# Table of Contents

**Rowan University In Brief** ................................................................. 1
*From Normal to Extraordinary: A History of Rowan University* ................. 1
**Rowan University Mission and Strategic Pillars** ................................ 3
**Using This Catalog** ........................................................................ 4
**Academic Calendar 2016-2017** ......................................................... 4
**Office of the President** ..................................................................... 4
**Division of Academic Affairs** ........................................................... 5
  - Rowan University Libraries ............................................................ 5
  - The Office Of International Initiatives & Support Services .................. 6
  - Thomas N. Bantivoglio Honors Concentration .................................. 7
  - Assessment ................................................................................... 7
  - Faculty Center for Excellence in Teaching and Learning .................... 8
  - Office of the University Registrar .................................................... 8
**Division of Finance** .......................................................................... 8
**Office of Government & External Relations** ......................................... 9
**Division of Facilities, Planning and Operations** ..................................... 9
**Division of Health Sciences** ............................................................... 10
**Division of University Research** ........................................................ 10
**Division of University Advancement** ............................................... 11
**Cooper Medical School of Rowan University** ...................................... 11
**Rowan University School of Osteopathic Medicine** .............................. 11
**Graduate School of Biomedical Sciences** .......................................... 12
  - The Division of Global Learning & Partnerships in Brief .................... 12
**Division of Student Life** .................................................................... 13
  - Academic Success Center ............................................................... 14
  - Card Services Office ...................................................................... 14
  - Community Standards .................................................................. 14
  - Counseling and Psychological Services ........................................... 14
  - Dr. Harley E. Flack Student Mentoring Program ................................. 15
  - Educational Opportunity Fund/Maximizing Academic Potential ........... 15
  - Greek Affairs ............................................................................... 16
  - Healthy Campus Initiatives ............................................................. 16
  - Office of Career Advancement (OCA) ............................................. 16
  - Orientation and Student Leadership Programs ................................ 16
  - Recreation Center ........................................................................ 17
  - Residential Learning and University Housing .................................... 17
  - Social Justice, Inclusion and Conflict Resolution ............................... 18
  - Student Activities ......................................................................... 18
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Center</td>
<td>18</td>
</tr>
<tr>
<td>Student Enrichment and Family Connections</td>
<td>19</td>
</tr>
<tr>
<td>Student Government Association</td>
<td>19</td>
</tr>
<tr>
<td>Student Health Services</td>
<td>20</td>
</tr>
<tr>
<td>Student Organizations</td>
<td>20</td>
</tr>
<tr>
<td>Volunteerism, Community Engagement &amp; Commuter Services</td>
<td>20</td>
</tr>
<tr>
<td>Wellness Center at Winans Hall</td>
<td>20</td>
</tr>
<tr>
<td>Division of Strategic Enrollment Management</td>
<td>21</td>
</tr>
<tr>
<td>Admissions</td>
<td>21</td>
</tr>
<tr>
<td>Conference &amp; Event Services</td>
<td>24</td>
</tr>
<tr>
<td>Financial Aid</td>
<td>24</td>
</tr>
<tr>
<td>University Scheduling</td>
<td>28</td>
</tr>
<tr>
<td>Web Services</td>
<td>28</td>
</tr>
<tr>
<td>University Advising Services</td>
<td>29</td>
</tr>
<tr>
<td>Office of General Counsel</td>
<td>32</td>
</tr>
<tr>
<td>Division of Information Resources and Technology</td>
<td>32</td>
</tr>
<tr>
<td>Undergraduate Programs</td>
<td>33</td>
</tr>
<tr>
<td>Academic Major Programs</td>
<td>33</td>
</tr>
<tr>
<td>Second Major, Minor, or Concentration</td>
<td>33</td>
</tr>
<tr>
<td>General Education at Rowan University</td>
<td>33</td>
</tr>
<tr>
<td>The Rowan Experience</td>
<td>35</td>
</tr>
<tr>
<td>Graduate and Post-Baccalaureate Programs</td>
<td>36</td>
</tr>
<tr>
<td>Tuition and Fees</td>
<td>37</td>
</tr>
<tr>
<td>Policies and Procedures</td>
<td>40</td>
</tr>
<tr>
<td>Interdisciplinary Studies</td>
<td>41</td>
</tr>
<tr>
<td>William G. Rohrer College of Business</td>
<td>61</td>
</tr>
<tr>
<td>Department of Accounting and Finance</td>
<td>63</td>
</tr>
<tr>
<td>Department of Management and Entrepreneurship</td>
<td>65</td>
</tr>
<tr>
<td>Department of Marketing and Business Information Systems</td>
<td>69</td>
</tr>
<tr>
<td>College of Communication and Creative Arts</td>
<td>74</td>
</tr>
<tr>
<td>Department of Art</td>
<td>75</td>
</tr>
<tr>
<td>Department of Communication Studies</td>
<td>82</td>
</tr>
<tr>
<td>Department of Journalism</td>
<td>84</td>
</tr>
<tr>
<td>Department of Public Relations and Advertising</td>
<td>86</td>
</tr>
<tr>
<td>Department of Radio, Television, and Film</td>
<td>87</td>
</tr>
<tr>
<td>Department of Writing Arts</td>
<td>89</td>
</tr>
<tr>
<td>College of Education</td>
<td>94</td>
</tr>
<tr>
<td>Department of Educational Services and Leadership</td>
<td>96</td>
</tr>
<tr>
<td>Department of Interdisciplinary and Inclusive Education</td>
<td>97</td>
</tr>
<tr>
<td>Department</td>
<td>Page</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Department of Language, Literacy, and Sociocultural Education</td>
<td>98</td>
</tr>
<tr>
<td>Department of Science, Technology, Engineering, Art and Mathematics (STEAM)</td>
<td>101</td>
</tr>
<tr>
<td>Henry M. Rowan College of Engineering</td>
<td>108</td>
</tr>
<tr>
<td>Department of Biomedical Engineering</td>
<td>109</td>
</tr>
<tr>
<td>Department of Chemical Engineering</td>
<td>110</td>
</tr>
<tr>
<td>Department of Civil and Environmental Engineering</td>
<td>115</td>
</tr>
<tr>
<td>Department of Electrical and Computer Engineering</td>
<td>117</td>
</tr>
<tr>
<td>Department of Mechanical Engineering</td>
<td>120</td>
</tr>
<tr>
<td>College of Performing Arts</td>
<td>122</td>
</tr>
<tr>
<td>Department of Music</td>
<td>123</td>
</tr>
<tr>
<td>Department of Theatre and Dance</td>
<td>132</td>
</tr>
<tr>
<td>College of Humanities and Social Sciences</td>
<td>137</td>
</tr>
<tr>
<td>Department of English</td>
<td>139</td>
</tr>
<tr>
<td>Department of Foreign Languages and Literatures</td>
<td>140</td>
</tr>
<tr>
<td>Department of History</td>
<td>152</td>
</tr>
<tr>
<td>Department of Law and Justice Studies</td>
<td>158</td>
</tr>
<tr>
<td>Department of Philosophy and Religion Studies</td>
<td>161</td>
</tr>
<tr>
<td>Department of Political Science and Economics</td>
<td>163</td>
</tr>
<tr>
<td>Department of Sociology and Anthropology</td>
<td>167</td>
</tr>
<tr>
<td>Bachelor of Arts in Human Services (B.A.)</td>
<td>170</td>
</tr>
<tr>
<td>Interdisciplinary Studies Bachelor of Arts Programs</td>
<td>171</td>
</tr>
<tr>
<td>Bachelor of General Studies</td>
<td>189</td>
</tr>
<tr>
<td>College of Science and Mathematics</td>
<td>191</td>
</tr>
<tr>
<td>Department of Biological Sciences</td>
<td>192</td>
</tr>
<tr>
<td>Department of Biomedical and Translational Sciences</td>
<td>198</td>
</tr>
<tr>
<td>Department of Chemistry and Biochemistry</td>
<td>199</td>
</tr>
<tr>
<td>Department of Computer Science</td>
<td>212</td>
</tr>
<tr>
<td>Department of Mathematics</td>
<td>218</td>
</tr>
<tr>
<td>Department of Physics &amp; Astronomy</td>
<td>222</td>
</tr>
<tr>
<td>Department of Psychology</td>
<td>232</td>
</tr>
<tr>
<td>School of Earth and Environment</td>
<td>238</td>
</tr>
<tr>
<td>Department of Geology</td>
<td>238</td>
</tr>
<tr>
<td>Department of Geography and Environment</td>
<td>239</td>
</tr>
<tr>
<td>School of Health Professions</td>
<td>249</td>
</tr>
<tr>
<td>Department of Health and Exercise Science</td>
<td>249</td>
</tr>
<tr>
<td>Department of Nursing</td>
<td>250</td>
</tr>
<tr>
<td>Faculty List</td>
<td>260</td>
</tr>
<tr>
<td>Nomenclature of Courses</td>
<td>281</td>
</tr>
<tr>
<td>General Education Course Listing</td>
<td>283</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Rowan Experience Course Listing</td>
<td>289</td>
</tr>
<tr>
<td>Course Descriptions</td>
<td>295</td>
</tr>
<tr>
<td>Organization of the University</td>
<td>546</td>
</tr>
<tr>
<td>Executive Administration</td>
<td>548</td>
</tr>
<tr>
<td>General Information</td>
<td>556</td>
</tr>
<tr>
<td>Campus Buildings</td>
<td>556</td>
</tr>
<tr>
<td>General Information</td>
<td>560</td>
</tr>
<tr>
<td>Directions to Campus</td>
<td>561</td>
</tr>
<tr>
<td>The Emeriti</td>
<td>562</td>
</tr>
<tr>
<td>Accreditations</td>
<td>577</td>
</tr>
</tbody>
</table>
Rowan University In Brief

**Type**
Comprehensive, coeducational, non-sectarian, state-supported, public research university, opened in 1923.

**Colleges**
Business, Communication & Creative Arts, Education, Engineering, Global Learning & Partnerships, Humanities & Social Sciences, Performing Arts, and Science & Mathematics. Schools: Cooper Medical School of Rowan University, Graduate School of Biomedical Sciences, School of Earth and Environment, School of Health Professions, and School of Osteopathic Medicine.

**Degrees**
Bachelor of Arts, Bachelor of Fine Arts, Bachelor of Music, Bachelor of Science in Nursing, Master of Arts, Master of Business Administration, Master of Education, Master of Engineering Management, Master of Music, Master of Science, Master of Science in Nursing, Master of Science in Teaching, Educational Specialist, Doctor of Education, Doctor of Medicine, Doctor of Osteopathic Medicine and Doctor of Philosophy.

**Campuses**
Main Campus – Glassboro, N.J. (approximately 20 miles southeast of Philadelphia, Pa.); Branch Campuses – Camden, Mullica Hill, and Stratford, N.J.

**Size**
Approximately 13,169 undergraduate students and 2,078 graduate students on the main campus in Glassboro and branch campuses; approximately 908 graduate students at the School of Osteopathic Medicine and the Graduate School of Biomedical Sciences on the branch campus in Stratford; approximately 823 full-time equivalent (FTE) faculty.

**Average Costs (2016-2017)**

<table>
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<th>In State</th>
<th>Out of State</th>
<th>Total</th>
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<tr>
<td>Tuition &amp; Fees</td>
<td>$14,534</td>
<td>$24,134</td>
<td>$36,176</td>
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<tr>
<td>Room &amp; Board*</td>
<td>$12,042</td>
<td>$12,042</td>
<td>$24,084</td>
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<tr>
<td>Total</td>
<td>$26,576</td>
<td>$36,176</td>
<td>$62,752</td>
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</tbody>
</table>

Tuition and fees for the Global Learning & Partnerships (Rowan Global) vary with the nature of the program, location, and mode of delivery. Rowan Global costs can be found at either of these websites: www.rowan.edu/bursar or www.rowanu.com/tuition

* For accommodations in a residence hall (double) and including the all-access meal plan with $200 Dining Dollars and $200 ’Boro Bucks

From Normal to Extraordinary: A History of Rowan University

Rowan University has evolved from its humble beginning in 1923 as a normal school, with a mission to train teachers for South Jersey classrooms, to a comprehensive public research university with a strong regional reputation.

In the early 1900s, many New Jersey teachers lacked proper training because of a shortage of schools in the state that provided such an education. To address the problem in South Jersey, the state decided to build a two-year training school for teachers, known then as a normal school.

The town of Glassboro was an early favorite because of its excellent rail system, harmonious blend of industry and agriculture, natural beauty and location in the heart of South Jersey. Several towns in the region competed to be the site of the new normal school because of the economic benefit and prestige such an institution would bring.

In 1917, to sway the decision in their favor, 107 residents of Glassboro raised more than $7,000 to purchase 25 acres, which they offered to the state for free if the borough were selected as the site. The tract of land included the Whitney mansion (now known as Hollybush) and carriage house. Before the purchase, the entire property belonged to the Whitney family, prominent owners of the Whitney Glass Works during the 1800s. This show of support, along with the site’s natural beauty, convinced the selection committee that Glassboro was the perfect location.

A Strong Foundation

In September 1923, Glassboro Normal School opened with 236 students arriving by train to convene in the school’s first building, now called Bunce Hall. Dr. Jerohn Savitz, the institution’s first president, expanded the curriculum as the training of teachers became more sophisticated.

Despite the rigors of the Depression, the program was expanded to four years in 1934, and in 1937 the school changed its name to New Jersey State Teachers College at Glassboro. The college gained a national reputation as a leader in the field of reading education and physical therapy when it opened a clinic for children with reading disabilities in 1935 and added physical therapy for the handicapped in 1944. The college was one of the first in the country to recognize these needs and
was in the forefront of the special education movement.

Rowan’s second president, Dr. Edgar Bunce, created a junior college program in 1946 to serve World War II veterans taking advantage of the GI Bill.

In the 1950s, Dr. Thomas Robinson, the University’s third president, expanded the curriculum, increased enrollment and added several buildings to the campus. In 1958, the school’s name was changed to Glassboro State College to better reflect its mission.

**A Historic Summit**
The University received worldwide attention when it hosted a historic summit conference between President Lyndon Johnson and Soviet Premier Aleksei Kosygin in Hollybush. The University was chosen because of its strategic location midway between Washington, D.C., and the United Nations in New York City, where Kosygin was scheduled to speak. The meetings between the two leaders, held June 23-25, 1967, led to a thaw in the Cold War and eased world tensions.

**Rapid Growth to Serve Needs**
The University’s fourth president, Dr. Mark Chamberlain, guided the college through its next phase of growth as enrollment doubled and the college became a multi-purpose institution. As new majors and a Business Administration Division were added, four divisions grew into schools and a board of trustees was formed. In 1969, the University opened a campus in Camden to expand its educational services. With a 1978 Division III National Championship in baseball, the first of 11 national championships for the institution, the athletic program established itself as one of the premier athletic programs in the country.

The college’s fifth president, Dr. Herman James, assumed the leadership of the institution in 1984. Under his direction, Rowan expanded by establishing the first doctoral program among the state’s public institutions and adding the Colleges of Engineering and Communication. Dr. James also was responsible for the construction of Campbell Library, the Student Recreation Center and Rowan Hall.

**A Transformative Gift**
In July 1992, industrialist Henry Rowan and his wife Betty donated $100 million to the institution, then the largest gift ever given to a public college or university in the history of higher education. Later that year, the school changed its name to Rowan College of New Jersey to recognize its benefactors’ generosity. The Rowans’ only request was that a College of Engineering be created with a curriculum that would address the shortcomings of engineering education at that time.

The college achieved University status in 1997 and changed its name to Rowan University under Dr. James’ leadership. The College of Engineering quickly earned national accolades for its successful new curriculum.

Dr. Donald J. Farish was appointed as the sixth president in July 1998. Under his leadership, the University implemented an aggressive improvement plan that addressed academic and student support initiatives as well as campus construction and renovation projects.

Major construction projects included the University townhouses; Science Hall; Education Hall; and the Samuel H. Jones Innovation Center, the first building of the South Jersey Technology Park at Rowan University.

During his tenure, the University also entered into a public-private partnership that led to the construction of Rowan Boulevard, a $300-million, mixed-use redevelopment project that links the campus with Glassboro’s historic downtown. The corridor features student and market-rate housing, a Barnes & Noble collegiate superstore, a Courtyard at Marriott Hotel, an urgent care center and numerous retail and dining outlets. Work is underway on other facilities.

**A Broader Mission**
During this period, Rowan founded Cooper Medical School of Rowan University—the first new medical school in New Jersey in more than 35 years and the first-ever M.D.-granting four-year program in South Jersey—in partnership with Cooper University Health Care.

The medical school welcomed its first class in the summer of 2012 into a new, six-story building adjacent to Cooper University Hospital in Camden. Close to 3,000 students applied for 50 spots in the medical school’s charter class, which graduated in May 2016.

The Board of Trustees named then-Provost Dr. Ali Houshmand as interim president in July 2011 and then the University’s seventh president in June 2012.

As provost, Dr. Houshmand established the College of Graduate and Continuing Education and started Rowan’s online education program, which now are part of Global Learning & Partnerships. As president, he dramatically reduced institutional expenses and increased revenue while expanding enrollment and academic programs.

In 2012, several of the colleges were restructured and schools were created, among them the Colleges of Business, Communication & Creative Arts, Education, Engineering, Humanities & Social Sciences, Performing Arts, and Science & Mathematics.

During 2016-17, the University will open Holly Pointe Commons, freshman and sophomore housing strategically located on Rt. 322, and new buildings for the William G. Rohrer College of Business and Henry M. Rowan College of Engineering, which will enable the high-demand programs to double their enrollment.
N.J. Medical & Health Sciences Education Restructuring Act
On July 1, 2013, Rowan again changed dramatically when the New Jersey Medical and Health Sciences Education Restructuring Act went into effect. The Restructuring Act designated Rowan as the New Jersey's second comprehensive public research institution, transferred the University of Medicine and Dentistry of New Jersey’s School of Osteopathic Medicine to Rowan and partnered Rowan with Rutgers-Camden to create health sciences programs in the City of Camden. Rowan became the second institution in the nation to have both a D.O.-granting medical school (RowanSOM) and an M.D.-granting medical school (Cooper Medical School of Rowan University). The transfer of programs also led to the creation of the Graduate School of Biomedical Sciences and gave Rowan its third campus, with Stratford joining Glassboro and Camden, New Jersey, as homes to Rowan programs.

Recognized Nationally
Rowan has attracted the attention of national organizations that evaluate colleges and universities. U.S. News & World Report consistently ranks Rowan University among the top tier of Northern Regional Universities and among the top three public institutions in the category, and includes the Henry M. Rowan College of Engineering among the best institutions where the highest engineering degree offered is a bachelor’s or master’s. The Princeton Review includes the William G. Rohrer College of Business among its best business schools yearly.

The University has received more than a dozen awards for green initiatives since 2007. Recently, The Princeton Review listed it in its “Guide to 322 Green Colleges.”

Numerous Opportunities
Rowan continues to expand its programs and partnerships. Among the most recent—and vital to higher education in New Jersey—was its June 2015 partnership with the former Burlington County College (now Rowan College at Burlington County) to improve access to affordable four-year undergraduate degrees. That move followed one two years earlier with then-Gloucester County College (now Rowan College at Gloucester County) to establish a similar arrangement that enables students to pursue Rowan bachelor’s degrees at the county college or transfer seamlessly to the University after earning an associate’s degree and meeting set standards.

Today, Rowan’s approximate 16,100 students can select from 74 bachelor’s, 51 master’s, four doctoral degree and two professional programs— along with undergraduate and post-baccalaureate certificates—in colleges and schools across four campuses.

From the modest normal school begun 90 years ago, Rowan University has become an extraordinary comprehensive institution that has improved the quality of life for the citizens of New Jersey and the surrounding states.

Rowan University Mission and Strategic Pillars

Mission
A leading public institution, Rowan University combines liberal education with professional preparation from the baccalaureate through the doctorate. Rowan provides a collaborative, learning-centered environment in which highly qualified and diverse faculty, staff, and students integrate teaching, research, scholarship, creative activity, and community service. Through intellectual, social and cultural contributions, the University enriches the lives of those in the campus community and surrounding region.

The University’s strategy is anchored in four pillars:

Quality
We are committed to the development and transmission of new knowledge and providing rigorous, experiential and engaging educational experiences; a vibrant and healthy campus life; a rich intellectual, cultural, and artistic environment; and a safe, supportive and inclusive culture that respects and values the diversity of all of its members.

Access
We are committed to expanding quality educational opportunities for qualified students by increasing our enrollment capacity; supporting student success; utilizing an increasing array of pedagogies and platforms; and creating new pathways to undergraduate, graduate, post-graduate, and professional studies, including medicine.

Affordability
We are committed to keeping education affordable by managing costs; diversifying our revenue streams; reducing student debt; limiting tuition increases to the rate of inflation as measured by the consumer price index; and enhancing internship and employment opportunities for our students and graduates.

Economic Engine
We are committed to benefiting our local and state communities by making every effort to partner with and invest in regional businesses and organizations that contribute in meaningful ways to furthering our mission; preparing an educated citizenry and skilled workforce; enhancing the health of our citizens and the quality of life; and developing innovative products, services, and ideas.
Using This Catalog

Rowan University has multiple catalogs:

- The Undergraduate Catalog includes the program requirements and course descriptions for all traditional-format undergraduate programs (courses offered on-campus and across 16-weeks each term).
- Global Learning & Partnerships (Rowan Global) Catalog includes the program requirements and course descriptions for all traditional-format post-baccalaureate and graduate programs (courses offered on-campus and across 16-weeks each term) as well as all of Rowan’s non-traditional-format programs (courses offered online, off-site, hybrid, and/or accelerated each term) at every level (undergraduate, post-bac, and graduate - including doctoral).
- The Cooper Medical School of Rowan University (CMSRU) Catalog describes the curriculum and policies for the Doctor of Medicine (MD) program.
- The Rowan University School of Osteopathic Medicine Catalog describes the curriculum and policies for the Doctor of Osteopathic Medicine (DO) program.
- The Graduate School of Biomedical Sciences (GSBS) Catalog describes the curriculum and policies for the academic programs offered by GSBS.

Academic Calendar 2016-2017

**Fall Semester 2016**
- President’s Welcome: Tuesday, August 30
- Semester Classes Begin: Thursday, September 1
- Labor Day (no classes): Monday, September 5
- 1st Quarter Concludes: Thursday, October 20
- Election Day (no classes): Tuesday, November 8
- Thanksgiving Recess (no classes): Thursday-Saturday, November 24-26
- 2nd Quarter Concludes: Tuesday, December 13
- Finals Week: Wed-Tues, December 14-20 (Includes Saturday, December 17)
- Semester Concludes: Tuesday, December 20

**Spring Semester 2017**
- Spring Semester Begins: Tuesday, January 17
- 3rd Quarter Concludes: Monday, March 6
- Spring Break (No Classes): Monday-Saturday, March 13-18
- Good Friday (No Classes): Friday-Saturday, April 14-15
- 4th Quarter Concludes: Monday, May 1
- Finals Week: Tuesday-Monday, May 2-8 (includes Saturday May 6)
- Semester Concludes: Monday, May 8
- Commencement Week: Tuesday- Friday, May 9-12

**Summer Sessions 2017**
- Memorial Day (no Classes): Monday, May 29
- Fourth of July (no Classes): Tuesday, July 4

Summer Sessions are Subject to Change. Visit the Office of Winter & Summer Sessions for the Winter or Summer Term calendars [www.rowan.edu/winter/summer/calendars](http://www.rowan.edu/winter/summer/calendars)

**NOTE:**
Please note that this calendar applies to traditional programs offered on the Glassboro and Camden campuses during the fall and spring semesters. Visit [www.rowan.edu/university/academic/calendars](http://www.rowan.edu/university/academic/calendars) and use the links listed for calendars from The Division of Global Learning & Partnerships, the Office of Winter & Summer Sessions, the Cooper Medical School of Rowan University, the Rowan University School of Osteopathic Medicine, and the Graduate School of Biomedical Sciences.
Office of the President

Ali A. Houshmand  
President  
856.256.4103  
houshmand@rowan.edu

Robert Zazzali  
Senior Vice President for Community and Economic Development  
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Joanne Connor  
Chief of Staff and Liaison to the Board of Trustees  
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connorj@rowan.edu

The President works with the Board of Trustees and the Executive Cabinet to determine the vision and strategy for the University. The President’s Office is comprised of the Executive Vice President for Administration and Strategic Advancement, the Executive Assistant to the President/Board of Trustees Liaison, and the President’s Chief of Staff.

Division of Academic Affairs

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Senior Vice President and Provost  
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Roberta Harvey  
Vice President for Academic Affairs  
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harvey@rowan.edu

Darren Nicholson  
Associate Provost for Academic Affairs  
Bole Hall  
856.256.5144  
nicholson@rowan.edu

The Academic Affairs Division is headed by the Provost or Chief Academic Officer. The Provost is responsible for leadership and oversight of academic programs, faculty affairs, and library services. The Deans of the Colleges of Business, Communication & Creative Arts, Education, Engineering, Performing Arts, Humanities & Social Sciences, Science & Mathematics, and Schools of Earth and Environment, School of Health Professions, The Office Of International Initiatives & Support Services, and Thomas N. Bantivoglio Honors Concentration report to the Provost. The Office of the University Registrar, Faculty Center for Excellence in Teaching and Learning, and Assessment report to the Vice President for Academic Affairs. The Vice President and associate provosts for Academic Affairs, and Library Information Services also report to the Provost. The Provost reports directly to the President.

Rowan University Libraries

Scott P. Muir  
Associate Provost  
Keith and Shirley Campbell Library  
856.256.4800  
muir@rowan.edu

Rowan University Libraries supports the University’s educational and research mission through the judicious selection, management, promotion, and training in the use of information resources and services. Rowan University Libraries provides the Rowan community with access to an extensive range of resources and services, which are accessible through three physical libraries and through the Library website. Reference librarians are available in all libraries for research consultation and to assist patrons in identifying, locating, accessing, and evaluating both print and online resources.
The Keith and Shirley Campbell Library is the main library on the Glassboro campus. Opened in 1995, the 118,000 sq. ft. facility, houses nearly 400,000 books, multimedia materials, periodicals, newspapers, and special collections in a variety of formats. Rowan University Libraries subscribes to 95,000 online journals and thousands of other e-resources that are available 24/7 through the Library website. Librarians are available to assist students virtually via “Ask a Librarian” chat, email, and text services. Rowan's libraries participate in a number of local consortia groups to provide patrons with materials not available to them at Rowan University.

Rowan University participates in the U.S. Federal Documents Depository program. Rowan University Libraries collects virtual materials from the federal government and provides research assistance and help in obtaining desired documents.

Campbell Library staff provide orientations, tours, and workshops throughout the academic year. A 30-workstation lab is available for student use, as well as library instruction, on the first floor. Additional computer workstations are also available on the second and third floors. And, group study rooms are available throughout the building for use by students.

Digital Scholarship Center
Campbell Library also houses the Digital Scholarship Center, a collaborative environment to support Rowan community members in the exploration of emerging digital technologies. Students, faculty, and staff can experiment with updated equipment and specialized software related to video editing, image editing, and research poster design. They can access technology resources available through the Rowan Cloud and brainstorm projects with trained library staff. And, they can engage in self-paced technology discovery.

The Performing Arts Collection
Located on the second floor, the Collection offers specialized information services and instruction for students and faculty. The Performing Arts Collection houses significant collections of scores, CDs, scripts, and recordings. Electronic access to the Naxos Music Library, Grove Music Online, Dance in Video, and the International Index to Performing Arts, among others, is also available through the Rowan University Libraries website.

Archives and Special Collections
University Archives and Special Collections are housed on the fifth floor of the Campbell Library. Frank H. Stewart, a prominent New Jersey industrialist, donated an extensive and valuable collection of New Jersey historical documents and artifacts to Rowan University upon his death in 1949. The collection has grown to include a wide range of important source materials beginning with the Colonial and Revolutionary eras. Researchers and scholars from across the nation use these important collections. The University Archives include items from the historic summit in 1967 between President Lyndon Johnson and Soviet Premier Aleksei Kosygin, which took place at the Hollybush mansion on campus.

The CMSRU Library
The CMSRU Library serves the faculty, staff, and students of CMSRU; Cooper University Health Care; and members of the Rowan University community. The Library houses a small collection of print books and journals in the clinical and basic sciences. The bulk of the collection is comprised of books, journals, databases, and related specialty collections. These are linked via the library website and are available to users 24/7. The Library has a combined seating capacity of 198 with seven group study rooms, 41 public workstations, and two computer labs.

The Rowan SOM Health Sciences Library
The Health Sciences Library is located in the Academic Center. It serves all students, faculty, and staff on the Stratford Campus, as well as members of the Rowan University community. The Library houses an extensive collection of print books and journals in the clinical and basic sciences. In addition, a collection of electric journals, electronic books, and a wide variety of image databases and collections are available through the Library's web page. The Library has a seating capacity of 224, which includes study carrels and tables, study rooms, and computer workspaces.

The Office Of International Initiatives & Support Services
Li Yang
Robinson Hall, 117
856.256.2914

The Office of International Initiatives & Support Services is committed to comprehensive internationalization at Rowan through collaborative efforts that infuse global perspectives throughout the university's teaching, learning, and service. The OIISS offers the expertise in international partnership development and governmental regulations pertaining to non-immigrant Visas. We are the primary facilitator for faculty, student or staff engaging internationally for their studies, research, employment, or for the development of collaborative programs and agreements with universities and organizations abroad. The OIISS works closely with multiple departments at Rowan, including: Academic Colleges, Admissions, Advising, The Faculty Center, the Health Center, Residence Life, the Registrar, and Financial Aid. Through this collaboration, we can attract high quality international students and provide the support, training and services necessary for student retention and success. The OIISS staff is also responsible for the ongoing support of international students and scholars through academic and cultural workshops, enrichment activities, and social programming to facilitate a positive campus experience. By engaging the wide array of expertise across our campus, our international students are integrated into campus life, thus providing opportunities for all students, faculty and staff to globalize their experiences and perspectives, a critical
component of life in the 21st century.

The OIISS is responsible for the following areas:

- **International Student & Scholar Support Services**
  - Issue I-20s for prospective F-1 students and dependents
  - Issue DS-2019 for prospective J-1 students and dependents
  - Advise students on OPT activities and status
  - Plan and deliver arrival and orientation activities for new international students
  - Work collaboratively with Foundations Office to advise students receiving international scholarships, such as Inductotherm

- **SEVIS Compliance Oversight**
  - Stay up to date on federal regulations from DHS and USCIS as they impact non-immigrant students and scholars
  - Maintain compliance within SEVIS regarding university certificate and degree programs
  - Maintain institutional compliance with DHS, USCIS and DOS

- **International Recruitment & Admission Strategies**
  - Identify, implement and oversee strategies for increasing student enrollment, working in collaboration with the Office of Admissions
  - Oversee the International Scholarship opportunities at Rowan

- **International Partnerships & Initiatives**
  - Oversee government sponsored programs, such as the Brazil Science Mobility Project and Saudi Arabian Cultural Mission
  - Identify viable international partners for internationalizing student learning opportunities and faculty research opportunities
  - Work collaboratively with Academic Affairs and Office of General Counsel to implement and oversee partnerships
  - Collaborate with university advising on study abroad partnerships & initiatives, and promoting study abroad opportunities throughout the university

- **English Language Programs**
  - Intensive 5-level English language program for international and domestic students to learn English
  - Conditional Admission Program for students applying to Rowan University
  - Pathway classes for matriculated students who need additional English language & culture support
  - Upward Bound Program pre-college program for high school English language learners in Camden City

- **Campus Internationalization Initiatives**
  - Plan campus activities that promote internationalization
  - Advisor to Rowan’s International Student Organization
  - Plan activities for International Week
  - Collaborate with offices across the campus to develop initiatives that integrate global perspectives into every day life at Rowan
  - Cultural Liaison Program

The Office of International Initiatives and Support Services has offices at the Glassboro and Camden Campuses:
Glassboro Campus, Office of International Initiatives & Support Services, Robinson Hall 117
Camden Campus, English Language Programs, College Hall 516

**Thomas N. Bantivoglio Honors Concentration**

Lee Talley, Dean
The Whitney Center
856.256.4775
talleyl@rowan.edu

Open to talented students in every major and college, the Thomas N. Bantivoglio Honors Concentration emphasizes interdisciplinary learning, challenging scholastic work, enhanced classroom experiences, and participation in a learning community of intellectually curious and academically talented student colleagues and faculty. Classes are structured so that students have the opportunity to engage in active learning with faculty who are committed to helping students develop their skills as scholars. In addition to coursework, the Honors Concentration features enhanced and/or unique Honors classes with small classes and access to Rowan’s top faculty; funding to attend theatre, art gallery, instrumental and vocal concerts, and invited speaker presentations; competitive funding for educational activities abroad, travel to conferences, and research activities; extended library borrowing privileges; honors cluster housing; and priority registration. Through these enhanced educational experiences, students become accomplished independent thinkers, researchers and leaders prepared for successful graduate study or professional careers and contributing members of their communities.
Assessment
Jeff Bonfield
Director
Bole Hall
856.256.5116
bonfield@rowan.edu

The purpose of academic assessment is to enhance Rowan University’s capacity to improve every student’s knowledge, skills, and development. In addition to academic assessment, the University engages in assessment of its facilities, services, and administration. Together, these assessment efforts help Rowan University determine how well it is fulfilling its mission and make informed decisions about how best to use resources. Assessment is the process of collecting and using reliable information as a basis for program improvement. At Rowan University, we systematically measure the extent to which we are achieving desired student learning outcomes and institutional effectiveness targets.

Faculty Center for Excellence in Teaching and Learning
Bonnie L. Angelone
Director
James Hall
856.256.4079
angelone@rowan.edu

Mission Statement:
The Faculty Center for Excellence in Teaching and Learning serves individuals, groups, and the institution in pursuit of teaching excellence. Its three areas of activity are; 1) induction and ongoing support of junior faculty; 2) professional development focused on the scholarship of teaching, learner-centered teaching, action-research, and reflective pedagogy; and 3) institutional change relevant to teaching and learning. The Center encourages self-directed inquiry through workshops, discussion groups, learning communities, and conference participation.

Our Goals:
• Promote a high standard of quality in teaching and learning
• Support junior faculty throughout the tenure process
• Build faculty leadership capacity
• Maintain currency in the field of teaching and learning and professional and organizational development
• Create community and opportunity for all faculty to learn and grow
• Represent the interests of teaching and learning at the University

Office of the University Registrar
Rebecca Gollihur
Savitz Hall
856.256.4367
gollihur@rowan.edu
registrar@rowan.edu

The Office of the University Registrar oversees registration and registration-related issues for all of Rowan’s undergraduate and graduate (non-medical) students. The Registrar coordinates compliance with the Statewide Transfer Agreement and provides resources for transfer students, including the management of ongoing transfer credit articulations and credit postings for individual undergraduate and graduate students. In addition, the Office has oversight for student records, including transcripts, enrollment verifications, coordination of graduation audits, and the awarding of all Rowan degrees, certificates, and diplomas. The Office also coordinates updates to official curriculum in the system, including programs and courses. The Registrar works closely with all academic colleges as well as University Scheduling, the Offices of Admissions, Advising and Student Retention, and directly supports the Office of Academic Affairs.

Division of Finance
Joseph F. Scully
Senior Vice President for Finance and Chief Financial Officer
856.256.4127
scullyj@rowan.edu

The mission of the Division of Finance is to provide fiscal leadership in supporting the instruction, research, and public service missions of the University by providing reliable financial information; exemplary service and objective advice to both internal and external customers. The Division of Finance oversees a comprehensive financial management system for
stewardship of University resources. It also ensures regulatory compliance and the achievement of shared goals and objectives for the University community through teamwork, professional expertise, developing practical procedures and processes, the promotion of efficient systems, maintaining sound financial records, and seeking continuous improvements.

Office of Government & External Relations

Steven D. Weinstein  
Executive Vice President Policy & External Relationships & Partnerships  
856.256.5106  
weinstens@rowan.edu

Bridgette Ferraro  
Managing Administrative Assistant  
856-256-4144  
ferrarog@rowan.edu

Elaine Mahoney Kennedy  
Director of Government Affairs  
856-256-5108  
Mahoney-kennedy@rowan.edu

The Rowan University Office of Government & External Relations serves as the liaison between the University and federal, state and local government officials. It is responsible for the coordination of all official University contacts and interactions with all levels of government and other pertinent government agencies. The Office directs, facilitates and provides guidance on all such activities, including budget and grant requests, to ensure coordination and consistency of intent, purpose and accuracy, and approves materials, content of testimonies, and accuracy of positions to be presented in representation of the University.

The Office has developed a policy on lobbying activities and contacts with federal, state, and local officials to enhance the coordination of institutional advocacy and lobbying priorities and efforts. The Office strives to ensure that internal stakeholders receive critical information and strategic direction on State and federal issues important to the University.

This policy is not intended to limit the personal rights of those in the University community (faculty, staff, volunteers and students) to contact, and advocate with officials about their personal beliefs and issues. Nor is it directed toward those contacts made on behalf of their professional groups/organizations as long as that representation is expressively not on behalf of Rowan University or it is done with the approval of Rowan University if University titles will be used in such activities.

Division of Facilities, Planning and Operations

Donald E. Moore  
Senior Vice President for Facilities, Planning & Operations  
856.256.4199  
mooredo@rowan.edu

Joseph Monahan  
Assistant Vice President of Campus Planning & Construction  
856.256.4826  
monaghanj@rowan.edu

James Lovegrove  
Assistant Vice President of Operations & Plant Management  
856.256.4936  
lovegrove@rowan.edu

Arijit De  
Senior Director of Campus Planning  
856.256.4507  
de@rowan.edu

The Facilities, Planning, and Operations Division at Rowan University is a growing enterprise. The Division's mission is to create and sustain a vibrant, safe and supportive living/learning environment at Rowan's multiple campuses. Our Division not only functions on our Main Campus in Glassboro but also oversees planning, operations and development in Camden at our Cooper Medical School at Rowan University and at Rowan University School of Osteopathic Medicine in Stratford. In order to accommodate a growing university we are dedicated to providing leadership in facilities development and management, campus master planning, and real estate management and operations.
We are committed to help provide a welcoming, attractive, sustainable and safe environment for our students, faculty, colleagues, neighbors and guests. We are also responsible for ensuring environmental health & safety management, strategic planning & campus design, as well as construction, campus operations & maintenance, reducing expenses, conserving energy and maintaining a conscious effort to support Rowan’s mission as well as to be of service to our community. Our team of experienced project managers, planners and architects lead the capital projects on campus including; new construction, renovation, infrastructure, landscape architecture and space planning needs.

Division of Health Sciences

Kenneth Blank  
Senior Vice President for Health Sciences  
James Hall, Suite 3013  
856.256.5851  
blank@rowan.edu

The Division of Health Sciences works with deans and other administrators to integrate and build nationally recognized academic and research programs related to the health sciences.

Division of University Research

Shreekanth Mandayam  
Vice President  
James Hall, Suite 3129  
856.256.5333  
shreek@rowan.edu

Sarah Piddington  
Director  
James Hall, Room 3128  
856.256.5482  
piddington@rowan.edu

The Office of the Vice President for Research is responsible for promoting, supporting and administering the research, scholarly and creative activity of Rowan faculty, staff and students. The Division of University Research oversees five departments.

Office of Sponsored Programs/Glassboro

Stephanie Lezotte  
Director  
James Hall, Room 3126  
856.256.5482  
lezotte@rowan.edu

Office of Sponsored Programs/Stratford

Mui Whetstone  
Director  
University Education Center (UEC), Suite 1040  
856.566.6075  
whetstone@rowan.edu

The mission of the Office of Sponsored Programs (OSP) is to provide Rowan faculty, staff, and students with information and guidance for the submission of proposals to federal, state, and other sponsors, and to provide effective stewardship of awarded funds.

Office of Research Compliance

Sreekant Murthy  
Chief Research Compliance Officer  
James Hall, Suite 3013  
856.256.5853  
murthy@rowan.edu

The Office of Research Compliance is responsible for overseeing the ethical conduct of research and compliance with all applicable federal, state, and institutional laws and regulations.
Office of Technology Commercialization
Mina Zion
Director
South Jersey Technology Park
856.256.5097
zion@rowan.edu

The Office of Technology Commercialization (OTC) is responsible for aligning innovations to respond to commercially unmet market needs, receiving invention disclosures, processing patent applications, and executing licensing agreements.

Office of Proposal Development
Steve Robishaw
Manager
James Hall, Suite 3129
856.256.5795
robishaw@rowan.edu

The Office of Proposal Development (OPD) is responsible for increasing the overall number and quality of competitive, interdisciplinary, and collaborative proposals that support faculty research at Rowan University. OPD achieves this goal by partnering with faculty members to develop project ideas, identify funding sources, form proposal teams, and prepare proposals for submission.

Division of University Advancement
John J. Zabinski
Senior Vice President for University Advancement/Executive Director, Rowan University Foundation
856.256.4148
zabinski@rowan.edu

The mission of the Division of University Advancement is to build strong, lasting relationships with the University among alumni, donors and other important constituents to encourage investment in and support of the University.

The Division provides leadership and assistance to garner support for the institution and enhance its reputation and visibility among its internal and external constituencies through strategic relationship building, fundraising and stewardship. Strong alumni programs and services help promote the interests of the University, its alumni and the community.

The Division oversees the following functions: Development, Alumni Engagement, Advancement Services, Advancement Communications, Corporate & Foundation Relations, Stewardship & Distinguished Events, and the Rowan University Foundation. In conjunction with the academic colleges and other units of the University, the Division is responsible for leading the development efforts of the institution. Through the cultivation and establishment of new relationships, and the continuance of ongoing relationships, the Division works to promote and advance the overall mission of the University and expand its margin of excellence.

Cooper Medical School of Rowan University
Paul Katz, MD
Founding Dean
Medical Education Building, CMSRU, Camden
856.361.2800
katzp@rowan.edu

The Cooper Medical School of Rowan University (CMSRU), located in Camden, NJ, admitted its inaugural class in August 2012 and is the first new medical school to open in New Jersey in 39 years. CMSRU is committed to providing humanistic education in the art and science of medicine within a scientific and scholarly community in which inclusivity, excellence in patient-care, innovative teaching, research, and service to our community are valued. The focus of CMSRU is to graduate physician leaders through an innovative curricular model that emphasizes care of the underserved. In May 2016, the members of the Charter Class received the MD degree.

Rowan University School of Osteopathic Medicine
Thomas A. Cavalieri, DO, FACOI, FACP
Dean
Academic Center, RowanSOM, Stratford
856.566.6995
The Rowan University School of Osteopathic Medicine (RowanSOM) joined Rowan in July 2013. Established in 1976, RowanSOM is New Jersey’s only osteopathic medical school. RowanSOM also includes three nationally recognized institutes for research and treatment, the NJ Institute for Successful Aging, the Child Abuse Research Education and Service (CARES) Institute, and the NeuroMusculoskeletal Institute (NMI). The Rowan School of Osteopathic Medicine is dedicated to providing excellence in medical education, research and health care for New Jersey and the nation. An emphasis on primary health care and community health services reflects the School’s osteopathic philosophy, with specialty care and centers of excellence demonstrating our commitment to innovation and quality in all endeavors. The School seeks to develop clinically skillful, compassionate and culturally competent physicians from diverse backgrounds, who are prepared to become leaders in their communities. RowanSOM is committed to expanding Graduate Medical Education offerings and to ensuring the successful placement of 100% of our graduates into residency programs. Rowan University School of Osteopathic Medicine is accredited by the Commission on Osteopathic College Accreditation (COCA).

Graduate School of Biomedical Sciences

Carl Hock
Senior Associate Dean
University Doctors Pavilion, RowanSOM, Stratford
856.566.6282
hock@rowan.edu

The Graduate School of Biomedical Sciences (GSBS) became part of Rowan University in July 2013. GSBS offers a Ph.D. in Cell and Molecular Biology; M.S. in Cell and Molecular Biology; Master of Science in the Biomedical Sciences (M.S.; thesis); Master of Biomedical Sciences (M.B.S.; non-thesis); Certificate in the Biomedical Sciences; and Master of Science in Molecular Pathology and Immunology (M.S.; thesis), along with several dual degree programs.

The Division of Global Learning & Partnerships in Brief

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The Division of Global Learning & Partnerships is Rowan University’s vehicle to identify and meet the needs of the adult student population. Our students include college graduates pursuing graduate or doctoral studies, returning college students pursuing the completion of a baccalaureate degree, employees/employers seeking professional development, and life-long learners looking for personal enrichment. The Division places foremost emphasis on making quality education accessible, convenient, and affordable by using delivery modes that address the vast range of adult student needs and preferences. In partnership with Rowan’s seven academic colleges, Rowan Global currently offers several doctoral/specialist level programs (including both Ph.D. and Ed.D. programs), over 40 master's level programs (including specializations), more than 40 graduate-level and post-baccalaureate certificate programs and endorsements, and a host of accelerated undergraduate degree-completion and dual Bachelor/Master degree programs (4+1).
Given Rowan Global’s variety and range of offerings, all courses/programs and corresponding services are classified into four major categories:

- **Traditional-format graduate-level** (including post-baccalaureate and doctoral) courses/programs for both part-time and full-time students. Courses are commonly face-to-face, 16 weeks, and held on one of Rowan's campuses.
- **Non-traditional format courses/programs at every level** (undergraduate, post-baccalaureate, graduate, doctoral). Courses are offered online, hybrid, off-site, Saturday-only, in an accelerated timeline, or some combination of these.
- All Rowan University **summer and intersession** courses.
- **Professional development and personal enrichment** non-credit courses, workshops, and seminars.

**Locations**
The Division of Global Learning & Partnerships is proudly located on Rowan University’s Glassboro and Camden campuses.

**Glassboro**
The Division’s Glassboro campus is located inside the Enterprise Center, a new, mixed-use facility on Rowan Boulevard next to the University Bookstore (Barnes & Noble).

**Camden**
Rowan Global at Camden is located in the University District of Camden in the historic First National Bank and Trust Company building and annex on the corner of Cooper and Broadway. Currently under renovation, the 44,000 square foot building houses a variety of academic programs including Law and Justice, Sociology and General Studies. In addition, the campus offers a Doctorate in Education and a Masters in School Counseling.

The campus is also home to several academic enrichment programs designed to advance access to higher education among diverse populations including the acclaimed Intensive English Language Program for English Language Learners (IELP) and the Educational Opportunity Fund program.

The Intensive English Language program integrates academic content with language competencies to prepare students for university study. This non-credit program provides face-to-face instruction in classes ranging from Academic Reading & Writing to American Literature and Oral Presentation Skills.

The Educational Opportunity Fund program (EOF) provides access, preparation, orientation and academic support programming for students who are among the first in their family to attend college, and for those who otherwise may face unique challenges in college due to economic, cultural or educational circumstances.

The campus is also home to varied college access programs including the CHAMP/GEAR UP, a program providing pre-college services to youth in high school and the Upward Bound program for Language Learners, a program dedicated to providing high achieving, high school English language learners with requisite skills necessary for success in the higher education setting.

The campus provides an array of services for students. Students, faculty and staff have access to the Barnes and Noble University District Bookstore and Café conveniently located on the Campus. In addition, students have full library privileges and use of the recreation center at Rutgers at Camden. The University provides a daily shuttle bus which travels between our Camden and Glassboro campuses for all University students. Students may also drive to campus and parking privileges are available for a fee.

**Division of Student Life**

**Richard L. Jones**  
Vice President and Dean of Students  
Savitz Hall, Room 203  
856.256.4283  
jonesri@rowan.edu

The Division of Student Life provides and supports a collaborative learning environment that promotes the education of the whole person within a global society. Student Life is dedicated to actively engaging students by encouraging healthy life choices, multicultural competency, personal and professional growth, campus and community involvement, civic responsibility and leadership development. As an integral partner in the educational process, Student Life is committed to student learning and continual improvement through ongoing assessment and review of its programs and services.

The departments within the Division of Student Life include: Academic Success Center (Disability Resources and Veterans Affairs) Career Management Center (CMC), Counseling and Psychological Services, Dean of Students, Dining Services, EOF/MAP, Card Services, Community Standards, Recreation Center, Residential Learning and University Housing, Volunteerism, Community Engagement & Commuter Services, Social Justice, Inclusion, and Conflict Resolution, Student Activities, Student Center, and Student Health Center. These departments are responsible for numerous programs including Greek Affairs, Intramurals, Living and Learning Communities, Mentoring, Orientation, Parent & Family Program, Rowan After Hours, Student Leadership, the Student Government Association, and Student University Programming.
In addition, the Office of the Vice President for Student Life and Dean of Students provides guidance and support to students in the following areas; students facing prolonged absences due to a health problem or other extenuating circumstances; reporting sexual assault; and other related student issues.

**Academic Success Center**
John Woodruff  
Director  
Savitz Hall, 3rd floor  
856.256.4259  
successcenter@rowan.edu

The Academic Success Center provides a myriad of comprehensive programs and services that assist students in enhancing and maximizing their academic potential from Orientation through Graduation. The Center provides services in the following areas; tutorial services, veterans affairs, disability resources, testing/basics skills, academic coaching program, and an array of academic support workshops.

Disability Resources provides accommodations and assistance to students with various documented disabilities in accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990. Students who meet University admissions requirements (i.e., otherwise qualified to attend the University) are required to submit appropriate documentation so that the University can determine whether they qualify for reasonable accommodations.

Veterans Affairs handles all military education benefits and provides support services for our student veterans and programming for the campus community to recognize and appreciate their contributions.

**Card Services Office**
Christine Noon  
Director of Card Services  
Chamberlain Student Center  
856-256-4531  
oon@rowan.edu

The Card Services Office is responsible for managing all aspects of the official Rowan University identification card and coordination of all activities related to the use of the RowanCard. These responsibilities include managing the University wide card system applications, monitoring the University wide card systems for proper performance, coordinating all distributed responsibilities for University wide card systems, and coordinating integration of all departmental card system applications. The office provides all training related to card systems amongst all campuses. In addition, the office serves as the point of contact for students experiencing problems with their ID card.

**Community Standards**
Joseph Mulligan  
Assistant Vice President  
Chamberlain Student Center, Suite 210  
856.256.4242  
mulligan@rowan.edu

The Office of Community Standards articulates and upholds the standards of behavior expected within the University community. The office addresses violations of the student code of conduct through the university disciplinary system to ensure respect for all members of the community and the maintenance of a collaborative and learning-centered environment.

**Counseling and Psychological Services**
David F. Rubenstein, Ph.D.  
Associate Vice President for Student Wellness  
Wellness Center at Winans Hall  
856.256.4333  
wellnesscenter@rowan.edu

Counseling and Psychological Services (CPS) at the Wellness Center provides confidential mental health and substance abuse services to enrolled students. CPS provides individual and group counseling, triage and emergency evaluations, psychological testing and outreach programs in the area of mental health and substance abuse prevention. Some common areas addressed in counseling for college students include addressing academic stressors, coping with personal and family relationship issues, stress and anxiety management, coping with depression, eating and body image issues, dealing with grief and loss, trauma and substance use.
The University's Stress Management and Response Team (SMART) is coordinated through the Wellness Center and each professional staff is a core member of the team. This university-wide group is available to meet with various divisions, departments, organizations, and groups on campus in order to assist with response to traumatic events that impact particular groups of students or university community as a whole.

**Dr. Harley E. Flack Student Mentoring Program**

Temple Jordan  
Assistant Director  
Robinson Hall, Room 118  
856.256.5495  
harleyflackmentoring@rowan.edu

The Dr. Harley E. Flack Student Mentoring Program (comprised of three separate components: the male student mentoring program, the Ujima female student mentoring program, and the high school mentoring program) is an academic success and retention program that aims to improve the academic and professional success, retention rates, and graduation rates of active program participants. The program's focus is to enhance students' overall university experience; support students in developing core academic, personal, professional and cultural skills; and foster in students some core civic and leadership proficiencies that will serve them personally and professionally.

**Male Student Mentoring** Established in 1992 under the auspices of the Executive Vice President/Provost, Dr. Harley E. Flack, the male component of the Dr. Harley E. Flack Student Mentoring Program is a student mentoring support initiative whose goal is to enhance young men's overall university experience. Peer mentors known as **Focused Peers** and faculty/staff Professional Mentors work to empower male students with guidance, opportunities for reflection, and leadership possibilities to help them reach their educational and professional goals while at Rowan.

**Ujima Female Student Mentoring** Since its inception in the spring of 1995, Ujima – a Swahili term translated as “collective responsibility” – has fulfilled the need of Rowan women to connect with professional role models who would support them in fulfilling their personal and career goals. Peer mentors known as **Sisterlinks** and faculty/staff Professional Mentors support and facilitate the academic success, empowerment, career preparation and leadership ability of female students through mentorship.

**High School Mentoring** This most recent component of the Harley E. Flack mentoring program serves as a leadership opportunity for first-year Rowan students who serve as **Mentoring Ambassadors** to provide on-site mentorship in neighboring high schools. Rowan students develop group facilitation and other leadership skills while supporting high school students in thinking about the importance of higher education as well as the attitudes and skills necessary for successfully completing high school and moving on to college.

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**Educational Opportunity Fund/Maximizing Academic Potential**

Penny McPherson  
Assistant Vice President to Academic Enrichment, Director, EOF/MAP Glassboro  
Savitz Hall, 3rd floor  
856.256.4080  
Camden, Academic Building, 2nd Fl.  
856.256.9230  
mcpersonp@rowan.edu

To be considered for the EOF program, students must complete the Common Application and select EOF. The four main requirements for applicants before consideration are:

1. At least one year residency in New Jersey.
2. A background of historical poverty as indicated by the Free Application for Federal Student Aid (FAFSA) and supporting documentation.
3. Potential for college level success as demonstrated by an interview, letters of recommendation, etc.
4. A High School or General Equivalency Diploma.

The Maximizing Academic Potential (MAP) Program is a special admissions program designed for highly motivated students who do not meet Rowan University’s regular admission criteria. There are no financial eligibility criteria for the MAP program, although students are encouraged to complete the FAFSA. To be considered for the MAP program, students must submit the standard Rowan University admissions application with supporting documentation. Admissions officers identify potential candidates, review admission information and conduct student interviews to determine admittance.

Selected students of the EOF and MAP program are conditionally admitted and required to participate in a six week summer bridge program. This program provides college survival skills, leadership skills, academic coursework and support, and information concerning the college environment. During the summer program, the EOF/MAP staff evaluates the students’ demonstrated ability to successfully transition into Rowan University and makes a recommendation regarding the appropriateness of fall admission.
EOF/MAP students are assigned an EOF/MAP counselor to provide a broad range of academic and personal support services, including counseling, tutoring, and leadership development from freshman year through graduation. EOF/MAP Counselors interact with students in individual and small group settings. Financial assistance is provided to qualified students.

**Greek Affairs**

**Kelvin Rodriguez**  
Coordinator  
Chamberlain Student Center, Suite 210  
856.256.4296  
rodriguezk@rowan.edu

Fraternities and sororities are Greek-letter organizations that join together to offer fellowship, leadership opportunities, participation in campus activities, and service to both the University and surrounding communities. The Greek Affairs Office serves as the primary liaison to the recognized Inter/National fraternities and sororities at Rowan University. The mission of the Greek Community at Rowan University is to encourage and promote intellectual curiosity through academic achievement and to develop the personal and social skills of students by providing leadership opportunities through self-governance. In addition, the Greek Community strives to promote service through the University's co-curricular programs and through community involvement. The co-curriculum, established by Rowan University's Mission Statement on student development, promotes growth toward attitudinal and ethical development; and, responsibility to self and others through active participation in the betterment of the campus and larger community. The Greek Community is expected to plan its activities with academic and co-curricular mission of the University in mind.

**Healthy Campus Initiatives**

**Allie Pearce, MA**  
Assistant Director, Healthy Campus Initiatives  
Wellness Center at Winans Hall  
856.256.4333  
hci@rowan.edu

Healthy Campus Initiatives (HCI) at the Wellness Center educates students about making healthy decisions and choices regarding their personal wellness that will enhance their college experience. All members of the Rowan community are encouraged to attend workshops, programming, and campus events aimed at increasing knowledge and developing attitudes and beliefs that promote health and wellness in several areas. These areas include suicide prevention, sexual health education, sexual assault prevention, substance abuse prevention, and mental health outreach. Students are given opportunities for leadership through internships, field placements, and becoming members of the peer education group, StudentCare. Several groups meet weekly for students to learn to deal with stress and relationships.

**Office of Career Advancement (OCA)**

**Andrew Duffy**  
Associate Director  
Savitz Hall  
856.256.4456  
duffya@rowan.edu

The mission of the Office of Career Advancement (OCA) is to engage students in the development and implementation of meaningful educational and career goals consistent with their personal values, interests, and abilities. The OCA helps students and alumni create an effective framework for a lifetime of active career management through one-on-one counseling, workshops, recruitment programs, career fairs, job posting databases and by promoting strong partnerships with employers, academic departments, and the university community.

**Orientation and Student Leadership Programs**

**Drew Tinnin**  
Senior Director  
Savitz Hall 203  
856.256.4041  
oslpo@rowan.edu

The Office of Orientation and Student Leadership Programs (OSLP) assists new students in their transition to Rowan University. Orientation and Student Leadership Programs directs programs such as freshman and transfer orientation and Leadership Rowan.

Orientation and Student Leadership Programs begins the integration process of new students into the intellectual, cultural, and social climate of the institution, and provides a capstone to students’ co-curricular learning and development through
Leadership certification.

**Leadership Rowan**
Rowan University recognizes the value of preparing students for leadership roles. Through education, enrichment and empowerment, Leadership Rowan enables students to transform themselves, their communities, and the world through three levels of leadership experiences:

1. Leadership Training
2. Leadership Application and Organizational Effectiveness
3. Leadership Sustainability

**Orientation**
Through on-campus and online orientation programs, undergraduate students are introduced to the concepts of academic success, co-curricular enrichment, dual community membership, & holistic wellness and discover pathways to engagement through STEP UP. Orientation programs provide opportunities for parents & family members to support their student’s transition. The Office of Orientation and Student Leadership Programs coordinates and implements these programs in collaboration with academic and student service units who share the responsibility for welcoming our new students and their parents and family members.

**Recreation Center**
Tina Pinocci  
**Associate Vice President**  
856.256.4900  
pinocci@rowan.edu

The Student Recreation Center staff is committed to providing exceptional programs, services, and facilities that promote and encourage a balanced, healthy lifestyle. We are dedicated to creating a safe and welcoming environment that enhances student learning and skill development, fosters enjoyment and appreciation for recreational life, and enriches the quality of life for the Rowan Community.

Rowan University’s Recreation Center is a three-story, 76,000 square foot recreational activities facility. The building houses an eight-lane swimming pool, a three-lane indoor track, a three-court multi-sport gymnasium, five racquetball courts (one used for indoor cycling) and a group exercise room. The facility also has a 9,000 square foot fitness and weight room, a conference room, locker/shower facilities, and a smoothie bar and café. The main desk of the facility operates as ID access/control area, equipment checkout center, and as the program/membership registration area. Access to the facility is granted to full time students with a current and active Rowan ID card. Students taking 6 or fewer credits may purchase a membership.

The Recreation Center offers a broad range of programs and services; coordinating or co-sponsoring over 200 programs annually in the following programmatic areas: intramural sports, fitness and wellness, aquatics, sport clubs, informal sports and special events. The building maintains 18 hour days during the academic year, with modified hours during the weekends, holidays, and breaks over the course of the year. Although the foundation of our department rests on serving student recreational needs as a priority, we are also committed to a broader constituency.

**Residential Learning and University Housing**
Travis Douglas  
**Assistant Vice President for Residential Learning and Inclusion Programs**  
Savitz Hall, Room 103  
856.256.4266  
housingquestions@rowan.edu

The Office of Residential Learning and University Housing exists to support each individual resident student in all areas of their university experience. We expect that each resident student will play an active part in the development of a community that embraces diversity, personal growth, scholarship and respect of self, others, and the environment.

**Residential Learning Programming:** Residential Learning and University Housing coordinates programs designed to integrate high quality engagement with learning. The Residential Learning staff works with various members of the university community to provide a living/learning environment that is unique to the Rowan Experience.

**Mandatory Housing:** All unmarried undergraduate full-time students, under the age of 21, whether or not emancipated, who will not be living in the residence of their parents or legal guardian, must reside in the university residential facilities until completion of their second academic year (or four full-time semesters).

**Residential Facilities:** Rowan University offers two types of on-campus co-ed housing, residence halls and apartments. The Residence Halls are as follows: Evergreen Hall, Laurel Hall, Mullica Hall, Magnolia Hall, Mimosa Hall, Oak Hall, Chestnut Hall, and Willow Hall. The Apartments are as follows:
Edgewood Park Apartments, Rowan Blvd. Apartments, Triad Apartments, and Rowan Townhouses
On-campus apartments are reserved for upperclassmen. Students with questions concerning housing facilities, arrangements or contract agreements should be directed to the Residential Learning and University Housing Office, Savitz (856) 256-4266.

Social Justice, Inclusion and Conflict Resolution
Gardy J. Guiteau
Director
Robinson Hall, Room 118
856-256-5495
socialjustice@rowan.edu

Formed through the collaborative efforts of students, faculty and staff, the Office of Social Justice, Inclusion and Conflict Resolution exists to promote an inclusive university community where individuals are empowered to grow in their understanding of identity, social justice, and the skills needed to lead a more just society. The office provides dedicated physical space and resources for underrepresented and underserved students at Rowan University. The office serves as an umbrella for the following programs and centers:

Harley E. Flack Student Mentoring Program - The Harley E. Flack Student Mentoring Program was founded in 1992, and provides a comprehensive array of mentoring services. Services are designed and delivered using methods based on strong evidence, which indicates that these programs support retention and student success.

Multicultural Center - The Multicultural Center is an evolution of the long established Office of Multicultural Affairs, which has been merged into the new structure. The Multicultural Center serves as a resource for students from diverse cultural and identity groups, and is intended to promote the celebration diversity, development cross cultural understanding and competency, and inclusion of diverse people in the Rowan community.

Spiritual Exploration Center - The Spiritual Exploration Center aims to promote a campus environment that is inclusive of student’s religious and spiritual identities and allows for expression and exploration of spiritual and religious beliefs and values. Programs and initiatives of the center will advance understanding and appreciation of the contributions of communities of faith.

LGBTQIA+ Center - The LGBTQIA+ Center located in the Office of Social Justice, Inclusion, and Conflict Resolution (SJICR) aims to create a safe space for students who identify as LGBTQIA+ and support students’ exploration of their identity. SJICR staff working to fulfill the goals of this center advocate for campus inclusion of the LGBTQIA+ community at Rowan.

Women’s Center - The Women’s Center develops programming aimed at addressing the needs of all women and empower students to promote a campus community inclusive of all genders and respectful of gender differences. Programs and initiatives of the center will support efforts to address inequity, promote understanding of women’s and gender issues, and create a space for women to build bridges and a strong sense of community.

Student Activities
Constantine Alexakos
Assistant Director
Chamberlain Student Center, Room 209
856.256.4696
alexakos@rowan.edu

The Office of Student Activities (OSA) supports the mission of the Division of Student Life. This office is also responsible for oversight and advising of both Rowan After Hours and Student University Programmers. Through constant collaboration with campus partners, the OSA plans and implements co-curricular programs for all students that are designed to stimulate personal development, create opportunities for student engagement, and contribute to building campus community.

Student Center
Tina Pinocci
Associate Vice President
Chamberlain Student Center
856.256.4604
pinocci@rowan.edu

The Chamberlain Student Center serves as a safe and welcoming environment with unlimited opportunities for personal development and enhanced student learning experiences. Through quality services, programs and facilities, the Student Center is "more than just a building."
The main administrative office of the Chamberlain Student Center is responsible for a variety of services within the building, including scheduling and reservations for meeting or program spaces, assistance with set-up or AV tech needs, employment of student staff, and enforcement and interpretation of building policies and procedures. The administrative staff also oversees the following service areas within the facility: the Information Desk, ID Processing Center, Profs Place, and the game room.

Additional offices and services housed within the facility include: Student Activities, Greek Life, RowanCard Services, Volunteerism, Community Engagement & Commuter Services, Student Government Association, Student University Programmers, Mailroom and Campus Dining Services (Food Court, Marketplace, Owl's Nest, Profs Place, Starbucks, and RoGo Convenience store and Catering).

### Student Enrichment and Family Connections

**Julie A. Peterson**  
**Director**  
**Student Center, Room 216**  
**856.256.4596**  
**peterson@rowan.edu**

Rowan University’s Parent and Family Program commits itself to establish and maintain a sound partnership with parents and guardians to enhance and support their student’s university experience and promote student success.

We understand that you have a large personal and financial investment in your son’s or daughter’s education, and thus Rowan University. You want what we want: success for your son or daughter, and it is right and proper that you be a part of our community in a way that promotes the success of that student we all care so much about.

The Office of Student Enrichment and Family Connections achieves this collaborative partnership by being available to assist and guide parents and guardians in facilitating better communication with the University. The office works to nurture the relationship with parents and family members of Rowan University students by supporting student achievements and helping carry out the University carry out its mission. Parents and guardians are natural allies with the University as we seek to help students find success. Parents' hopes and goals are consistent with the Division of Student Life’s mission to "cultivate the development of he whole person within a global society" by providing encouraging healthy life choices, multicultural competency, personal and professional growth, campus and community involvement, civic responsibility, and leadership development. The Parents and Family Program has a special interest in establishing cooperative relationships with academic departments and student services to establish parents ad a vital constituent of the University.

**Parents' Orientation**

Designed to complement Student Orientation, Parents' Orientation helps parents and family members get acquainted with the many different programs and services offered to students and addresses questions and concerns each may have. Interactive programs are offered on:

- Academic Requirements
- Expectations
- Student Services
- College Success
- Coping with "empty-nest" syndrome

**Welcome Weekend – “Aboard The Brown-Eyed Susan”**

This is an opportunity to meet other parents and give yourself some much needed pampering after a long day of moving boxes into your student's room. Take advantage of services including reflexology, blood pressure screening, manicures, relaxation techniques, massages, games, healthy snacks and activities based on "STEP Up!" It's a wonderful way to send yourself off in style.

**Family Weekend**

Offered in the fall each year, Family Weekend celebrates the parents, siblings and other family members of our students. Rowan University families are invited to attend in this time-honored tradition and join their students for the traditional picnic, football game, and other exciting events.

### Student Government Association

**Chamberlain Student Center**  
**856.256.4540**

The Student Government Association (SGA), the official voice of students in University affairs, coordinates student activities on campus. All fulltime and part-time undergraduate students become members of the SGA upon payment of the student activity fee.

The SGA maintains meaningful student input in University affairs, serves as a funding source and coordinating group for student activities and provides services for the welfare of the students and the University. The SGA encourages the concept
of diversity by involving students with as broad a variety of ideas and backgrounds as possible. To accomplish this, SGA opens many positions to students through appointment or election. These range from serving as class advisory board members to being president of SGA.

An elected executive board and senate consisting of student representatives of academic departments, classes and bureaus, administer the SGA. Students interested in running for or being appointed to a position in SGA may seek information in the SGA suite on the first floor of the Student Center or call 856-256-4540.

**Student Health Services**

Scott Woodside  
**Director for Student Health Services**  
856.256.4333  
wellnesscenter@rowan.edu

Student Health Services (SHS) at the Wellness Center strives to remove health-related barriers to learning, to promote optimal wellness, to enable students to make informed decisions about health issues, and to empower students to be self-directed and well informed health care consumers.

Licensed physicians, nurse practitioners and registered nurses provide quality, professional healthcare to all students who are matriculated and currently enrolled at Rowan University.

All incoming matriculated students must provide SHS with a complete health record that can be downloaded from our website. This packet has simple, yet detailed information regarding your immunization history and other health requirements that must be submitted by July 15th (December 15th for Spring admission).

All matriculated students are required to have health insurance as a condition of full time enrollment at Rowan University.

To enroll in the health insurance plan offered by United Healthcare, visit [www.firststudent.com](http://www.firststudent.com) and follow the instructions. To waive the Rowan University health insurance plan, visit the Health Insurance tab on the Bursar’s Office website and follow the instructions [www.rowan.edu/bursar](http://www.rowan.edu/bursar) Failure to waive the United Insurance plan will result in automatic enrollment into the plan. Further information is available at the "Health Insurance" or the "Mandatory Pre-Entrance Health Forms" tabs at the left on our website [www.rowan.edu/health](http://www.rowan.edu/health)

**Student Organizations**

At Rowan University, SGA charters and finances over 100 student clubs and organization. These organizations provide a wide variety of co-curricular and extra-curricular activities to meet the varying interests of Rowan University students.

Students can become members of organizations by contacting the organization's president or advisor directly. All organizations have a mailbox located in the SGA suite. Students interested in forming a new organization can request a new charter for it from SGA.

Student organizations are financed from fees charged to all matriculated undergraduate students. The Student Government Association assumes the responsibility for distributing all monies to the various organizations.

**Volunteerism, Community Engagement & Commuter Services**

Andrew Perrone  
**Assistant Director**  
Chamberlain Student Center, Suite 210  
856.256.4597  
perrone@rowan.edu

The Office of Volunteerism, Community Engagement & Commuter Services provides programming, resources, and support to promote a Rowan community of active citizens. We work collaboratively with university faculty and community partners to design a range of curricular and co-curricular service-learning opportunities. Students who engage with service learning, volunteerism and community engagement at Rowan will reflect on meaningful volunteer experiences as they develop a lifelong commitment to their communities. We also collaborate with Glassboro Administration and officials to assist with community concerns that may arise related to Rowan students sharing community life with residential neighbors. Furthermore, the VCECS office also provides programming and support resources geared towards Rowan University's commuter student population.

**Wellness Center at Winans Hall**  
wellnesscenter@rowan.edu

The overall mission of the Wellness Center of Rowan University is to provide our students with quality medical and mental health care as well as education about making health choices and decisions. Our Student Health Services (SHS) strives to remove health-related barriers to learning, to promote optimal wellness, to enable clients to make informed decisions about health issues, and to empower students to be self-directed and well informed health care consumers. Our Counseling & Psychological Services (CPS) provides quality mental health and AOD counseling services to students experiencing academic, developmental, social and environmental stressors. CPS dedicated staff focus on helping students develop...
effective coping strategies and make healthy decisions and choices in managing their experiences, stressors and symptoms, aimed at improving their overall level of functioning. Our office of Healthy Campus Initiatives (HCI) uses evidence-based practices to reach students, faculty and staff through the development of initiatives and interactive programs to keep the Rowan community informed of current health trends. Students are encouraged to take an active part in their own personal health as well as the health of the campus as a whole. Overall, The Wellness Center is dedicated to involving the Rowan community in the ever-changing journey to wellness.

Division of Strategic Enrollment Management

Jeff Hand
Vice President
Savitz Hall, Third Floor
856.256.5185
handj@rowan.edu

The Division of Strategic Enrollment Management encompasses several key areas at Rowan University committed to attracting high caliber students and retaining them through graduation. In short, we are a division dedicated to our students' success. SEM includes the departments of Admissions, Financial Aid, University Web Services, the International Center, Conference & Event Services, Student Diversity, Office of University Scheduling, and in the Retention area, University Advising Services, University Transfer Services, University Retention Systems, the Office of Academic Transition & Support Programs, the Tutoring Center, Testing Services, and the Basic Skills Math program. Together, these departments recruit students, help finance their education, advise them on college and career choices, and communicate with them via the Rowan University web and mobile sites. Our main office is in Savitz Hall but, SEM is literally all over Rowan. While you may not have realized it, we met you before you first stepped foot on campus, we’ll advise you while you’re here and, hopefully, our impression will stay with you long after you leave. The Division of Strategic Enrollment Management provides academic support and retention programs for students from their first semester through their graduation.

Admissions

Albert Betts Jr.
Director
Savitz Hall, Second Floor
856.256.4200
admissions@rowan.edu

Rowan University admits applicants to undergraduate study on the basis of academic and personal qualifications. Recruitment and admission procedures are designed to enroll students who will benefit from and contribute to the University. In addition to the traditional admission program, the University is also interested in providing educational opportunities for non-traditional students, i.e., the disadvantaged, minority students, adult students, veterans, etc.

NOTE:

Admission to all Rowan post-baccalaureate and graduate programs (both traditional-format and non-traditional-format) as well as admission to any Rowan non-traditional-format (online, off-site, hybrid, accelerated) undergraduate program is coordinated by Rowan Global Learning & Partnerships.

Rowan's admission process adheres to general policies established by the New Jersey Commission on Higher Education and the Rowan University Board of Trustees. Applicants are carefully considered in view of their total secondary school record, performance on the SAT I or ACT examination, school and community activities, post-secondary school experiences, and the University's estimate of the applicants potential as students and members of society. Applicants for Art, Music, Theatre and Dance are also required to complete an on-campus portfolio review or audition and interview.

Deadlines for submitting freshman application and official records:

January - Applicants should take the SAT or ACT exam no later than the January testing date to ensure receiving all test scores by the admission deadline date.

March - All applications, official high school transcripts and SAT/ACT scores, must be complete and received by the Admissions Office by March 1.

Applications

Rowan University accepts The Common Application for all freshman applicants. Transfer students cannot apply for admission via The Common Application and must use Rowan's internal application. Applicants should follow the links on the Rowan website to access these applications.
Eligibility for Admission
Applicants for admission to Rowan University must present certificates or transcripts proving graduation from an approved secondary school, or they must indicate that graduation is scheduled during the current scholastic year. GED equivalencies are considered in lieu of high school diplomas. Applicants should ensure that this information is forwarded to the Admissions Office.

Applicants must show they have completed or are in the process of completing a minimum of 16 college preparatory courses to be eligible for consideration for admission. The New Jersey Commission on Higher Education has set the following college preparatory guidelines for admission:

- 4 units - English
- 2 units - laboratory science*
- 3 units - college prep mathematics (Algebra I & II, geometry)*
- 2 units - social studies
- 5 units - Additional work in at least two of the following areas: English, history, languages (minimum of two units in one language), mathematics, social science and science.

*The College of Engineering seeks applicants with 3 units of laboratory science including chemistry and physics and 4 units of college preparatory mathematics including pre-calculus (calculus preferred).

Entrance Examinations
Applicants should submit either the SAT I or the ACT test scores in support of their application to Rowan University.

Scholastic Assessment Test
SAT I tests are given in numerous centers, usually in high schools, throughout the United States. Applications should be sent to College Entrance Examination Board, P.O. Box 592 Princeton, NJ 08540, or online at www.collegeboard.com. Applications should request that results be sent to Rowan University: C.E.E.B. Code 2515.

American College Testing Program
Student registration manuals are available in most high schools. Materials can also be obtained from ACT, P.O. Box 168, Iowa City, Iowa 52240, or online at www.act.org.

Test-optional Admission
Test-optional admission is available to freshman candidates who meet specific criteria. Further information is available at http://www.rowan.edu/home/undergraduate-admissions/applications/freshman/test-optional-admissions

Deferred Admission
Rowan University is aware and, in many cases, approves of the feeling of many high school seniors that a year’s experience between high school and college would be beneficial. A year away from formal academic work frequently sharpens the student’s sense of direction and purpose. Any student who is accepted, pays the admission deposit, and then chooses to defer registration in courses at Rowan, must request deferred admission status before June 1. Deferred admission is not an option for those admitted to special admission programs or the EOF program.

Out-Of-State Applicants
Rowan University welcomes applications from out-of-state students.

Advanced Placement
Rowan University awards credit for the College Entrance Examination Board Advanced Placement examinations for scores of 3, 4, or 5. Candidates must arrange to have official score results forwarded to the University Registrar. Upon written request, degree credit equivalent to one semester’s work (3 s.h.) will be awarded in that particular subject or its equivalent. Advanced placement credit is recognized as fulfilling general education requirements where applicable and will be considered as un-graded, transfer credit. The College-Level Examination Program (CLEP) is a series of examinations that allow students to demonstrate their knowledge in a wide range of subjects and receive credit. (See additional information in Course Credit by Examination.)

Campus Visits & Interviews
We encourage prospective students to visit our campuses. Campus tours are offered daily throughout most of the year. The University also holds numerous open house programs throughout the year. Specific dates are listed in admissions publications and on the Rowan University website www.rowan.edu For those interested in studying at the Camden Campus, you may contact the Camden Admissions officer at 856.361.2900 for a tour and information. Individual interviews are not required unless specifically requested by the Admissions Office.

Transfer Admission
Students who have completed a minimum of 12 semester hours of transferable credit by the application deadline are classified as transfer applicants. Rowan University admits transfer students on a competitive, space available basis. The cumulative GPA for all college work is the primary consideration for Rowan University’s admission decisions. Although most programs require a 2.0 minimum GPA, some majors may also require completion of specific courses prior to admission. Transfer applicants should complete the following steps:

1. File an application for admission with all required documents and the $65 non-refundable application fee by March 1 for September entrance
2. Arrange to have official transcripts of all previous academic work sent from each college attended to Rowan’s Admissions Office. Students with fewer than 24 credits completed by the deadline are also required to submit SAT or ACT scores and their high school transcripts.

3. Payment of a non-refundable enrollment deposit after being offered admission and then enrollment in courses, completes the admission process.

Transfer students are encouraged to take advantage of information available through their community college transfer counselor, the Rowan University transfer equivalent information available on our website, and the NJ Transfer initiative www.njtransfer.org

Students who have been dismissed by their previous college are not immediately eligible for admission to Rowan University. Students must wait at least one year and show appropriate interim activities to be eligible for consideration. Students seeking to transfer into the Art, Music or Theater and Dance programs must contact the appropriate department to arrange for a portfolio review or audition. These evaluations must be completed before the application deadline. An admission decision cannot be made without results of the performance evaluation. Because transfer admission decisions usually are made on the basis of incomplete transcripts of credit, they are always subject to review on the basis of later information. Offers of admission may be withdrawn if students do not complete their semester in progress satisfactorily. The registrar’s office and the faculty make specific evaluations of college transcripts for transfer of credit in the student’s major department. Students will receive an evaluation of previous coursework at the time of acceptance. Although applicable credits transfer, grades earned at other colleges do not affect the Rowan GPA.

Mid-Year Admission
Rowan University generally has junior level transfer openings at mid-year. Although other applicants may be considered on a space available basis, recent graduates of New Jersey community colleges and those who have completed at least 60 transferable credits from a four-year institution receive priority consideration for mid-year admission. The application deadline for consideration for spring admission is November 1.

Application Fee & Enrollment Deposit
A $65 non-refundable application fee is required of all applicants. After notification of admission to Rowan University, applicants must send a $100 non-refundable enrollment deposit by the deadline given in the admission letter. This deposit reserves a place for students in the formal enrollment process.

Fee Waiver: The $65 application fee may be waived by the University upon written certification by the applicant’s school counselor or other school official that payment would constitute a financial burden to the applicant. Such requests must accompany the application.

Matriculation: The term matriculation means a student has been formally admitted to Rowan University. A student becomes matriculated by going through the admission process and paying the $100 enrollment deposit. The last step in the matriculation process is enrollment in classes. Entering freshmen and transfer students must register for courses in the semester for which they were accepted to maintain matriculation status.

Special Admissions - Maximizing Academic Potential
Rowan University is deeply committed to supporting the continued and increased enrollment of qualified students from underrepresented groups. To this purpose the University has developed the Maximizing Academic Potential program (MAP). This program enrolls qualified minority and other first generation college students based on the evaluation of their secondary school achievement, recommendations, and assessments of their motivation to succeed. Students admitted under the MAP Program are required to attend a summer enrichment program.

Educational Opportunity Fund (EOF) Program
This program provides access to college for students who are educationally and economically disadvantaged, and who are motivated and have the potential for success.

Students are admitted on the basis of need for more appropriate educational opportunities, their leadership potential, academic promise and financial need rather than past academic achievement alone. Traditional admission criteria are not used to the same degree to evaluate EOF applicants. Emphasis is placed on personal recommendations, and assessment of potential rather than the accu-placer score, high school achievement and rank in class. GED equivalencies may be accepted in lieu of the high school diplomas.

The Admissions Office in conjunction with the EOF Office selects students. EOF students are required to successfully complete a structured summer program prior to entering their first fall semester. In the summer session, students are evaluated in various academic areas and receive concentrated developmental and supplementary instruction and tutoring as necessary. These supportive services are extended throughout the academic year.

Students who successfully complete the Pre-College Institute are invited to return for the fall semester and are fully integrated into the University and enrolled as matriculated students. The program staff provides a comprehensive program of guidance and counseling for EOF students. Information concerning financial aid available to EOF students can be found under or by contacting the Rowan University Admissions Office.
**International Admissions**

Rowan University welcomes international applicants. The Office of International Initiatives & Support Services is responsible for the recruitment and support of international students at Rowan University. It coordinates programs and activities and provides a variety of services in cooperation with the Rowan campus community. For detailed information, please contact The Office of International Initiatives & Support Services located on the first floor of Robinson Hall at internationalapplicants@rowan.edu or 856.256.4239 or visit our website www.rowan.edu/internationalstudents

**Placement/Basic Skills/Testing Requirements**

Basic skills courses provide an appropriate curriculum for students with documented weaknesses in the areas of reading, mathematics, and writing. These courses also reinforce the general academic skills needed for a successful academic career. Transfer students with 30 or more transfer credits are exempt from basic skills courses and basic skills placement exams. Students must take any required basic skills course(s) beginning in their first semester at Rowan and each subsequent semester until the requirements have been fulfilled. Students do not receive graduation credit for passing basic skills courses. These courses do not count toward the minimum number of semester hours needed to complete the student’s major and/or degree requirements. The credits do count toward part- or full-time status for enrollment and financial aid purposes. Students with outstanding basic skills requirements after their first semester at Rowan are subject to registration holds until verification of appropriate progress can be established. For more information, please email testingservices@rowan.edu

**Re-Entrance/Re-Admission To The University**

Rowan students who have lost their matriculated status due to inactivity, withdrawal, or dismissal before completing their major programs and/or being awarded their bachelor’s degree must apply for reenrollment to the University. Students seeking re-enrollment should visit the website www.rowan.edu/atp and click on the Re-enroll at Rowan link on the left hand side of the webpage. From there, students should complete the re-enrollment inquiry form. Students will be notified via email of their re-enrollment status. Contact Tiffany Fortunato at fortunato@rowan.edu in the Office of Academic Transition & Support Programs with questions.

**Conference & Event Services**

Steven C. Farney, Sr.
Director of Operations
James Hall
856.256.5189
scheduling@rowan.edu

The Office of Conference & Event Services is dedicated to strengthening the Rowan University community by providing comprehensive event management services, facilitating the effective and efficient year-round use of university resources, and cultivating lasting relationships with clients, partners, and service providers.

As an ACCED-I certified One-Stop Shop, the office delivers exceptional service through industry best practices. Providing clients with one contact, one contract, and one invoice for all aspects of their meeting or event results in streamlined communication and seamless delivery of services.

**Financial Aid**

Pamela Gordy
Interim Director
Savitz Hall, First Floor
856.256.4250
financialaid@rowan.edu

The Financial Aid Office strives to:

- Provide access to higher education by effectively managing federal, state, institutional, and private financial resources while adhering to any applicable laws, regulations, and policies.
- Implement strategies to help recruit, retain, and graduate a diverse and talented student body.
- Guide students and parents with financial aid information and resources that will enable students to achieve their educational goals.

The Financial Aid Office is a centralized department servicing all students at Rowan University. The Stratford Campus Financial Aid Office supports students enrolled in the Rowan School of Osteopathic Medicine and the Graduate School of Biomedical Sciences and our Cooper Campus Financial Aid Office supports students enrolled in the Cooper Medical School of Rowan University.
How to Apply

Students seeking assistance must file the Free Application for Federal Student Aid (FAFSA). The FAFSA is an application used by most Colleges and Universities to determine need and eligibility for federal, state, and institutionally sponsored financial aid. This includes grants, educational loans, and work-study programs. The FAFSA is available on the web at http://www.fafsa.ed.gov. There is a paper version of the FAFSA which may be obtained only by calling 1-800-4-FED-AID. We encourage applicants to file their FAFSA on the web. It is very important to designate Rowan University as a college choice by including Rowan University’s federal school code 002609 on the FAFSA.

Department of Education Title IV Programs

Federal Pell Grant Program

Pell Grant is an entitlement program made available by the federal government. The amount of any grant is based on the results of a formula established by the federal government. Additionally, the amount of the grant is affected by the amount of funds available to the program and the number of credits the student is (will be) taking. To be eligible for this grant, students must meet other criteria:

1. Students must matriculate in an eligible, degree seeking program.
2. Students must be U.S. citizen or an eligible non-citizen.
3. Students must demonstrate financial eligibility as determined by the need analysis formula and Pell Grant table.
4. Pell has a lifetime limit of 12 semesters of full-time study. * Two semesters of half-time enrollment would equal 1 semester of full-time enrollment. Two semester of less than half-time enrollment would equal one semester of half-time enrollment.

Federal Supplemental Educational Opportunity Grants

Federal Supplemental Educational Opportunity Grants (SEOG) are available to students who demonstrate exceptional financial need and who also receive Pell Grants. Students applying for financial aid are automatically considered for a Supplemental Educational Opportunity Grant.

Federal Stafford Student Loan

Through the Federal Direct Student Loan Program matriculated students enrolled at least half time may borrow a maximum of $5,500 for their freshman year, $6,500 for their sophomore year, and up to $7,500 for both their junior and senior years. Students apply by completing the Free Application for Federal Student Aid (FAFSA), indicating that they are willing to accept financial aid in the form of a loan. There are two types of Federal Stafford Loans:

1. Subsidized: If the student demonstrates need based on the FAFSA, the federal government will pay the interest charge while the student is enrolled at least half-time. Students must pay the principle and interest during the repayment period (6 months) following graduation or withdrawal from the university.
2. Unsubsidized: All matriculated students enrolled for six credits or more may receive a Federal Unsubsidized Stafford Loan regardless of family income. However, the student will have to pay all interest charges (interest accrues even while the student is attending the University) until the loan is fully repaid.

Federal Parent Loan for Undergraduate Students (PLUS)

Parents of matriculated, dependent, undergraduate students enrolled at least half-time and making satisfactory academic progress towards a degree or certificate may borrow up to the cost of education from the federal government. Parents must be citizens or eligible non-citizens of the United States and pass a financial credit check. The PLUS loan, when added to other financial aid and/or resources, may not exceed the total cost of education for that academic year.

TEACH Grants Grants offered to students pursuing a career in teaching in high need subject areas i.e. math, reading specialist, sciences, etc. The grants are for up to $3,712 each year. Students must teach four years in a low-income school district to earn their grants. Students may receive up to $14,848 for Undergraduate study and up to $7,424, for Graduate study. If the recipient does not end up teaching at a low-income school district for the required four years, the grant will be treated as an unsubsidized student loan and must be repaid.

Federal Work Study Program

With funds supplied by the Federal government, Rowan University provides jobs both on and off campus during the academic year for students who qualify. Students should indicate an interest for this program on the FAFSA. Many work-study positions provide skills and experience, which will assist students in their career development. Students can arrange their hours to the time they have available to work. Hours worked cannot exceed 20 per week while classes are in session or 30 per week when classes are not held. For more information, please see our web site at the following link: http://www.rowan.edu/home/financial-aid/undergraduate-aid/work-study.

Institutional Work Study Program

Students not eligible for Financial Aid based on need and are interested in employment should apply directly to the hiring department. The University offers student jobs during the academic year and summer. Positions vary from general office to professional opportunities. Many work study positions provide skills and experiences, which will assist students in their career development. Students can arrange their hours to the time they have available to work. Hours worked cannot exceed 20 per week while classes are in session or 30 per week when classes are not held. For more information, check our web site.

FINANCIAL AID PROGRAMS AVAILABLE TO RESIDENTS OF NEW JERSEY

Tuition Aid Grants (TAG)
New Jersey Tuition Aid Grant (TAG) recipients must be residents of New Jersey for 12 consecutive months prior to receiving this grant. In addition, recipients must enroll as full-time undergraduates and must demonstrate financial need. Actual awards depend on state funding and the tuition charges. TAG awards are renewable annually provided continued eligibility. The New Jersey Higher Education Assistance Authority notifies students of their eligibility.

Educational Opportunity Fund
Established by the New Jersey State Legislature in early 1968, the Educational Opportunity Fund (EOF) helps disadvantaged students. Eligibility is judged on financial need and motivation for future academic work, not just on past grades or test scores. Students must live in New Jersey for twelve months before receiving this aid. To be considered for this program, students must submit the EOF Freshman application for admissions. These grants are renewable based upon continued eligibility. Rowan University’s Educational Opportunity Fund Offices on the Glassboro and Camden campuses can provide more information.

In order to receive federal or state financial aid, all students at Rowan University must demonstrate satisfactory academic progress towards the completion of a degree. At Rowan University, financial aid SAP is reviewed annually at the end of the spring term. The standards for financial aid SAP purposes are different from the academic requirements of the University. Financial Aid SAP reviews three progress standards; Grade Point Average (GPA), Completion Rate and Maximum Time Frame to degree completion.

In some instances, students experiencing academic difficulty may find that they are permitted to remain in school; however, they may not receive financial aid until minimum standards are achieved. Individuals not meeting the financial aid SAP standards are notified within 30 days of the spring term grade posting through the U.S. Postal Service.

Individuals not making SAP have the right to appeal the denial of financial aid. Appeals can be based upon extenuating circumstances that occurred during the academic year or individuals not having extenuating or special circumstances can appeal based upon the submission of a developed “academic plan”. All appeals are reviewed by a committee. Decisions are made to maintain compliance with federal guidelines.

FEDERAL RETURN OF TITLE IV FUNDS POLICY
Federal regulations require Title IV financial aid funds to be awarded under the assumption that a student will attend the institution for the entire period in which federal assistance was awarded. When a student withdraws from all courses for any reason, including medical withdrawals, he/she may no longer be eligible for the full amount of Title IV funds that he/she was originally scheduled to receive. The return of funds is based upon the premise that students earn their financial aid in proportion to the amount of time in which they are enrolled. A pro-rated schedule is used to determine the amount of federal student aid funds he/she will have earned at the time of the withdrawal. Thus, a student who withdraws in the second week of classes has earned less of his/her financial aid than a student who withdraws in the seventh week.

Once 60% of the semester is completed, a student is considered to have earned all of his/her financial aid and will not be required to return any funds.

Federal law requires schools to calculate how much federal financial aid a student has earned if that student:

- completely withdraws, or
- stops attending before completing the semester, or
- does not complete all modules (courses which are not scheduled for the entire semester or payment period for which he/she has registered at the time those modules began.)

Based on this calculation, Rowan University students who receive federal financial aid and do not complete their classes during a semester or term could be responsible for repaying a portion of the aid they received. Students who do not begin attendance must repay all financial aid disbursed for the term.

Scholarships Available to Incoming Freshman
Rowan University rewards academic success through our scholarship program. Scholarships are awarded to qualified first-year students. Scholarships are renewable for an additional six semesters provided students maintain a 3.0 GPA and maintain continuous full-time enrollment. For further information contact the Admissions Office.

Rowan University Scholars Program
This is a merit-based scholarship program to reward recent high school graduates who have achieved academic distinction as indicated by high school percentile rank and SAT I (math + critical reading) score. Scholarships range from $2,000 to $10,900 depending upon student’s qualifications.
Doris V. Broome Scholarships
Offered to incoming freshmen with outstanding academic records (1,100 SAT I, class rank in top 10 percent). 3.0 GPA required for renewal. $1,000 yearly for four years.

William H. Myers Scholarships
Offered to incoming freshman students enrolled in the Educational Opportunity Program and having an outstanding academic record. $1,000 yearly for four years. 2.5 GPA required for renewal.

Louise MacDonald Scholarships
Offered to incoming freshman students enrolled in the Educational Opportunity Program and having an outstanding academic record. $1,000 yearly for four years. 2.5 GPA required for renewal.

Fischer-Reisig Scholarship
Offered to an incoming transfer student from Gloucester, Camden or Burlington County College who is a single parent. Education major is preferred. $5,000 per year. Maximum two years. 3.5 GPA required and must be maintained for renewal.

Bessie Maxwell Scholarship
Offered to incoming freshmen student in the Educational Opportunity Program from East Orange or Newark, NJ. 3.0 required GPA and SATs over 1,000.

Alumni/Broome Scholarships
Offered to incoming freshmen with outstanding academic records (1,100 SAT I, class rank in top 10 percent). 3.0 GPA required for renewal. Scholarships range from $750 to $1,000 yearly for four years.

Rowan University Foundation Scholarships
$1,000 yearly for four years offered to outstanding freshmen students. 3.0 GPA required for renewal.

Frances R. Lax Scholarships in Fine & Performing Arts
Awarded competitively to freshmen fine and performing arts majors with demonstrated talent and significant academic achievement. $1,000 yearly for four years. 3.0 GPA required for renewal.

William G. Rohrer Scholarships
Awarded competitively to incoming freshman and junior-level transfer business or accounting majors with significant academic achievement as well as demonstrated civic involvement and leadership skills. $2,000 yearly for four years for freshmen, $2,000 yearly for two years for transfers.

Transfer Trustee Scholarships
Awarded competitively to N.J. community college graduates with a 3.5 GPA or higher attending Rowan University full time. $2,000 yearly for two years.

SCHOLARSHIPS FOR CONTINUING STUDENTS
The University Scholarship Committee awards scholarships to Rowan University Students on the basis of academic excellence, financial need, and participation in on-campus and off-campus activities. The Continuing Student Foundation Scholarship program is available at the beginning of September through December every year. For further information visit, www.rowan.edu/scholarships

Other Programs of Assistance

Army Reserve Officers’ Training Corps (ROTC)
LTC Kevin McKiernan and MAJ Lee Gerber Senior Military Science Instructors
ROTC House, 401 Mullica Hill Road
Rowan University
856.881.4316
daep@princeton.edu msi@princeton.edu

The primary purpose of Army ROTC is to develop leaders of character for the 21st century. Students enrolled in ROTC participate in a unique interactive program focused on leadership development with emphasis on self-discipline, integrity, confidence, and responsibility. Our intent is to help students improve themselves whether they decide to pursue a career as an officer in our Army or as a leader in the private sector. Students join the program without any obligation to the Army. Students only sign a contract to serve in the Army when they begin their junior year or when they receive an ROTC scholarship.

Our main objective is to commission the future officer leadership of the U. S. Army and motivate young people to be better citizens.

Our second objective is to teach leadership and management skills which will enhance a student’s future success in either a military or civilian career.
The Army ROTC scholarship program provides financial assistance for the education and training of highly qualified and motivated students who desire to be commissioned as officers in the Army after graduation from college. Scholarships pay full tuition and fees at Rowan University. Students also receive a book allowance and a monthly stipend. Army scholarships offer an excellent incentive to join the ROTC program. For more information, see Army R.O.T.C. under the scholarship section.

Leadership Training and ROTC Activities Some of the Leadership Training events and ROTC activities involved are:

Leadership Labs/Field Training Exercises Hands-on training in a field environment performing events such as: Rappelling, Obstacle Course, Weapons familiarization, Land Navigation and Battle Drills.

Physical Fitness Training We conduct physical fitness sessions throughout the school week to help keep you physically, mentally and emotionally fit.

Ranger Challenge A highly competitive team specializing in military skills and physical fitness. This team competes in a yearly competition against other university ROTC programs in the tri-state area.

Color Guard Take pride in Army tradition by participating in the Color Guard. We support various events such as parades, football homecomings and Commencement/Convocation Ceremonies.

Rowan Army ROTC is located at the ROTC House at 401 Mullica Hill Road (intersection of Route 322 and Bowe Boulevard). Contact information is at the top this section and you can visit: www.goarmy.com. Note: All Military Science Courses (MILS) are listed under the Interdisciplinary heading in the Courses Description section of this catalog.

Air Force Reserve Officers' Training Corps (ROTC)
Air Force ROTC offers one-, two-, and three-year scholarships on a competitive basis to qualified applicants. All scholarships cover tuition, lab fees, and books, plus a tax-free monthly stipend. All members of the POC, regardless of scholarship status, receive the tax-free monthly stipend. (see Interdisciplinary Studies for details of the program.)

For information regarding Veterans Benefits contact the Office of Veterans Affairs. You can also visit their website, www.rowan.edu/studentaffairs/veterans/

Veterans Affairs Office
Veterans Coordinator: Beth Sosnoski
Phone Number: (856)256-4233
Fax Number: (856)256-4438
veteranaffairsoffice@rowan.edu

University Scheduling
Steven C. Farney Sr.
Director of Operations
James Hall
856.256.5189
scheduling@rowan.edu

Comprised of two dozen faculty, staff and administrators who represent a cross-section of the University, the University Scheduling Committee identifies ways to improve the University’s master schedule. The goal is to better maximize University resources and to be more mindful of student and faculty time constraints.

The Office of University Scheduling oversees all academic and non-academic scheduling for the University, as recommended by the University Scheduling Committee, and is housed in James Hall. The office processes all on campus room requests, including those for classrooms, meeting space and conference rooms, and rental requests from off-campus organizations. Please email scheduling@rowan.edu to contact the department.

Web Services
Jen Bell
Director
Linden Hall, Second Floor
856.256.4410
webservices@rowan.edu

When Rowan first went online sometime in 1992, not everyone immediately embraced the idea of this new-fangled invention. Yes, it was by all means revolutionary, but that was more so for the subset of society who sported pocket protectors. Today, while being a geek is very much socially acceptable, you no longer have to officially be one to carry gadgets around in your pockets that host more processing power than the computers on the Apollo 11 mission that landed men on the moon.

In today’s world, Web Services is mission control.
Our primary objective?
To support the enrollment management functions of the institution via the web.

How do we do this?
By providing you with all the tools you need for a successful website.

While you may not think your department's website has a direct impact on the recruitment and retention functions of the University, it has a significant influence. All of our websites together present a comprehensive reflection of who we are, as a campus and a community. This is why we develop and maintain the interfaces and dynamic web systems that power Rowan's 300+ official websites, and manage the University's digital identity via all web-based interfaces and social media outlets.

RETENTION AREA OF SEM: ACADEMIC TRANSITION, ADVISING & SUPPORT
Rory McElwee
Associate Vice President for Student Retention
Savitz 323
856.256.5187
mcelwee@rowan.edu

University Advising Services
University Advising Services, UAS, is an organization of professional academic advisors within the Retention area of the Division of Strategic Enrollment Management. The hallmarks of UAS advising are exceptional student-centeredness and responsiveness; excellence in advisor training and ongoing professional development; adherence to standard advising services and protocols; and collaboration with academic units and other campus personnel and services. UAS works to construct a collaborative, learning-centered environment committed to engaging students in the development and implementation of meaningful educational goals, informed academic planning, and major selection consistent with their personal values, interests, and abilities. We also provide our students guidance with regard to effective navigation of university systems and processes. UAS partners with Departments and Colleges to provide and coordinate advising services to Rowan students in specific majors. UAS offers a range of services, including individual appointments, walk-in hours, group advising sessions in or out of class sessions, and more.

University Advising Center (UAC)
Carol Eigenbrot
Associate Director
Savitz Hall, Third Floor
856.256.4459
eigenbrotc@rowan.edu

The University Advising Center (UAC) serves as the advising hub for advising related information. In addition, academic advisors in the UAC advise all Exploratory Studies students and all students considering changing their major, as well as students in select majors.

College of Education Advising Center
Sheri Rodriguez
Associate Director
James Hall, Second Floor
856.256.4420

The College of Education Advising Center provides academic advising for students enrolled in College of Education programs and selected School of Health Professions programs. Additionally, informational meetings are available for students considering these programs.

Achieving the Dream Scholars Program
Lorenzo Matthews
Assistant Director
Savitz Hall, Third Floor
University Advising Center
856.256.4459
matthewsl@rowan.edu

Achieving the Dream is a comprehensive program that supports students of all backgrounds in an effort to foster a diverse student population on the campus of Rowan University. It includes supporting students during the Admissions process, supplemental academic advising and individual student support.
Office of Academic Transition & Support Programs
Sean Hendricks
Assistant Director
James Hall, Third Floor
856.256.5655
hendrickss@rowan.edu

The Office of Academic Transition & Support Programs provides programming and services to support successful transition into and through Rowan University. The Office provides oversight for these programs and services:

- Rowan Seminar Program a required course for all new first-year students to support their transition to college-level academic work and to the Rowan community
- Rowan 101: College Success course for many first-year and transfer students to provide additional support and integration into the Rowan community
- Exploratory Studies Program, for students who have not yet declared a major, including programming for the Exploratory Workshop, a co-curricular series of workshops and activities addressing the process of exploring majors, careers, and one's own interests
- Degree completion initiatives at Rowan, including the process for students who seek to reenroll at Rowan after a period of leave or for a second bachelor's degree, and Project Graduation Quest, in which former students are invited to return to complete their degrees
- Education Abroad
- Tutoring and Testing Centers

Rowan Seminar
Rowan Seminar is designed to help our first year students make a smooth academic transition to university life. Rowan Seminar courses are special sections of courses taken by first-year students (either General Education or major-specific courses), many of which are popular with new college students and are reserved for first-year students only. Most major programs have designated specific courses for first year students. Student receive regular credit for successful completion of these courses.

Extensive research on the first-year experience provides compelling evidence that the high school learning environment is not always sufficient preparation for college-level learning. Our own research at Rowan suggests that although entering first-year students believe they know what will be expected of them academically, many benefit from the careful attention given to issues of transition from high school to college. Also, our research strongly suggests that participation increases retention rates and four-year graduation rates among students who take Rowan Seminar courses.

Rowan Seminar courses are designed to introduce students to the academic skills needed to succeed at Rowan and to college level expectations of the learning process. What distinguishes a RS course from any other section of the same course is how the course material is used to help each student understand academic expectations that accompany the college level learning process. Rowan Seminar courses are designated in a student's schedule with an RS after the title.

Within the subject context of the course, the professor will introduce every student to the following skills, values, and expectations at the college level:

- Strengthen writing and critical thinking skills through their application to specific course content
- Nurture library research skills within a course context
- Reinforce the value of cooperative learning
- Strengthen the academic skills needed for college

Rowan Seminar professors are typically experienced full-time faculty. They are chosen for their teaching skills, thorough knowledge of their subject, familiarity with university policies and procedures, and their interest in helping new students succeed in college. With the reduced class size, students have a greater opportunity to interact with their professor who is available to the student as a mentor and as a guide.

First year students are assigned to Rowan Seminar sections in the fall semester. Any student unable to enroll in a section in the fall will have the opportunity to take a Rowan Seminar section offered in the spring.

For more information about Rowan Seminar or if you have any questions about the program, please contact the Office of Academic Transition & Support Programs. Please also visit the Rowan Seminar website at: www.rowan.edu/atp

Rowan Select
The Rowan Select program is designed to provide structured support for many first-year students as they enter Rowan University. The program prepares students to join the Rowan family through assisting with the transition to college. While Rowan Select students did not meet Rowan's criteria for regular admission in the fall term, they are fully-admitted students who begin with a special course in the summer and receive excellent support and guidance throughout the year. Potential students are chosen for this program based on a specific academic profile and individual potential, as well as unique qualities that make them an asset to Rowan University.
Exploratory Studies
Exploratory Studies provides an academic home for students with less than 60 credits who have not yet selected a major. Students in the Exploratory Studies Program are housed within the College of Humanities and Social Sciences. Exploratory Studies students receive professional academic advising from the University Advising Center, and support from the Office of Academic Transition & Support Programs, and many other offices on campus. First-year students in the Exploratory Studies Program, including those in the Rowan Select Program, will be enrolled in the Exploratory Studies Workshop in their first semester to familiarize them with Rowan's many resources and to begin the process of exploring majors, careers, and their own strengths and interests. Students may remain in Exploratory Studies until they have completed 60 credits (including all transfer credits). Students who have not selected a major at that time will be placed in the Liberal Studies/Humanities and Social Science major. However, most students select a major well before 60 credits. For more information, see www.rowan.edu or email exploratorystudies@rowan.edu

Rowan Students seeking a Second Bachelor's Degree
Students that have graduated from Rowan and would like to return to pursue a second bachelor's degree should follow the re-enrollment process. Students should visit the website www.rowan.edu/atp and complete the re-enrollment inquiry form. Students will be notified of their re-enrollment status via email.

Contact Sean Hendricks at hendrickss@rowan.edu in the Office of Academic Transition Programs with questions.

Education Abroad Office
Laura Kahler
Education Abroad Advisor
856-256-4105
University Advising Center, Savitz Hall, Third Floor
kahler@rowan.edu

The Education Abroad office provides information and assistance to students seeking to study abroad, through arrangements with Rowan's partner organizations or faculty-led programs. The Education Abroad advisor is available for individual appointments to help students plan an educational program that is high quality, professionally relevant, and personally engaging.

Testing Services
Lara Roberts LeBeau
Coordinator
Savitz Hall, Third Floor
856.256.4263
testingservices@rowan.edu

Testing Services offers the following services: testing accommodations for students registered with Disability Resources, Basic Skills placement testing and progress tracking, CLEP examinations, the Miller Analogies Test, and proctoring for long-distance learners.

Tutoring Center
Kelly Young
Coordinator
Savitz Hall, Third Floor
856.256.4462
tutoringcenter@rowan.edu

Tutoring is available free of charge to all Rowan University undergraduate students. The Tutoring Center provides small-group or drop-in tutoring in most subject areas. Students may request academic assistance on a one time basis or may be scheduled for regular assistance on a weekly basis throughout the semester. The purpose of tutoring is to complement classroom instruction, not replace it. Workshops on learning strategies and effective study techniques are presented at various times throughout the academic year.

Basic Math Skills
Carol Rodano
Coordinator
Savitz Hall, Third Floor
856.256.4261
rodano@rowan.edu

The Basic Skills Math program offers MATH 01.094 Basic Algebra I and MATH 01.095 Basic Algebra II. These courses are designed to provide a solid foundation in developmental math skills to enable students to move on successfully to college-level math courses. Students' math placement (MATH01.094, MATH 01.095, or a college-level math course) is determined by SAT score or placement test, offered in the Testing Center.
University Transfer Services
Julia Beth Rey
Coordinator
856-256-4452
rey@rowan.edu

University Transfer Services provides a variety of transfer student services including the Transfer Topics workshop series, New Transfer Information Sessions, the Transfer Mentor program, and the email hotline transferhelp@rowan.edu, to which any transfer student can send questions which will be answered promptly by a Rowan administrator.

Office of General Counsel
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cleventl@rowan.edu

Christina Martino
Secretary 3
856-256-5112
vivianch@rowan.edu

The Office of the General Counsel provides legal representation for Rowan University. The Office of General Counsel provides legal services to all colleges, schools, departments, and units of the University. It provides legal support to the educational mission of Rowan University by providing legal counsel and advice in all areas of operation, research, and administration. This includes review and coordination of all contracting issues, litigation, human relations issues, student matters, construction & development, intellectual property, research matters and other areas. In special circumstances, the Office of General Counsel works in conjunction with the New Jersey Office of the Attorney General in providing advice and counsel to the Rowan University community.

Division of Information Resources and Technology
Memorial Hall
856.256.4401
irt@rowan.edu

www.rowan.edu/irt

For any service please use the following contact info:
Support Desk
856.256.4400
support@rowan.edu

The Division of Information Resources and Technology (IRT) provides university-wide support for all information resources governance processes, information technology infrastructure, information security, business applications, data
Undergraduate Programs

Undergraduate studies at Rowan University are housed in seven colleges and two schools: Business, Communication and Creative Arts, Education, Engineering, Performing Arts, Humanities & Social Sciences, Science & Mathematics, the School of Health Professions and the School of Earth and Environment. To receive a baccalaureate degree, the student must successfully complete a minimum of 120 semester hours of credit. Within this number must be included the general education and Rowan experience requirements plus the requirements of the academic major. Requirements for the major will vary from program to program, and some programs exceed 120 hours.

Academic Major Programs

Academic major programs listed with general education requirements in the colleges of Business, Communication & Creative Arts, Engineering, Humanities & Social Sciences, Sciences & Mathematics and Performing Arts fulfill baccalaureate degree requirements but not teacher certification requirements. Additional program information, including the fulfillment of certification requirements, may be secured by contacting either the office of the dean of the College of Education or the University Advising Center (UAC)

Second Major, Minor, or Concentration

Students may choose to complete a second major, minor, or concentration when graduating from a bachelor’s degree program at Rowan University. To qualify for this additional designation on the transcript, a student must satisfy all course work for the second major, minor, or concentration concurrent with the conferral of the degree. Students must follow departmental policy regarding required course work to be completed at Rowan University for the minor, concentration, or second major. Academic policies governing the award of degrees for dual majors, concurrent, and successive degree programs are listed in the Rowan Handbook: www.rowan.edu/student_affairs

General Education at Rowan University

A well-rounded education is a goal in itself and there are important aspects of this education that the university as a whole wants to emphasize. These aspects include a thorough grounding in communication and an exposure to university level science, mathematics, social and behavioral science, and the humanities.

Broadly speaking, the general education program will:

1. Develop students’ abilities to speak and write effectively, think clearly and critically
2. Develop students’ abilities to use computational, quantitative, and problem solving skills, as well as scientific thinking and modes of inquiry
3. Increase students’ understanding of the complexity of issues in humanities, arts, social and behavioral sciences and the practice of free inquiry in their analyses and examination of values.
4. Provide opportunities for students to explore specializations, concentrations, minors, or disciplines outside of their own in greater depth.

As one of the fundamental principles of a general education curriculum is to experience a variety of disciplines, students are required to take courses from five areas: Communication; Science and Mathematics; Social and Behavioral Sciences; History, Humanities, and Language; and Non-Program Courses.

At Rowan University, the minimum number of hours required for a four-year degree is 120 semester hours, and all students are required to earn a combined total of 42 semester hours of General Education and Rowan Experience courses. (The Rowan Experience Requirements are described in detail in the next section.) Different degree programs vary in the number of hours required for Free Electives and the Major. Students must plan their program of study in consultation with an advisor in order to meet all the requirements of a specific major program.

Within General Education, there are specific areas of study or discipline groups. All of the semester hour requirements listed below are considered minimum requirements. Specific requirements may vary by degree type (Bachelor of Arts, Bachelor of Science) and/or by major program of study.

General Education Requirements by Area of Study

Following are the minimum numbers of credits required in each of five areas of study within General Education. In addition to meeting the minimum credit hours in each bank, students must earn a COMBINED TOTAL of 42 credits of General Education courses and Rowan Experience courses.
General Education Areas

Communication .............................................. 6
Science and Mathematics ................................ 7
Social and Behavioral Sciences ........................ 6
History, Humanities and Language .................... 6
Non-Program Courses ..................................... 6

These are minimum requirements for each area of study or discipline group. Specific major programs may expand the requirements within any of these categories in order to meet program and learning outcome objectives as well as meeting the minimum 120 semester hour requirement for a four-year degree. Specific General Education courses may be required for individual majors if they serve as prerequisites for required courses within that major.

General Education courses must be selected so that the following requirements are satisfied:

1. All students must take College Composition I (3 s.h.) or Intensive College Composition I (4 s.h.) as well as College Composition II (3 s.h.).
2. The minimum of 6 s.h. of Communication is fulfilled by College Composition I and II. For all other banks requiring 6 or more semester hours, students must take courses from at least two different disciplines within the bank.
3. All students must take at least one course from the list of mathematics courses listed under Science and Mathematics.
4. All students must take at least one approved course that includes an in-class laboratory experience (LAB) under Science and Mathematics. Transfer courses must include the in-class lab experience. Students may not test out of the lab experience.
5. All courses at the university can be used in the Non-Program Bank, as long as they are not courses in the major program of the student.

Students Transferring from a New Jersey Community College to Rowan University

Students who have completed an Associate of Arts or Associate of Science degree at a New Jersey community college will receive at least 60 hours of transferrable credit towards the appropriate Bachelor of Arts or Bachelor of Science Program. With regard to General Education, it is assumed that transfer students will have met all lower division General Education requirements expected of students having completed the first two years of a four-year program. In most situations, students will receive transfer credit for a combination of General Education Courses, Rowan Experience Courses, Free Electives, and Major Requirements totalling at least 60 semester hours of credit or approximately one-half of a basic four-year degree. Exceptions to this assumption will occur when students have failed to complete required course work at the community college that is required for entrance into a required Rowan University course. Coordination between the student and advisor at the community college is necessary in planning for the transfer to Rowan University. Specific program requirements are available on the Rowan University home page.

For students transferring to the university without completing an Associate of Arts or Associate of Science degree, it is expected that credits taken at a New Jersey community college that are applicable to an Associate of Arts or and Associate of Science degree will be transferable to the basic four-year degree program at Rowan University. Transfer students must meet the specific graduation requirements of the Rowan University degree program to which they seek to transfer. It is expected that through careful planning, the transfer student will be able to meet these requirements within their two years of study at the community college and the following two years of study at Rowan University.

General Education Requirements

General Education is designed to fulfill the aim of a liberal education. It is intended to provide the breadth of knowledge and balance of judgment befitting a college graduate, regardless of major. At Rowan University, General Education is divided into five areas of study with specific goals. The educational goals of the five areas of study are:

Communication Bank Goals

1. Students will develop the ability to write a structured, well-reasoned, ordered and grammatically correct document appropriate to the intended audience.
2. Students will develop the ability to research and properly reference the work of others.

Science and Mathematics Bank Goals

1. Students will demonstrate an ability to identify and apply fundamental concepts in science and math.
2. Students will demonstrate an ability to collect, interpret and verify lab data.
3. Students will demonstrate an ability to analyze and manipulate data, and to access and organize information.

History, Humanities, and Languages Bank Goals

1. Students will demonstrate an understanding of major concepts, theories, and methods in at least two areas of history, humanities, culture, or world languages.
2. Students will develop an understanding of systems of thought and language.
Social and Behavioral Sciences Bank Goals

1. Students will demonstrate an understanding of major concepts, theories, and methods in at least two areas of the social and behavioral sciences.
2. Students will demonstrate an understanding of the development of human society as it relates to culture, geography, and language in the context of an emerging interdependent, global community.
3. Students will demonstrate an ability to apply basic methodologies used in the measurement of social and behavioral sciences.

Non-Program Electives Bank Goals

1. Students will develop a deeper understanding of at least one area outside of the major program of study as a means of creating a broader, customized, and complete program of general education.
2. Students will choose courses to enhance the major degree program and better prepare them to meet future professional and life objectives.

Some general courses offered at Rowan University fulfill one or more of the Rowan Experience Requirements, or are applicable to the Honors Concentration, or meet a combination of General Education, Rowan Experience, and Honors Concentration Requirements. Such courses are signified as follows:

- (ACE) Artistic and Creative Experience
- (H) Honors Concentration Course
- (LIT) Broad-based literature course
- (LAB) In-class laboratory experience
- (PS) Public Speaking
- (M/G) Multicultural/Global
- (RS) Rowan Seminar
- (WI) Writing Intensive

The General Education course listing can be viewed in the Approved General Education Courses section of the university catalog.

Non-Traditional-Format Undergraduate Offerings

Rowan also offers a few of its undergraduate degree programs in non-traditional modes of delivery (online, off-site, hybrid, accelerated, etc.) through the Global Learning & Partnerships (Rowan Global). For a list of available programs and related details, please visit www.rowanu.com/programs

Note: Admission to all traditional-format undergraduate programs at Rowan University is coordinated by the main Admissions Office (admissions@rowan.edu).

Admission to the non-traditional-format undergraduate programs at Rowan University is coordinated by the Rowan Global Admissions Office globaladmissions@rowan.edu or www.rowanu.com.

The Rowan Experience

All students must take courses that define the unique aspects of a Rowan University degree and are described as the Rowan Experience. The Rowan Experience consists of courses that require a demonstration of specific skills or provide specific kinds of experiences that the university deems significant for all graduates. All students must complete a course or series of courses with the following six Rowan Experience designations during their four-year education:

1. Artistic and Creative Experience (ACE)
2. Literature (LIT)
3. Multicultural/Global (M/G)
4. Public Speaking (PS)
5. Rowan Seminar (RS). Rowan Seminars are to be taken by all FRESHMEN. This requirement is waived for transfer students entering with sophomore, junior or senior standing.
6. Writing Intensive (WI). Writing Intensive courses MUST be taken at Rowan, and College Composition II or its equivalent must be completed prior to enrolling in a WI course.

Many courses are designated as ACE, LIT, M/G, PS, WI, and RS, including many General Education courses and many courses taken only by students within their designated major. Courses may also carry more than one designation so that one course may meet two or more Rowan Experience requirements as well as General Education or major requirements.

As noted in the previous section, all students must take a minimum of 42 credits of General Education and Rowan Experience courses. The purpose of this requirement is to ensure a broad-based education. Consequently, M/G, LIT, ACE, PS, WI and RS courses that are taken within the major program of study DO NOT COUNT towards this minimum total of 42 credits. Note, too, that General Education and Rowan Experience course requirements vary depending on the specific degree program, so students should plan their program of study in consultation with their academic advisors.
The specific goals of the Rowan Experience Requirements are to:

1. Help first-year students make a smooth academic transition to the university community, serious scholarship and the life of the mind (RS).
2. Develop the ability to give oral presentations on a variety of subjects that are well reasoned, ordered, correct, and appropriate for the intended audience (PS).
3. Have students explore the diverse ways in which human beings have confronted the perennial questions of human existence through various imaginative and discursive literary works (LIT).
4. Develop students' knowledge of the multi-faceted culture in which we live, contemporary social and cultural milieu, and the global implications of an increasingly interdependent and multicultural world (MG).
5. Develop the ability to create and/or critically evaluate works of art through experiential courses designed to expose students to the plastic and performing arts (ACE).

The Rowan Experience course listing can be viewed in the Approved Rowan Experience Courses section of this catalog.

Graduate and Post-Baccalaureate Programs

All post-baccalaureate and graduate-level (including doctoral) programs offered at Rowan University are administered by the Division of Global Learning & Partnerships (formerly CGCE) and housed across the academic colleges: Business, Communication and Creative Arts, Cooper Medical School, Education, Engineering, Graduate Schools of Biological Sciences, Humanities & Social Sciences, Performing Arts, School of Biomedical Sciences, School of Osteopathic Medicine, and Science & Mathematics.

The role of Rowan Global is to provide programmatic leadership, coordination, and administrative support for quality post-baccalaureate and graduate-level programs at Rowan University consistent with national, state and regional educational needs. Led by the Vice President of the Division of Global Learning & Partnerships and professional staff of Rowan Global, the Graduate Council, and the academic program advisors and faculty, the post-bac and graduate experiences are integral components of the overall mission of the University.

Graduate-level programs at Rowan provide those who already possess Bachelor's or Master's degrees an opportunity to continue to advance their education. Available offerings at the graduate level include but are not limited to the following degree and non-degree options:

- Doctor of Philosophy (Ph.D.), Doctor of Education Leadership (Ed.D.), Educational Specialist degree (Ed.S.), Master of Business Administration (M.B.A.), Master of Arts (M.A.), Master of Science (M.S.), Master of Engineering Management (M.E.M.), Master of Music (M.M.), Master of Science in Teaching (M.S.T.), Master of Education (M.Ed.)
- 4+1 (dual degree Bachelor/Master) programs
- Certificates of Advanced Graduate Study (CAGS/post Master)
- Certificates of Graduate Study, (COGS/post Bachelor)

Post-Baccalaureate (post-bac) programs are non-degree, undergraduate programs that enable Bachelor degree holders to obtain professional certifications in a variety of areas. The requirements and curricula of the post-baccalaureate programs are often similar to the requirements and curricula listed for the corresponding undergraduate degree programs and may also have the same national accreditation and/or state approval (in the case of College of Education certifications) as the corresponding undergraduate degree programs.

Available offerings at the post-bac (undergraduate) level include but are not limited to the following certification and non-degree options:

- Post-baccalaureate (post-bac/post Bachelor) programs in applied behavior analysis and cartography and GIS
- State certifications/endorsement programs (also post Bachelor) for school nursing, principals, supervisors, teacher of students with disabilities, driver education, learning disabilities teacher consultant (LDTC), bilingual/bicultural education, English as a Second Language

Credit requirements for each program vary greatly according to level, degree and professional standards. Many programs will accept transfer credit from accredited institutions. For a full list of programs offered through Rowan Global, please visit www.rowanu.com/programs

One of the major goals of Rowan Global is to serve the adult non-traditional student population by offering programs and courses that meet the needs of individuals with busy personal and professional life-styles. Consequently, several programs are available in an accelerated format, online, hybrid or face-to-face formats at a number of selected off-campus locations. Such information is provided in the Rowan Global Catalog under the “Programs Offered” section for each academic college.

Note: Admission to all post-baccalaureate and graduate programs at Rowan University (both traditional-format and non-traditional-format), as well as all non-traditional-format undergraduate programs, is coordinated by Rowan Global Admissions (globaladmissions@rowan.edu or www.rowanu.com ).
Tuition and Fees

The following is a summary of fees charged at Rowan University. Tuition and other charges are subject to change at any time in accordance with policies established by the Board of Trustees of Rowan University. The fees do not include the cost of textbooks and personal expenses. Fees at Rowan for academic year 2016-17 are as follows:

Admissions Application
(Graduate and Undergraduate): $65

Meal Plans:
- 30 Block Meal Plan with $150 Dining Dollars + $200 Rowan Bucks: $840
- 60 Block Meal Plan with $150 Dining Dollars + $200 Rowan Bucks: $1,330
- 14 Meal Plan with $200 Dining Dollars + $400 Rowan Bucks: $4,080
- 10 Meal Plan with $200 Dining Dollars + $400 Rowan Bucks: $3,650
- 7 Meal Plan with $200 Dining Dollars + $400 Rowan Bucks: $2,900
- All Access Meal Plan $200 Dining Dollars + $200 Rowan Bucks: $4,340

Freshman Acceptance Fee
(non-refundable): $200

Housing in
- Residence Hall: $6,608-$9,540
- Deposit: $200

Housing in
- Edgewood Park Apartments: $7,962
- Triad Apartments: $7,962
- Townhouse: $10,370
- Rowan Boulevard: $10,370
- Whitney Center: $10,370

Identification Card: $10

ID Card Replacement: $25

Deferred Payment Plan Fee: $30

Late Payment Fee: $25-50

Late Registration Fee: $75

Returned Check Charge: $25-50

Parking Fee: $130/commuter $205-330/resident

Student Accident/Hospitalization Insurance:
- $1,605-undergrad. $3,033-grad. $3,313-SOM, GSBS, CMSRU

University Fee
(p-t) $157.00/credit-undergraduate (matriculated) $150.90/credit-graduate &
undergraduate (non-matriculated)

(f-t flat rate) $1,837.00/semester

Educational Field Experience: $50/semester

Transcript: $15/20

Library Fines
- Per Day: $.10
- Maximum (pre-collections): $3
- Maximum (post-collections): $6

Library fines are imposed on users who are delinquent in the return of library materials. The cost of repair or replacement of lost or damaged materials will be charged to users. Current fines and other charges are posted on the Library Services website. Library and other services may be denied if fine obligations are not met.

Tuition

Tuition for each semester will be charged on a per credit hour basis for part-time students and a flat rate for full-time students. The following rates are per semester:

Graduate tuition rates (2016-17) are:
- New Jersey resident: $667/credit
- Non-resident: $667/credit

Undergraduate tuition rates (2016-17) are:
- New Jersey resident (p-t): $362/credit
- New Jersey resident (f-t flat rate): $4,717.00
- Non-resident (p-t): $682/credit
- Non-resident (f-t flat rate): $8,852.00
**Expenses**

The Office of the Bursar is responsible for all billing of students and for the collection of payments. A statement of expenses for the fall semester will be e-mailed via Rowan student e-mail account during the week of July 11. A similar statement will be sent via e-mail by November 30 for the spring semester.

All charges must be paid in full each semester on or before the date stipulated in the statement of expenses given to each student. Students who do not pay their bills will be withdrawn from classes in accordance with the University policy on outstanding financial obligations. Credit may be extended to students engaged in negotiations concerning State scholarships, loans or grants. Questions regarding University expenses should be discussed with personnel in the Office of the Bursar (856.256.4150).

Rowan University strives to make paying for college convenient and affordable for you. We offer several ways for our students to pay, from secure online payment with e-Check to a convenient deferred payment plan.

Online Payments are the quickest, most convenient way to pay your bill. We accept all major credit cards (Visa, American Express, Discover, and MasterCard), debit cards and e-Checks. Payments made by credit and debit cards are subject to a convenience fee of 2.75% or a minimum of $3.00, whichever is greater. Avoid the fee and pay with e-Check.

You may also pay your bill in person at the Office of the Bursar located in the lower level of Savitz Hall. We accept cash, check, money order, and credit and debit card payments. All checks must be made payable to Rowan University.

Need help paying for college. The Office of the Bursar offers a convenient deferred payment plan for all students. Information on the deferred payment plan is available at [www.rowan.edu/bursar/payment](http://www.rowan.edu/bursar/payment) on the Office of the Bursar website.

Instructions on how to make a payment can be found on the "Instructions for Term Invoice" page on-line at the Rowan Self Service web site at [www.rowan.edu/selfservice](http://www.rowan.edu/selfservice)

Tuition and fees, regulated by Rowan University, are subject to change without notice to individual students.

**Summary of Expenses**

Estimated fees and expenses for New Jersey residents living on-campus or commuting are summarized below.

<table>
<thead>
<tr>
<th></th>
<th>Residents</th>
<th>Commuters</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tuition</strong></td>
<td>$10,860</td>
<td>$10,860</td>
</tr>
<tr>
<td><strong>University Fee</strong></td>
<td>$3,674</td>
<td>$3,674</td>
</tr>
<tr>
<td><strong>Room and Board</strong></td>
<td>$12,042</td>
<td>$12,042</td>
</tr>
<tr>
<td><strong>Total expenses</strong></td>
<td>$26,576 (on campus)</td>
<td>$14,534 (commuter)</td>
</tr>
<tr>
<td><strong>Based on the following:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residence Room (double)</td>
<td>$7,962</td>
<td>$7,962</td>
</tr>
<tr>
<td>14 Meal Plan</td>
<td>$4,080</td>
<td>$4,080</td>
</tr>
</tbody>
</table>

Tuition and fees for full-time out-of-state students is $26,576/year based on an average of 30 credit hours a year. Tuition and other charges are subject to change at any time in accordance with policies established by Rowan University.

**Food Services**

Students living in a residence hall must purchase an All-Access, 14, 10 or 7 Meal per week Plan. First-time, first-semester freshmen must select an All-Access or 14 meal per week plan. Students living in apartments or off-campus may also purchase a meal plan, but it is not required.

**Residence Hall**

Residence halls and apartments are available to Rowan University students. Please visit [www.rowan.edu/rluh](http://www.rowan.edu/rluh) for more information.

Security deposits are required with housing applications. Deposits are refunded when a reservation is canceled within the approved time frame set by Residence Life.

**University Fee**

This fee is charged to all students at $157.00 per credit hour with a maximum of $1,837.00 per semester. The purpose of this fee is to help defray the costs of an array of varied but integral services and projects that positively impact our students' everyday experience at Rowan University.

Important functions of the University fee are as follows:

- Helps to offset placement service costs in order to assist all of our students as they proceed from the academic world to the job market.
- Assists in the overall support of our Wellness Center, which offers treatment to currently enrolled students for acute illnesses, urgent care situations and certain health promotion needs.
- Provides much needed support for expansion and upgrade of our computer labs and academic programs.
- Helps defray the cost of debt service on recently constructed or renovated buildings as well as addressing the operation and maintenance cost of newly constructed buildings. In addition, the fee partially finances the operations of...
the Recreation Center and Student Center.

- Pays for student publications and major concerts and supports over 100 clubs and organizations.

**Late Payment Fee**

Students on a Deferred Payment Plan who fail to pay bills by the date due will be charged a non-refundable late payment fee between $25 and $50, depending on when payment is made.

**Late Registration Fee**

Students who fail to register at the time designated will be charged a non-refundable $75 fee.

**Parking**

All students, faculty and staff, contract workers, visitors and guests who park a vehicle on any authorized campus lot or garage must have a properly displayed valid parking permit or a temporary/visitor parking pass. All parking information may be viewed online at [www.rowan.edu/public safety](http://www.rowan.edu/public safety)

For any parking related questions, contact the Parking Office at 856-256-4575 or parking@rowan.edu

**Returned Check Charge**

A charge of $25-50 will be made for each check that is given to the University if it is returned by the bank for any reason.

**Identification Cards**

The University requires that all matriculated students carry an official identification card at all times. This card is needed for library use, student activities, registration, cashing checks, recreation center and security purposes. The initial charge for an ID card is part of the tuition, and a $25 charge is made for each replacement of a lost card.

**Required Pre-matriculation Immunization and Medical Records**

As a condition of admission and continued enrollment, each student is required to provide evidence of immunization against measles, mumps, and rubella (N.J.S.A. 18A:61D-1). Students are also required to have vaccination against Hepatitis B (series of three [3] vaccines). Any student living in campus housing is required to first have vaccination against meningitis (Menactra®). Students are also required to submit a complete health record to the Wellness Center. Failure to submit these requirements will result in an immunization hold that will prevent the student from living in campus housing or registering for courses. Additional information on these requirements is available from the Wellness Center website at [www.rowan.edu/health](http://www.rowan.edu/health)

**Student Insurance**

Rowan University requires that all matriculated, full-time students have health insurance coverage. To that end, all matriculated full-time students will be automatically charged a Student Health Insurance fee ($1,605/undergraduate $3,033/graduate fee 2016-17). To waive this fee, the student must complete a waiver identifying their current insurance coverage. This waiver must be completed on-line at the Rowan University Self-Service web site at [www.rowan.edu/selfservice](http://www.rowan.edu/selfservice) prior to the start of the student’s first semester and every fall semester thereafter.

More information can be obtained about Student Health Insurance from the Wellness Center Website at [www.rowan.edu/health](http://www.rowan.edu/health) It is important to note that this insurance coverage is a limited plan, and it is recommended that students and parents review the coverage offered in the plan. Coverage for part-time students, spouses and children is available for a fee paid directly to the insurance company. See the Wellness Center website for more information.

All students who compete in intercollegiate sports programs are covered while participating by a separate policy purchased by the University. Premiums for insurance are subject to change.

**Educational Field Experience**

All teacher preparation students pay an Educational Field Experience fee of $50/semester which covers the normal expenses incurred in the program, including a payment to the cooperating teacher. Students will be billed for this fee as part of their normal University term invoice.

**Transcript Fee**

A transcript is provided to each student upon graduation. Additional transcripts are available through the Office of the Registrar for $15/20 each.

**Refund Policy**

Refunds will be prepared for all students who officially withdrawal in accordance with the University's refund policy. Requests for official withdrawal must be made through the Dean of Students Office. This procedure assures that students will receive the proper refund for tuition, fees, room and board charges.

**Approved Refund Schedule**

Tuition, and University fees only.

**Part-Time students:** Refunds will be processed only for drops occurring on or before the last day of Drop/Add Registration. No refunds will be processed for withdrawals beyond that date.
**Full-Time students:** Refunds will be processed only for students who officially withdrawals from all courses on or before the last day of Drop/Add Registration.

**Financial Aid students:** Refunds of Federal Financial Aid are processed in accordance with federal guidelines:

- Withdrawal before end of Add/Drop: 100% Registration
- Withdrawal after Add/Drop: None

**Room and Board** Refunds for residence halls and for meal plans will be calculated immediately following the date of the student’s official withdrawal. Refunds for rooms shall be pro-rated on a weekly basis until the end of the fifth week of the semester, at which point there will be no refund for the remaining weeks of the term. Refunds for Board shall be pro-rated on a weekly basis until the end of the third week of the semester, at which point there will be no refund for the remaining weeks of the term.

**Outstanding Financial Obligations**

The University may deny a student graduation, readmission, registration, or access to records because of outstanding financial obligations to the University. This action may be taken in cases where reasonable notice of a debt and the consequences of non-payment have been given to the student. If a student does not meet his/her outstanding obligations by the established deadlines under the policy, the student will automatically be denied registration for the following semester, in addition to losing all other University services. Denial for future semesters will also be continued until such time as the obligation is met.

The student will have the right to a hearing in cases of dispute concerning an obligation. The request for a hearing must be submitted in writing by the student to the appropriate department or office head in which the obligation exists. If it becomes necessary, any appeal of a decision resulting from such a hearing must be arranged through the Office of the Bursar or Dean of Students in Savitz Hall.

The University will have the right to withhold the degree and all records, including certification, transcripts, placement services, etc., pending satisfactory financial arrangements.

A complete text of the Outstanding Financial Obligations Policy may also be obtained from the Office of the Bursar or the Dean of Students in Savitz Hall.

**Policies and Procedures**

The following selected policies and procedures govern conditions that affect student enrollment. For more information on these and other policies that may relate to academic affairs, students are encouraged to consult with the dean of students, the registrar, the University Advising Services and the Student Government Association.

- Academic Honors: [www.rowan.edu/academic honors policy](http://www.rowan.edu/academic honors policy)
- Academic Integrity Policy: [www.rowan.edu/academic integrity policy](http://www.rowan.edu/academic integrity policy)
- Academic Status Policy: [www.rowan.edu/academic status policy](http://www.rowan.edu/academic status policy)
- Attendance Policy: [www.rowan.edu/academic attendance policy](http://www.rowan.edu/academic attendance policy)
- Audit Policy: [www.rowan.edu/audit policy](http://www.rowan.edu/audit policy)
- Awarding of Posthumous Degrees: [www.rowan.edu/posthumous degrees policy](http://www.rowan.edu/posthumous degrees policy)
- GPA Forgiveness: [www.rowan.edu/GPA forgiveness policy](http://www.rowan.edu/GPA forgiveness policy)
- Grade Change Policy: [www.rowan.edu/grade change policy](http://www.rowan.edu/grade change policy)
- Grade Dispute Policy: [www.rowan.edu/grade dispute policy](http://www.rowan.edu/grade dispute policy)
- Grade Reporting: [www.rowan.edu/grade reporting policy](http://www.rowan.edu/grade reporting policy)
- Grades Policy: [www.rowan.edu/grades policy](http://www.rowan.edu/grades policy)
- Graduation Requirements: [www.rowan.edu/graduation requirements policy](http://www.rowan.edu/graduation requirements policy)
- Mobile Electronic Device Policy: [www.rowan.edu/mobile device policy](http://www.rowan.edu/mobile device policy)
- Repeating a Course Policy: [www.rowan.edu/repeating a course policy](http://www.rowan.edu/repeating a course policy)
- Research Papers — The Term Paper Law: [www.rowan.edu/term paper law](http://www.rowan.edu/term paper law)
- Second Baccalaureate Policy: [www.rowan.edu/second baccalaureate policy](http://www.rowan.edu/second baccalaureate policy)
- Student Complaint Procedures: [www.rowan.edu/student complaint procedures](http://www.rowan.edu/student complaint procedures)
- Syllabus Policy: [www.rowan.edu/syllabus policy](http://www.rowan.edu/syllabus policy)
- Transfer of Credit: [www.rowan.edu/transfer credits policy](http://www.rowan.edu/transfer credits policy)
- Turnitin Policy: [www.rowan.edu/Turnitin policy](http://www.rowan.edu/Turnitin policy)
- Undergraduate Senior Privilege Policy: [www.rowan.edu/undergraduate senior privilege policy](http://www.rowan.edu/undergraduate senior privilege policy)
- Viewing Final Exams and Papers Policy: [www.rowan.edu/viewing final exams and papers policy](http://www.rowan.edu/viewing final exams and papers policy)
Interdisciplinary Studies

Rowan University offers a variety of interdisciplinary studies, in addition to the various majors within academic departments and concentrations and specializations that relate specifically to these majors. These interdisciplinary studies include concentrations, and courses that transcend the discipline of a single academic department. Interdisciplinary studies are generally co-sponsored by at least two academic departments or are taught by faculty from a number of departments and colleges.

AFRICAN AMERICAN STUDIES CONCENTRATION
James Coaxum, III
Coordinator
3087 Herman James Hall
856.256.4779
coaxum@rowan.edu

Required Credits 18 s.h.

The African American Studies Concentration consists of interdisciplinary curricular offerings that engage faculty and students in critical analysis, reflection and transformational thinking about African Americans within the framework of the multicultural diversity and global connectedness of American society. The African American Studies Program dates back to the late 1960s when the Civil Rights Movement across the nation and the Southern New Jersey region led to the establishment of the King Scholar Program (The Educational Opportunity Fund or EOF Program) in the Fall of 1968. Following the offering of the first Black History course by the History Department in 1969 in response to Black student demands, a slow but steady growth in African American and African curricular offerings over the course of the next two decades culminated in the formal establishment of the African American Studies concentration in 1989.

To complete the 18 semester hours of course work required for the concentration, students should take six semester hours of requirements and an additional twelve semester hours of electives selected from the related elective courses listed below. Overall, the 18 semester hours of course work completed for the concentration must include offerings from at least three academic departments. Students interested in pursuing the concentration are encouraged to sign up in the RU Career Management Center and to contact the coordinator for further information and advisement.

Core Requirements 6 s.h.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFST11.104</td>
<td>Introduction to Africana Studies</td>
</tr>
<tr>
<td>ENGL02.216</td>
<td>African/American Literature I</td>
</tr>
<tr>
<td>or ENGL02.316</td>
<td>African/Amererican Literature II</td>
</tr>
<tr>
<td>or HIST05.377</td>
<td>Afro-American History Since 1865</td>
</tr>
</tbody>
</table>

Electives 12 s.h.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFST11.304</td>
<td>Africana Social/Political Thought</td>
</tr>
<tr>
<td>AFST11.310</td>
<td>Service Learning Seminar in Africana Studies</td>
</tr>
<tr>
<td>ENGL02.116</td>
<td>Readings in Non-West Lit</td>
</tr>
<tr>
<td>ENGL02.200</td>
<td>Women in Literature</td>
</tr>
<tr>
<td>ENGL02.216</td>
<td>African/American Literature I</td>
</tr>
<tr>
<td>ENGL02.316</td>
<td>African/Amererican Literature II</td>
</tr>
<tr>
<td>ENGL02.217</td>
<td>U.S. Literature of Latin/Hisp Peoples</td>
</tr>
<tr>
<td>ANTH02.202</td>
<td>Introduction to Cultural Anthropology</td>
</tr>
<tr>
<td>GEOG16.140</td>
<td>World Regional Geography</td>
</tr>
<tr>
<td>HIST05.376</td>
<td>African American History to 1865</td>
</tr>
<tr>
<td>HIST05.394</td>
<td>Sub-Saharan Africa to 1800</td>
</tr>
<tr>
<td>HIST05.397</td>
<td>Sub-Saharan Africa Since 1800</td>
</tr>
<tr>
<td>HIST05.441</td>
<td>Imperialism/Colonialism</td>
</tr>
<tr>
<td>HIST05.322</td>
<td>Civil War and Reconstruction</td>
</tr>
<tr>
<td>HIST05.413</td>
<td>Comparative Race Relations</td>
</tr>
<tr>
<td>HIST05.425</td>
<td>History of Feminism</td>
</tr>
<tr>
<td>HIST05.422</td>
<td>Women in American History</td>
</tr>
<tr>
<td>LAW105.330</td>
<td>Problems of World Justice</td>
</tr>
<tr>
<td>LAW105.346</td>
<td>Women, Crime, &amp; Criminal Justice</td>
</tr>
<tr>
<td>LAW105.401</td>
<td>Law and Human Rights</td>
</tr>
<tr>
<td>LAW105.205</td>
<td>Minorities, Crime &amp; Justice</td>
</tr>
<tr>
<td>MUSG06.115</td>
<td>Growth &amp; Development of Jazz</td>
</tr>
<tr>
<td>MUSG06.220</td>
<td>The Music of African Americans</td>
</tr>
<tr>
<td>POSC07.323</td>
<td>Politics of Race/Poverty/Welfare</td>
</tr>
<tr>
<td>POSC07.340</td>
<td>Civil Rights and Civil Liberties</td>
</tr>
<tr>
<td>POSC07.324</td>
<td>Black Americans &amp; American Politics</td>
</tr>
<tr>
<td>PSY101.200</td>
<td>Psychology of Women &amp; Cultural Experience</td>
</tr>
<tr>
<td>PSY101.235</td>
<td>African American Psychology</td>
</tr>
</tbody>
</table>

41 ROWAN UNIVERSITY UNDERGRADUATE CATALOG 2016-2017
AIR FORCE RESERVE OFFICERS’ TRAINING CORPS (ROTC)

Professor of Aerospace Studies
AFROTC, Detachment 750
Saint Joseph’s University
Philadelphia, PA 19131-1399
610.660.3190

Rowan University students are eligible to participate in the Air Force Reserve Officers’ Training Corps (AFROTC) through a cross-enrollment agreement with St. Joseph’s University. All aerospace studies courses will be held on the St. Joseph’s campus. The AFROTC program enables a college student to earn a commission as an Air Force officer while concurrently satisfying requirements for his or her baccalaureate degree.

The program of aerospace studies at St. Joseph’s University offers two-year, and four-year curricula leading to a commission as a second lieutenant in the Air Force. In the four-year curriculum, a student takes the General Military Course (GMC) during the freshman and sophomore years, attends a four-week summer training program, and then takes the Professional Officer Course (POC) in the junior and senior years. A student is under no contractual obligation to the Air Force until entering the POC or accepting an Air Force scholarship.

The subject matter of the freshman and sophomore years is developed from a historical perspective and focuses on the scope, structure, and history of military power, with an emphasis on the development of air power. During the junior and senior years, the curriculum concentrates on the concepts and practices of leadership and management, and the role of national security forces in contemporary American society.

In addition to the academic portion of the curricula, each student participates in a leadership laboratory for two hours each week, during which the day-to-day skills and working environment of the Air Force are discussed and explained. The leadership lab utilizes a student organization designed for the practice of leadership and management techniques.

Air Force ROTC offers one-, two-, and three-year scholarships on a competitive basis to qualified applicants. All scholarships cover tuition, lab fees, and books, plus a tax-free monthly stipend. All members of the POC, regardless of scholarship status, receive the tax-free monthly stipend.

For further information on the cross-enrollment program, scholarships, and career opportunities, contact: Air Force ROTC at 610-660-3190 or rotc@sju.edu.

ARMY RESERVE OFFICERS’ TRAINING CORPS (ROTC)

LTC Kevin McKiernan and MAJ Lee Gerber
Sr. Military Science Instructors
ROTC House, 401 Mullica Hill Road
Rowan University
856.881.4316
daoep@princeton.edu
msi@princeton.edu

The primary purpose of Army ROTC is to develop leaders of character for the 21st century. Students enrolled in ROTC participate in a unique interactive program focused on leadership development with emphasis on self-discipline, integrity, confidence, and responsibility. Our intent is to help students improve themselves whether they decide to pursue a career as an officer in our Army or as a leader in the private sector. Students join the program without any obligation to the Army. Students only sign a contract to serve in the Army when they begin their junior year or when they receive an ROTC scholarship.

Our main objective is to commission the future officer leadership of the U. S. Army and motivate young people to be better citizens.

Our second objective is to teach leadership and management skills which will enhance a student’s future success in either a military or civilian career.

The Army ROTC scholarship program provides financial assistance for the education and training of highly qualified and motivated students who desire to be commissioned as officers in the Army after graduation from college. Scholarships pay full tuition and fees at Rowan University. Students also receive a book allowance and a monthly stipend. Army scholarships
Leadership Training and ROTC Activities

Leadership Labs/Field Training Exercises Hands-on training in a field environment performing events such as: Rappelling, Obstacle Course, Weapons familiarization, Land Navigation and Battle Drills. Physical Fitness Training We conduct physical fitness sessions throughout the school week to help keep you physically, mentally and emotionally fit. Ranger Challenge A highly competitive team specializing in military skills and physical fitness. This team competes in a yearly competition against other university ROTC programs in the tri-state area. Color Guard Take pride in Army tradition by participating in the Color Guard. We support various events such as parades, football homecomings and Commencement/Convocation Ceremonies. Rowan Army ROTC is located at the ROTC House at 401 Mullica Hill Road (intersection of Route 322 and Bowe Boulevard). Contact information is at the top this section and you can visit: http://www.goarmy.com. Note: All Military Science Courses (MILS) are listed under the Interdisciplinary heading in the Courses Description section of this catalog.

ASIAN STUDIES CONCENTRATION
G. Edward Wang
Coordinator
Bunce Hall
856.256.4500 ext. 3990
wangq@rowan.edu

The Asian Studies concentration is an interdisciplinary program available to students of all majors. This program is designed to increase the students' understanding of Asian culture and to promote a sophisticated cross-cultural appreciation of our expanding global community. This program is of value to students who are interested in developing careers in business, education, communication and engineering. Those who fulfill a total of eighteen credits of Required Courses, Core Courses and Electives will be awarded a certificate in Asian Studies upon completion of their degree.

The Concentration requirements are as follows:

Required Courses (3)

- ENGL02.112 Readings in Asian Literature
- INTR01.136 Gateway to Asia (RS)
- POSC07.350 Introduction to Asian Political Systems

Core Courses (9 s.h.)

- ARHS03.231 Surveying Asian Art
- CHIN07.101 Elementary Chinese I
- CHIN07.102 Elementary Chinese II
- CHIN07.201 Intermediate Chinese I
- CHIN07.211 Intermediate Chinese II
- GEOG16.343 Geography of Asia
- HIST05.355 Modern China
- HIST05.351 Modern Japan
- HIST05.356 Late Imperial China
- HIST05.408 Chinese Cultural History
- HIST05.446 Race, Identity and History in East Asia
- JAPA08.101 Elementary Japanese I
- JAPA08.102 Elementary Japanese II
- JAPA08.211 Intermediate Japanese I
- JAPA08.212 Intermediate Japanese II
- JAPA08.212 Intermediate Japanese III
- PHIL09.330 Asian Thought
- PHRE11.370 Introduction to Daoism (M/G)
- PHRE11.310 Introduction to Buddhism
- REL10.230 Religions of Asia
- SOC08.391 Ethnic Minorities in China

Elective Courses (6 s.h.)

- ANTH02.202 Intro to Cultural Anthropology
- ANTH02.350 Comparative Cultures
- ANTH02.420 Culture and Personality
- ECON04.307 Economics of Developing Nations
- ECON04.310 International Economics
- ECON04.320 Contemporary Economic Systems
- ENGL02.116 Readings in Non-Western Literature
- FIN04.435 International Finance and Management
- GEOG16.140 World Regional Geography
The Ethics Concentration is a multi-departmental program designed to complement and enhance a student’s major program, as well as to prepare students for graduate studies and professional careers. The Concentration is open to all Rowan undergraduate and graduate students.

Nearly all professions now have codes of ethics, and many businesses require employees to adhere to various standards of conduct. The concentration is flexible enough to suit our students’ diverse majors and career goals. For example, a student who majors in business and completes the Ethics Concentration might serve as a company’s ethics officer; a student who majors in nursing or biology and completes the concentration could run a hospital ethics committee; a student who majors in political science and studies ethics would be well qualified to pursue graduate work in public policy or law.

The Ethics Concentration contains a core designed to sharpen your critical thinking and reasoning skills in the context of moral reflection. These core courses stress ethical theories and application of ethical theories.

**Program Requirements**

Including:

- **18 s.h.**

  **PHIL09.250**  Introduction to Ethics

  **PHIL09.251**  Introduction to Ethics - WI

  **PHIL09.392**  Contemporary Moral Problems

  **PHIL09.393**  Contemporary Moral Problems - WI

Two of the following courses:

- **PHIL09.328**  Philosophy and Gender
- **PHIL09.240**  Philosophy and Society
- **PHIL09.341**  Biomedical Ethics
- **PHIL09.322**  Business Ethics
- **PHIL09.330**  Asian Thought
- **PHRE11.350**  Spirituality & Healing
- **REL10.200**  Religions of the World
- **REL10.210**  Religion in America
- **ENST94.301**  Environmental Ethics

An Honors, Rowan Seminar, or Philosophy and Religion course approved by the program advisor.

Two of the following courses:

- Any course from the previous list.
- Approved service learning activity (up to 6 s.h.)
- Approved Internship (up to 6 s.h.)
- Choice of courses from interdisciplinary bank, available at: [www.rowan.edu/ethics/courses.html](http://www.rowan.edu/ethics/courses.html)

**Portfolio** (not for credit) The portfolio will be used to evaluate a student’s personal growth and academic progress in the study of Ethics. A portfolio provides a comprehensive record of experiences, achievements, and demonstration of competencies.
CERTIFICATE OF UNDERGRADUATE STUDY IN FORENSIC STUDIES
Maria Rosado
Advisor
CAMPBELL LIBRARY 539
856.256.4586
rosado@rowan.edu

The CUGS in Forensic Studies is an interdisciplinary program that provides a sequence of courses that combines forensic topics (such as forensic Anthropology, forensic law, forensic science, and computer forensics) with law-justice topics (such as criminal procedures, criminal investigation, criminal justice) enabling students to pursue post graduate certification or higher degree training in the area of forensics (forensic studies, forensic science, or related fields). The CUGS in Forensic Studies may also fulfill interest for personal enrichment and satisfaction of intellectual curiosity among those students with a non-professional interest in forensic studies and forensic science.

Certificate of Undergraduate Study Forensic Studies
12 s.h.

The CUGS in Forensic Studies requires at least 3 Forensic courses for 9-10 sh from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH02.315</td>
<td>Forensic Anthropology (lab course)</td>
</tr>
<tr>
<td>LAWJ05.290</td>
<td>Forensic Law</td>
</tr>
<tr>
<td>CS07.352</td>
<td>Foundations of Computer Forensics</td>
</tr>
<tr>
<td>CHEM05.249</td>
<td>Introduction to Forensic Science</td>
</tr>
</tbody>
</table>

Students will take an additional Forensic course, or take a course from the Electives Bank, to fulfill the minimum 12 sh. To be awarded the CUGS in Forensic Studies, students must complete all courses required with at least a 1.7 average. For students pursuing post graduate certification or higher degree training in the area of Forensics it is recommended to take additional courses from the Electives Bank.

BACHELOR OF ARTS IN INTERNATIONAL STUDIES
Corinne Blake
Coordinator
Robinson Hall
blake@rowan.edu

International Studies is an interdisciplinary major designed to engage students in an in-depth examination of international politics, economics, history, society, and culture. Students will pursue one of six specializations: International Business and Economics, Global and Comparative Perspectives, Middle East and African Studies, Asian Studies, European and Russian Studies, and Latin American and Iberian Studies. International Studies majors in all specializations will gain an understanding of major global issues and analyze their own society in a broader global context; they will also learn how to apply interdisciplinary approaches to global problems and issues and acquire strong research, critical thinking, and communication skills.

Students considering a major in International Studies are encouraged to consult with an advisor early in their academic career so they can develop a coherent program of study within their specialization. International Studies majors are very strongly encouraged to study abroad for at least a semester in a country relevant to their area of specialization. Students should also consider pursuing a double major in International Studies and another discipline to enhance their career prospects; students can complete all requirements to double major in International Studies and virtually any major in the College of Humanities & Social Sciences and Communication & Creative Arts within four years (120 credits). With careful planning, International Studies majors with a specialization in International Business and Economics could potentially earn a double major in the Rohrer College of Business such as Marketing, Management, or Entrepreneurship with 130 credits.

International Studies majors must have a minimum 2.0 overall G.P.A. to qualify for graduation.

General Education
All International Studies majors must complete the University General Education requirements as described on page 33

Rowan Experience
All International Studies majors must complete the Rowan Experience requirements as described on page 35

Program Requirements
Foundational Courses
up to 21 s.h.

These courses also count as Social & Behavioral Sciences General Education courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON04.101</td>
<td>Introduction to Macroeconomics</td>
</tr>
<tr>
<td>ECON04.102</td>
<td>Introduction to Microeconomics</td>
</tr>
</tbody>
</table>

These courses also count as Humanities General Education courses

- Four semesters of a foreign language— in the same language if available (up to 12 s.h.)
- Students may fulfill the language requirement by completing higher level foreign language courses, e.g. students who pass the placement examination for first year Spanish only need to complete second year Spanish courses.

LIT course one of the following: (3 s.h.)
Interdisciplinary Studies

ENGL02.116  Readings in Non-Western Literature
ENGL02.112  Readings in Asian Literature
GERM03.100  Masterpieces of German Literature in English Translation
FREN02.100  Masterpieces of French Literature in English Translation
SPAN05.100  Masterpieces of Hispanic Literature in English Translation
THD07.440  Contemporary World Theatre

Core Courses 18 s.h.

HIST05.120  World History since 1500
IS25.300   Introduction to International Studies –WI
IS25.400   Senior Seminar in International Studies

One of the following (3 s.h.)

ANTH02.202  Cultural Anthropology
REL10.200  Religions of the World

One of the following (3 s.h.)

GEOG16.110  Cultural Geography
GEOG16.140  World Regional Geography
GEOG16.100  Earth, People, Environment

Specializations 15 s.h.

Students choose one of the following specializations:

• International Business and Economics
• Global and Comparative Perspectives
• Middle East and African Studies
• Asian Studies
• European and Russian Studies
• Latin American and Iberian Studies

International Studies Required Courses 45-54 s.h.

General Education, Rowan Experience, and Free Electives 66-75 s.h.

Total Credits 120 s.h.

Specialization Options (15 s.h. each)

Students should work with their advisor to develop a coherent plan of study within these specializations. This is especially important for students pursuing the Global and Comparative Perspectives specialization. Students are very strongly encouraged to study abroad for at least a semester in a country relevant to their specialization.

International Business and Economics Specialization 15 s.h.

One of the following courses (3 s.h.)

MKT09.200  Principles of Marketing
MIS02.234  Management Information Systems

One of the following management courses (3 s.h.)

MGT98.242  Legal Environment of Business
MGT06.300  Organizational Behavior

Three of the following courses (9 s.h.)

ECON04.310  Global Economics
ECON04.307  Economic Development
ECON04.320  Contemporary Economic Systems
MGT06.330  Managing International Business
MKT09.379  International Marketing

One 300-400 level course from any other International Studies Specialization

Global and Comparative Perspectives Specialization 15 s.h.

Students select five courses (15 s.h.) from the list below. At least three of the courses selected (9 s.h) must be 300-400 level courses from at least two different disciplines. The other two courses (6 s.h.) taken for the specialization may be any level or discipline.

ANTH02.202  Cultural Anthropology
ANTH02.321  Cultural Ecology
ANTH02.322  Sex And Sex Roles In A Cross Cultural Perspective
ANTH02.350  Comparative Cultures
ANTH02.350  Introduction to Anthropological Linguistics
CMS04.330  International Media Communication
CMS04.360  Intercultural Communication
ECON04.303  Principles of Economics: Global Perspectives
ECON04.307  Economics of Developing Nations
ECON04.310  Global Economics
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON04.320</td>
<td>Contemporary Economic Systems</td>
</tr>
<tr>
<td>GEOG16.100</td>
<td>Earth, People, Environment</td>
</tr>
<tr>
<td>GEOG16.110</td>
<td>Cultural Geography</td>
</tr>
<tr>
<td>GEOG16.140</td>
<td>World Regional Geography</td>
</tr>
<tr>
<td>GEOG16.301</td>
<td>Economic Geography</td>
</tr>
<tr>
<td>GEOG16.303</td>
<td>Political Geography</td>
</tr>
<tr>
<td>HIST05.381</td>
<td>Modern Jewish History</td>
</tr>
<tr>
<td>HIST05.413</td>
<td>Comparative Race Relations</td>
</tr>
<tr>
<td>HIST05.425</td>
<td>History of Feminisms</td>
</tr>
<tr>
<td>HIST05.441</td>
<td>Imperialism and Colonialism</td>
</tr>
<tr>
<td>HIST05.445</td>
<td>History of the Cold War</td>
</tr>
<tr>
<td>LAWJ05.175</td>
<td>Comparative and International Criminal Justice</td>
</tr>
<tr>
<td>LAWJ05.330</td>
<td>Problems in World Justice</td>
</tr>
<tr>
<td>LAWJ05.401</td>
<td>Law and Human Rights</td>
</tr>
<tr>
<td>MUSG06.447</td>
<td>Music in World Cultures - Asia and Oceana</td>
</tr>
<tr>
<td>MUSG06.448</td>
<td>Music in World Cultures – Africa, India, Near &amp; Middle East</td>
</tr>
<tr>
<td>PHIL09.211</td>
<td>World Philosophy I</td>
</tr>
<tr>
<td>PHIL09.213</td>
<td>World Philosophy II</td>
</tr>
<tr>
<td>POSC07.230</td>
<td>Comparative Political Systems</td>
</tr>
<tr>
<td>POSC07.321</td>
<td>Contemporary World Problems</td>
</tr>
<tr>
<td>POSC07.420</td>
<td>International Law</td>
</tr>
<tr>
<td>POSC07.421</td>
<td>International Organizations</td>
</tr>
<tr>
<td>REL10.200</td>
<td>Religions of the World</td>
</tr>
<tr>
<td>RTF03.294</td>
<td>Contemporary International Cinema</td>
</tr>
<tr>
<td>SOC15.322</td>
<td>Sociology of Population</td>
</tr>
<tr>
<td>SOC08.327</td>
<td>Comparative Education in a Sociological Perspective</td>
</tr>
<tr>
<td>THD07.440</td>
<td>Contemporary World Theatre</td>
</tr>
<tr>
<td>THD08.446</td>
<td>World Dance Forms</td>
</tr>
</tbody>
</table>

One course from any other International Studies specialization

**Area Studies Specializations** (15 s.h.)

**Middle East and African Studies Specialization** 15 s.h.

Students select five courses (15 s.h.) from the list below. At least three of the courses selected (9 s.h.) must be 300-400 level courses from at least two different disciplines. The other two courses (6 s.h.) taken for the specialization may be any level or discipline. At least two semesters (6 s.h.) of foreign language taken for the International Studies foundational requirements should be related to the Middle East and African Studies Specialization, e.g. Arabic or French.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH02.311</td>
<td>People and Cultures of Africa</td>
</tr>
<tr>
<td>GEOG16.345</td>
<td>Geography of Africa</td>
</tr>
<tr>
<td>AFST11.104</td>
<td>Introduction to Africana Studies</td>
</tr>
<tr>
<td>AFST11.304</td>
<td>African Social Thought</td>
</tr>
<tr>
<td>HIST05.394</td>
<td>Sub-Saharan Africa to 1800</td>
</tr>
<tr>
<td>HIST05.397</td>
<td>Sub-Saharan Africa since 1800</td>
</tr>
<tr>
<td>HIST05.413</td>
<td>Comparative Race Relations</td>
</tr>
<tr>
<td>HIST05.443</td>
<td>Topics in Global History: African Medicine</td>
</tr>
<tr>
<td>HIST05.443</td>
<td>Topics in Global History: Women and Family in Africa</td>
</tr>
<tr>
<td>HIST05.437</td>
<td>Twentieth Century African Nationalism</td>
</tr>
<tr>
<td>HIST05.441</td>
<td>Imperialism and Colonialism</td>
</tr>
<tr>
<td>GEOG16.347</td>
<td>Geography of the Middle East</td>
</tr>
<tr>
<td>HIST05.308</td>
<td>Modern Middle East</td>
</tr>
<tr>
<td>HIST05.381</td>
<td>Islamic Civilizations</td>
</tr>
<tr>
<td>HIST05.404</td>
<td>Arab-Israeli Conflict</td>
</tr>
<tr>
<td>HIST05.417</td>
<td>Women in Islam</td>
</tr>
<tr>
<td>HIST05.439</td>
<td>Ottoman Empire</td>
</tr>
<tr>
<td>HIST05.444</td>
<td>Islamist Movements</td>
</tr>
<tr>
<td>POSC07.345</td>
<td>Government and Politics of the Middle East</td>
</tr>
</tbody>
</table>

Students may count up to six s.h. (two courses) of language and applied language courses in a related foreign language at the 300-400 level towards the Middle East and Africa specialization, e.g.:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>FREN02.311</td>
<td>Advanced French Conversation</td>
</tr>
<tr>
<td>FREN02.410</td>
<td>Advanced French Composition</td>
</tr>
<tr>
<td>FREN02.300</td>
<td>French Phonetics</td>
</tr>
<tr>
<td>FREN02.400</td>
<td>History of the French Language</td>
</tr>
</tbody>
</table>

Study Abroad or transfer credits for other language-skills-focused and applied courses in French or Arabic.

**Asian Studies Specialization** 15 s.h.
Students select five courses (15 s.h.) from the list below. At least three of the courses selected (9 s.h.) must be 300-400 level courses from at least two different disciplines. The other two courses (6 s.h.) taken for the specialization may be any level or discipline. At least two semesters (6 s.h.) of foreign language taken for the International Studies foundational requirements should be related to the Asian Studies Specialization, e.g. Chinese or Japanese.

**Asian Studies Specialization**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTR01.136</td>
<td>Gateway to Asia (RS)</td>
</tr>
<tr>
<td>ENGL02.112</td>
<td>Readings in Asian Literature</td>
</tr>
<tr>
<td>GEOG16.343</td>
<td>Geography of Asia</td>
</tr>
<tr>
<td>HIST05.336</td>
<td>Late Imperial China</td>
</tr>
<tr>
<td>HIST05.408</td>
<td>Chinese Cultural History</td>
</tr>
<tr>
<td>HIST05.351</td>
<td>Modern Japan</td>
</tr>
<tr>
<td>HIST05.355</td>
<td>Modern China</td>
</tr>
<tr>
<td>HIST05.438</td>
<td>History of the Vietnam War</td>
</tr>
<tr>
<td>HIST05.441</td>
<td>Imperialism and Colonialism</td>
</tr>
<tr>
<td>HIST05.446</td>
<td>Race, Identity, and History in East Asia</td>
</tr>
<tr>
<td>PHRE11.310</td>
<td>Introduction to Buddhism</td>
</tr>
<tr>
<td>PHIL09.330</td>
<td>Asian Thought</td>
</tr>
<tr>
<td>POSC07.350</td>
<td>Introduction to Asian Political Systems</td>
</tr>
<tr>
<td>REL10.230</td>
<td>Religions of Asia</td>
</tr>
<tr>
<td>PHRE11.330</td>
<td>Introduction to Daoism</td>
</tr>
<tr>
<td>SOC08.391</td>
<td>Ethnic Minorities in China</td>
</tr>
</tbody>
</table>

Students may count up to six s.h. (two courses) of language and applied language courses in a related foreign language at the 300-400 level (e.g. third year Chinese and Japanese language courses from Rowan or a Study Abroad program) towards the specialization.

**European and Russian Studies Specialization**

15 s.h.

Students select five courses (15 s.h.) from the list below. At least three of the courses selected (9 s.h.) must be 300-400 level courses from at least two different disciplines. The other two courses (6 s.h.) taken for the specialization may be any level or discipline. At least two semesters (6 s.h.) of foreign language taken for the foundational requirements should be related to the European and Russian Studies Specialization, e.g. French, German, Spanish, Italian, Russian.

**European and Russian Studies Specialization**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG16.346</td>
<td>Geography of the C.I.S. (former Soviet Union)</td>
</tr>
<tr>
<td>HIST05.343</td>
<td>Russia to 1914</td>
</tr>
<tr>
<td>HIST05.344</td>
<td>Russia since 1914</td>
</tr>
<tr>
<td>HIST05.443</td>
<td>Topics in Global History: Stalinism</td>
</tr>
<tr>
<td>HIST05.445</td>
<td>History of the Cold War</td>
</tr>
<tr>
<td>POSC07.341</td>
<td>Politics of Russia, Eastern Europe and Eurasia</td>
</tr>
<tr>
<td>POSC07.351</td>
<td>Russian Foreign Policy</td>
</tr>
<tr>
<td>ARHS03.205</td>
<td>Art History Survey III</td>
</tr>
<tr>
<td>ENGL02.473</td>
<td>Twentieth Century British Literature</td>
</tr>
<tr>
<td>ENGL02.482</td>
<td>Modern European Literature</td>
</tr>
<tr>
<td>FREN02.320</td>
<td>French Civilization and Culture</td>
</tr>
<tr>
<td>FREN02.324</td>
<td>Appreciating French Literature</td>
</tr>
<tr>
<td>FREN02.325</td>
<td>Readings in Contemporary French Literature</td>
</tr>
<tr>
<td>FREN02.326</td>
<td>The French Novel</td>
</tr>
<tr>
<td>FREN02.420</td>
<td>Evolution of French Civilization</td>
</tr>
<tr>
<td>FREN02.421</td>
<td>The French Short Story</td>
</tr>
<tr>
<td>GEOG16.342</td>
<td>Geography of Europe</td>
</tr>
<tr>
<td>GERM03.100</td>
<td>Masterpieces of German Literature</td>
</tr>
<tr>
<td>GERM03.320</td>
<td>German Civilization and Culture</td>
</tr>
<tr>
<td>HIST05.100</td>
<td>Western Civilization to 1660</td>
</tr>
<tr>
<td>or HIST05.101</td>
<td>Western Civilization since 1660</td>
</tr>
<tr>
<td>HIST05.314</td>
<td>Europe 1871-1914 History</td>
</tr>
<tr>
<td>HIST05.315</td>
<td>Twentieth Century Europe I</td>
</tr>
<tr>
<td>HIST05.316</td>
<td>Twentieth Century Europe II</td>
</tr>
<tr>
<td>HIST05.326</td>
<td>England since 1715</td>
</tr>
<tr>
<td>HIST05.407</td>
<td>History of World War II</td>
</tr>
<tr>
<td>HIST05.406</td>
<td>Jewish Holocaust 1933-1945</td>
</tr>
<tr>
<td>HIST05.419</td>
<td>Women in Modern European History</td>
</tr>
<tr>
<td>HIST05.420</td>
<td>British Empire and Commonwealth</td>
</tr>
<tr>
<td>HIST05.443</td>
<td>Imperialism and Colonialism</td>
</tr>
<tr>
<td>POSC07.346</td>
<td>Politics and Society of Great Britain</td>
</tr>
<tr>
<td>REL10.328</td>
<td>Development of Western Religious Thought</td>
</tr>
<tr>
<td>SOC08.399</td>
<td>Sociology of the Holocaust</td>
</tr>
</tbody>
</table>

Students may count up to six s.h. (two courses) of language and applied language courses in a related foreign language (French, German, Italian, Spanish, Russian) at the 300-400 level towards the specialization, e.g.:
Interdisciplinary Studies

FREN02.311 Advanced French Conversation
FREN02.410 Advanced French Composition
FREN02.300 French Phonetics
FREN02.400 History of the French Language
GERM03.311 Advanced German Conversation
SPAN05.305 Oral Spanish
SPAN05.409 Advanced Spanish Grammar (WI)
or SPAN05.410 (non-WI) Advanced Spanish Grammar
SPAN05.411 Advanced Spanish Conversation
SPAN05.300 Spanish Phonetics
SPAN05.302 Introduction to Hispanic Linguistics
SPAN05.312 Spanish for Business
SPAN05.313 Spanish for Medical Personnel
SPAN05.340 Introduction to Spanish Translation

Study Abroad or transfer credits for other language-skills-focused and applied courses in French, German, Italian, Spanish or Russian

Latin American and Iberian Studies Specialization 15 s.h.

Students select five courses (15 s.h.) from the list below. At least three of the courses selected (9 s.h.) must be 300-400 level courses from at least two different disciplines. The other two courses (6 s.h.) taken for the specialization may be any level or discipline. At least two semesters (6 s.h.) of foreign language taken for the foundational requirements should be related to the Latin American and Iberian Studies Specialization, e.g. Spanish.

ANTH02.210 Natives of South America
GEOG16.344 Geography of Latin America
HIST05.347 Traditional Latin America
HIST05.350 Modern Latin America
HIST05.362 History of Mexico & the Caribbean
HIST05.409 Latin American Revolutions and Reform
HIST05.411 Topics in Latin-American History
HONR05.390 Linguistics and Cultures of Native South America
HONR05.390 Modern Descendants of the Incas
SPAN05.301 Appreciation of Hispanic Literature
SPAN05.320 Spanish Civilization and Culture
SPAN05.324 Spanish American Civilization and Culture
SPAN05.321 Survey of Spanish Literature I
SPAN05.322 Survey of Spanish Literature II
SPAN05.323 Survey of Spanish American Literature I
SPAN05.325 Readings in Contemporary Spanish Literature
SPAN05.327 Spanish American Poetry
SPAN05.329 Survey of Spanish American Literature II
SPAN05.328 Spanish American Theatre
SPAN05.381 Contemporary Spanish Theatre
SPAN05.383 Spanish American Short Story
SPAN05.426 Spanish American Novel
SPAN05.481 The Generation of 1898
SPAN05.482 Contemporary Spanish Novel

Students may count up to six credits (two courses) of language and applied language courses in Spanish at the 300-400 level towards the specialization, e.g.:

SPAN05.305 Oral Spanish
SPAN05.409 Advanced Spanish Grammar (WI)
or SPAN05.410 (non-WI) Advanced Spanish Grammar
SPAN05.411 Advanced Spanish Conversation
SPAN05.300 Spanish Phonetics
SPAN05.302 Introduction to Hispanic Linguistics
SPAN05.312 Spanish for Business
SPAN05.313 Spanish for Medical Personnel
SPAN05.340 Introduction to Spanish Translation

Study Abroad or transfer credits for other language-skills-focused and applied courses in Spanish
Dual Degree (4 +1 program): B.A. in International Studies with an International Business and Economic Specialization and an M.B.A.

Overview

This 4 +1 accelerated dual degree program offers students an opportunity to earn a B.A. in International Studies with a Specialization in International Business & Economics and an M.B.A. in five years. Students may apply to the program after earning their freshman year (at least 30 credits) or, for transfer students, after earning 15 credits at Rowan. If admitted, students need to pass the GMATs or GRE with a 450 equivalent and reach the benchmarks listed below before enrolling in M.B.A. courses as a senior. The 12 graduate credits will be applied towards the undergraduate program as well as the graduate program, i.e. students only need to earn 108 undergraduate credits. In addition to earning an M.B.A. more quickly, students in this program will save tuition through taking 12 credits of M.B.A. courses as a senior at undergraduate tuition rates.

4 +1 Undergraduate Program Requirements

**Required Major Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL02.116</td>
<td>Readings in Non-Western Literature</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ENGL02.112</td>
<td>Readings in Asian Literature</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>GERM03.100</td>
<td>Masterpieces of German Literature in English Translation</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>FREN02.100</td>
<td>Masterpieces of French Literature in English Translation</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>SPAN05.100</td>
<td>Masterpieces of Hispanic Literature in English Translation</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>THD07.440</td>
<td>Contemporary World Theatre</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HIST05.120</td>
<td>World History since 1500</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ANTH02.202</td>
<td>Cultural Anthropology</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>REL10.200</td>
<td>Religions of the World</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>GEOG16.110</td>
<td>Cultural Geography</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>GEOG16.140</td>
<td>World Regional Geography</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>GEOG16.100</td>
<td>Earth, People, Environment</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>IS25.300</td>
<td>Introduction to International Studies (WI)</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>POSC07.320</td>
<td>International Relations</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>IS25.400</td>
<td>Senior Seminar in International Studies</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>MKT09.200</td>
<td>Principles of Marketing</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>MIS02.374</td>
<td>Management Information Systems</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>MGT98.242</td>
<td>Legal Environment of Business</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>MGT06.300</td>
<td>Organizational Behavior</td>
<td>3 s.h.</td>
</tr>
</tbody>
</table>

Three of the following courses:

- ECON04.310 Global Economics 3 s.h.
- ECON04.307 Economic Development 3 s.h.
- ECON04.320 Contemporary Economic Systems 3 s.h.
- MGT06.330 Managing International Business 3 s.h.
- MKT09.379 International Marketing 3 s.h.

One 300-400 level course from any International Studies Area Studies specialization

**Other Required Courses for the Major**

- ECON04.101 Introduction to Macroeconomics 3 s.h.
- ECON04.102 Introduction to Microeconomics 3 s.h.

Foreign Language I (students may test into higher level language courses) - 3 s.h.

Foreign Language II (must be the same language as Foreign Language I) - 3 s.h.

Foreign Language III (if available, the same language as Foreign Language II) - 3 s.h.

Foreign Language IV (must be the same language as Foreign Language III) - 3 s.h.

**Required M.B.A. Prerequisite Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH03.125</td>
<td>Calculus: Techniques and Applications</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>MATH01.130</td>
<td>Calculus I</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>STAT02.260</td>
<td>Statistics I</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ACC03.210</td>
<td>Principles of Accounting I</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ACC03.211</td>
<td>Principles of Accounting II</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>MGT06.305</td>
<td>Operations Management</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>FIN04.300</td>
<td>Principles of Finance</td>
<td>3 s.h.</td>
</tr>
</tbody>
</table>

**Rowan Experience, General Education, and Free Elective Courses**

Four approved graduate-level M.B.A. courses may substitute for any of the free elective courses. No more than 12 graduate credits total may be used to replace undergraduate coursework.

Total Required Credits for the Undergraduate Portion of the Program 120 or 108** s.h. total **The first number is the official number of credits required for the undergraduate degree; however, the second number reflects the actual number of credits students will take through undergraduate coursework since 12 of the graduate credits are completed in the senior year and count towards both the undergraduate and graduate degrees.

ROWAN UNIVERSITY UNDERGRADUATE CATALOG 2016-2017
4 + 1 Graduate Program Requirements

**Required M.B.A. Courses taken as an Undergraduate 4 + 1 student**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT06.500</td>
<td>Designing, Developing, and Leading High Performance Organizations</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>MGT01.510</td>
<td>Professional, Legal, and Managerial Responsibilities (MGT01.510)</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>MGT06.502</td>
<td>International Business and Society</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>MIA02.500</td>
<td>Issues in Management Information Strategy</td>
<td>3 s.h.</td>
</tr>
</tbody>
</table>

**Required M.B.A. Courses taken as a Graduate 4 + 1 Student**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT07.500</td>
<td>Managerial Decision Making Tools</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>MKT09.500</td>
<td>Marketing Management</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ACC03.500</td>
<td>Managerial Accounting</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>FIN04.500</td>
<td>Financial Decision Making</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>MGT06.629</td>
<td>Managing Organizational Strategy</td>
<td>3 s.h.</td>
</tr>
</tbody>
</table>

**Elective Graduate M.B.A. courses taken while a Graduate 4 + 1 student**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC03.502</td>
<td>Advanced Managerial Accounting</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ACC03.507</td>
<td>Government &amp; Non Profit Accounting</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ACC03.509</td>
<td>Intermediate Financial Accounting</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ACC03.510</td>
<td>Financial Statement Analysis</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>FIN04.512</td>
<td>Capital Budgeting</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>FIN04.516</td>
<td>Issues in Finance</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>FIN04.600</td>
<td>Investment &amp; Portfolio Analysis</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>MGT06.501</td>
<td>Advanced Operations Management &amp; Strategy</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>MGT06.503</td>
<td>Organization Development</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>MGT07.600</td>
<td>Business Forecasting</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>MKT09.600</td>
<td>International Marketing</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>BUS01.600</td>
<td>Special Topics in Business Administration</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>MGT06.601</td>
<td>Strategic Planning for Operation Managers</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>MGT06.605</td>
<td>Strategic Human Resource Management</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>MIS02.515</td>
<td>Electronic Commerce</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>MGT06.520</td>
<td>Global Leadership and Organization Culture</td>
<td>3 s.h.</td>
</tr>
</tbody>
</table>

(Students may elect as many as three special topics courses.)

**Total Required Credits for the Graduate Portion of the Program**

36 s.h.

This number includes the 12 graduate credits that may be applied towards both the graduate and undergraduate portions of the program.

**Total Required Credits for the Entire 4 + 1 Program**

138 s.h.

**Requirements for Admission:** Students may be admitted to this program as early as the summer after their freshman year (30 credits). Students are encouraged to apply as early as possible to ensure timely completion of the program, but assuming they've taken the required courses listed below, they may apply at a later point. Transfer students with at least 30 credits may apply after they have earned at least 15 credits at Rowan, i.e. in their second semester at Rowan.

Students must earn a C minimum grade in M.B.A. prerequisite courses as noted below and at least a C- in all courses that count towards the International Studies major.

**Sophomore Admission:** After completing their freshman year or 30 credits, students who meet the criteria listed below may apply to this program:

- Minimum overall GPA of 3.3 in undergraduate coursework;
- Completion of Calculus: Techniques and Applications (MATH03.125) OR Calculus I (MATH01.130) AND Statistics I (STAT02.260) with at least a C;
- Completion of at least two International Studies core courses or language courses;

**Junior Admission:** After earning 60 credits, students who apply to the program must meet the criteria listed below:

- International Studies major with an International Business & Economics Specialization;
- Minimum overall GPA of 3.3 in undergraduate coursework;
- Completion of at least five of the M.B.A. prerequisite courses listed below with at least a C in each course:
  - Calculus: Techniques and Applications (MATH03.125) OR Calculus I (MATH01.130)
  - Statistics I (STAT02.260)
  - Introduction to Macroeconomics (ECON04.101)
  - Introduction to Microeconomics (ECON04.102)
Requirements for Beginning M.B.A. Program as a Senior (90 credits): To begin the M.B.A. program in their senior year, students who have been accepted into this accelerated dual degree program must meet the criteria listed below. The coordinator of the M.B.A. program will assess whether the student has met the requirements necessary to begin taking M.B.A. courses. The coordinator of International Studies will assess the student's record in International Studies.

- Meet with Director of M.B.A. program to review course work and requirements related to the M.B.A.;
- Complete at least 90 credits with a 3.3 overall GPA;
- At least a 450 or equivalent score on the GMATs or GREs;
- Complete all prerequisites for the M.B.A. with a grade of at least C:
  - Calculus: Techniques and Applications (MATH03.125) OR Calculus I (MATH01.130)
  - Statistics I (STAT02.260)
  - Introduction to Macroeconomics (ECON04.101)
  - Introduction to Microeconomics (ECON04.102)
  - Principles of Accounting I (ACC03.210)
  - Principles of Accounting II (ACC03.211)
  - Principles of Marketing (MKT09.200)
  - Operations Management (MGT06.305)
  - Principles of Finance (FIN04.300)

- Complete the International Studies requirements listed below:
  - Two years of a foreign language or at least intermediate level proficiency in a foreign language
  - At least four of the six International Studies core requirements (see program guide below), including Introduction to International Studies (IS25.300)
  - At least two of the five required courses for the International Business & Economics Specialization (see program guide below)

Requirements for Graduation: To graduate from this accelerated dual degree program with a B.A. and an M.B.A., students must:

- Complete all requirements for the International Studies B.A. with an International Business & Economics Specialization, including General Education and Rowan Experience requirements;
- Complete all prerequisites for the M.B.A. program;
- Complete all requirements for the M.B.A., which is a level III program at Rowan. In level III programs, students must achieve a 3.0 overall GPA with no grade lower than C and no more than two Cs.

Student Status: Students will be expected to maintain satisfactory progress through the program: maintain an overall 3.3 GPA, earn at least Cs in all M.B.A. prerequisite courses, and meet the level III criteria in the M.B.A. program, i.e. achieve a 3.0 overall GPA with no grade lower than C and no more than two Cs. Any student who fails to maintain satisfactory progress as described above will be placed on probation within the program for one semester. If the student’s performance still does not improve, he/she will be dropped from the accelerated program. Students with documented extenuating circumstances may request an exception to this requirement by obtaining written approval of the M.B.A. Coordinator.

Students enrolled in this accelerated B.A./M.B.A. program may take up to 12 credits of graduate courses at the undergraduate rate in their senior year providing they meet the criteria listed above. Beyond this, students will pay graduate tuition rates for their M.B.A. courses.

Contingency for Students who do not Complete the M.B.A. program: Students who are dropped from the graduate program or choose not to complete the B.A./M.B.A. program may earn a B.A. in International Studies with a Specialization in International Business & Economics (or any other International Studies specialization) once they have completed all requirements for that undergraduate degree, achieved at least a 2.0 GPA, and earned at least 120 credits. Students may count up to 12 credits of their graduate courses towards their B.A. requirements, these courses will count as free electives towards the 120 credits required for a B.A.

CERTIFICATE OF UNDERGRADUATE STUDY IN MIDDLE EAST STUDIES (CUGS)
Corinne Blake
Coordinator
Robinson Hall
blake@rowan.edu

Karinka Somdal-Sands
Co-Coordinator
The CUGS in Middle East Studies aims to develop students' understanding of the history of the Middle East from the rise of Islam in the 7th century C.E. and the complexity of contemporary issues and problems; it also aims to develop skills that will help students professionally after they graduate.

The Middle East Studies CUGS requires 12 s.h. or four courses taken from at least two departments:

- **HIST05.383** Islamic Civilizations*
- or **HIST05.439** Ottoman Empire *

*Note: HIST05.306 Historical Methods is a prerequisite for both courses; students enrolled in this CUGS can receive a prerequisite waiver after completing COMP01.112 College Composition II; contact Dr. Blake, blake@rowan.edu, for a waiver.

- **POSC07.345** Government and Politics of the Middle East
- or **HIST05.308** Modern Middle East*

*Note: HIST05.306 Historical Methods is a prerequisite; non-History majors can receive a waiver completing COMP01.112 College Composition II.

Two electives at any level from courses listed below. Students enrolled in this CUGS may get a prerequisite waiver for any of the history courses listed.

- **HIST05.383** Islamic Civilizations (if not taken as a core course)
- **HIST05.439** Ottoman History (if not taken as a core course)
- **HIST05.308** Modern Middle East (if not taken as a core course)
- **POSC07.345** Government and Politics of the Middle East (if not taken as a core course)
- **HIST05.404** Arab-Israeli Conflict (HIST05.306 Historical Methods is a prerequisite)
- **HIST05.417** Women in Islam (HIST05.306 Historical Methods is a prerequisite)
- **HIST05.444** Islamist Movements (HIST05.306 Historical Methods is a prerequisite)
- **GEOG06.347** Geography of the Middle East
- **LAWJ05.415** Selected Topics: International Terrorism
- **POSC07.489** Seminar in Political Science* (POSC07.360 Methods and Statistics in Political Science Research is a prerequisite) with approval of Dr. Somdahl-Sands, co-coordinator of the Middle East Studies CUGS, and a final paper written about the Middle East

(i.e. only one language course may count towards the CUGS).

### INTERNATIONAL STUDIES CONCENTRATION

**Corinne Blake**
Coordinator
Bunce Hall
blake@rowan.edu

The International Studies program is an interdisciplinary concentration that prepares students for careers in an increasingly interdependent world. Students are introduced to a wide range of economic, political and environmental issues and they develop expertise in the culture, history and languages of other parts of the globe.

Students are required to complete 2 courses from a bank of core courses, and 4 others from any of the area studies (African, Asian, Eastern European and Russian, Latin American and Iberian, Middle Eastern and Western European) for a total of 18 credit hours. These 4 courses can be selected from the list of core courses as well. There may be other courses, not listed here, that are applicable with the approval of the Coordinator.

International Studies may be pursued in conjunction with major and minor programs, or as General Education, Multicultural/Global, Literature, Writing Intensive, or Rowan Seminar requirements. Study of a foreign language is recommended. Students can also pursue Study Abroad in partial fulfillment of the International Studies Concentration.

The International Studies program is an interdisciplinary concentration that prepares students for careers in an increasingly interdependent world. Students are introduced to a wide range of economic, political and environmental issues and they develop expertise in the culture, history and languages of other parts of the world. International Studies may be pursued in conjunction with major and minor programs.

### Requirements

Core Courses: 6 hours from the core bank below.
Area Studies: 9 hours. Credits earned to fulfill the Area Studies requirement must come from at least two departments. Six hours of Area Studies credits must be at the 300 lvl or higher. These may be selected from either core or area banks.

2nd Semester Foreign Language (or CLEP equivalent). Neither the first or second semester of this language may count as an Area Studies course. Any additional foreign language credit in this language (at a higher level) or another language (at any level) may fill Area Studies requirements.

**Additional Notes**

Students who complete an approved study abroad semester will have their 300/400 lvl Area Studies requirement reduced by three hours. Students will also receive credits from such study abroad semesters as determined by their home department and the International Center. As long as the study abroad semesters are approved by the home department and the university, there is no upper limit on the number of credits a student may apply to International Studies.

Students wishing to obtain credit for courses not listed in the Area Studies Bank may submit course syllabi to the program coordinator. In general, any course that deals exclusively with the language, culture, or history of any of the listed geographic regions will count, but such decisions are at the discretion of the ISC coordinator and the advisory council and should be obtained no later than the third week of the semester during which the class takes place (and may be obtained as soon as the student has access to the syllabus).

Internships in international trade, government, communications, business management and marketing can also provide students with valuable skills and work experience. For a listing of companies involved in such areas in the southern New Jersey and Philadelphia area, contact your local Chamber of Commerce. For information about international internship opportunities, you can also contact your professors, your department, or the International Center.

Both the Core Course bank and the Area Studies bank are located below. Please contact Dr. Corrine Blake (blake@rowan.edu) with any questions.

**International Studies Core**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN04.435</td>
<td>International Financial Management</td>
</tr>
<tr>
<td>ECON04.307</td>
<td>Economic Development (Multicultural/Global)</td>
</tr>
<tr>
<td>ECON04.310</td>
<td>Global Economics</td>
</tr>
<tr>
<td>ECON04.320</td>
<td>Contemporary Economic Systems (M/G)</td>
</tr>
<tr>
<td>ENGL02.116</td>
<td>Readings in Non-Western Literature (M/G)(LIT)(GenEd)</td>
</tr>
<tr>
<td>ANTH02.202</td>
<td>Cultural Anthropology (M/G) (GenEd)</td>
</tr>
<tr>
<td>ANTH02.370</td>
<td>Comparative Cultures (M/G)(GenEd)</td>
</tr>
<tr>
<td>ANTH02.250</td>
<td>Introduction to Anthropological Linguistics</td>
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<tr>
<td>GEOG16.110</td>
<td>Cultural Geography (M/G)(GenEd)</td>
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<td>GEOG16.140</td>
<td>World Regional Geography (M/G)(GenEd)</td>
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<tr>
<td>GEOG16.301</td>
<td>Economic Geography (M/G)</td>
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<tr>
<td>GEOG16.303</td>
<td>Political Geography (M/G)</td>
</tr>
<tr>
<td>HIST05.101</td>
<td>Western Civilization since 1600 (GenEd)</td>
</tr>
<tr>
<td>HIST05.120</td>
<td>World History Since 1500 (Gen Ed)</td>
</tr>
<tr>
<td>HIST05.413</td>
<td>Comparative Race Relations: South Africa, Brazil and the US</td>
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<tr>
<td>HIST05.441</td>
<td>Imperialism and Colonialism</td>
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<tr>
<td>LAWJ05.175</td>
<td>Comparative and International Criminal Justice</td>
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<tr>
<td>LAWJ05.330</td>
<td>Problems in World Justice</td>
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<td>LAWJ05.401</td>
<td>Law and Human Rights</td>
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<td>MKT09.379</td>
<td>International Marketing</td>
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<td>MGT06.330</td>
<td>Managing International Business</td>
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<td>MUSG06.447</td>
<td>Music in World Cultures - Asia and Oceana (M/G)(GenEd)</td>
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<td>MUSG06.448</td>
<td>Music in World Cultures – Africa, India, Near &amp; Middle East</td>
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<td>REL10.200</td>
<td>Religions of the World (M/G)(GenEd)</td>
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<td>POSC07.230</td>
<td>Comparative Political Systems (M/G)(GenEd)</td>
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<td>POSC07.321</td>
<td>Contemporary World Problems (M/G)(GenEd)</td>
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<td>POSC07.320</td>
<td>International Relations</td>
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<tr>
<td>SOC15.322</td>
<td>Sociology of Population Sociology</td>
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<tr>
<td>SOC8.327</td>
<td>Comparative Education in a Sociological Perspective</td>
</tr>
<tr>
<td>THD07.440</td>
<td>Contemporary World Theatre (W/I)(LIT)(GenEd)</td>
</tr>
<tr>
<td>THD08.146</td>
<td>World Dance Forms (M/G)(GenEd)</td>
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<tr>
<td>THD08.151</td>
<td>Ethnic and Character Dance</td>
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**African Studies**

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<th>Course Code</th>
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<tr>
<td>ZULU</td>
<td>All Zulu Classes</td>
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<tr>
<td>ARAB</td>
<td>All Arabic Classes</td>
</tr>
<tr>
<td>HIST05.394</td>
<td>Sub-Saharan Africa to 1800</td>
</tr>
<tr>
<td>HIST05.397</td>
<td>Sub-Saharan Africa since 1800</td>
</tr>
<tr>
<td>GEOG16.345</td>
<td>Geography of Africa</td>
</tr>
<tr>
<td>HIST05.417</td>
<td>Women in Islam</td>
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## Interdisciplinary Studies

<table>
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<th>Course Code</th>
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<tr>
<td>HIST05.437</td>
<td>Twentieth Century African Nationalism</td>
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<tr>
<td>HIST05.413</td>
<td>Comparative Race Relations</td>
</tr>
<tr>
<td>AFST11.104</td>
<td>Introduction to Africana Studies</td>
</tr>
<tr>
<td>AFST11.304</td>
<td>Africana Social Thought</td>
</tr>
<tr>
<td>THD08.311</td>
<td>African Influences in American Dance (M/G)(GenEd)</td>
</tr>
<tr>
<td>THD07.301</td>
<td>African, African-American Theater: Intercultural Definitions</td>
</tr>
</tbody>
</table>

### Asian Studies

- **INTRO.136** Gateway to Asia (RS)
- **ARHS03.231** Survey of Asian Art
- **ARAB** All Arabic Classes
- **CHIN** All Chinese Classes
- **ENGL02.112** Readings in Asian Literature (M/G)(LIT)(GenEd)
- **GEOG16.343** Geography of Asia (M/G)
- **HIST05.356** Late Imperial China
- **HIST05.408** Chinese Cultural History
- **HIST05.355** Modern China
- **HIST05.438** History of the Vietnam War
- **HIST05.351** Modern Japan
- **HIST05.446** Race, Identity, and History in East Asia
- **JAP** All Japanese Courses
- **POSC07.350** Introduction to Asian Political Systems
- **PHRE11.310** Introduction to Buddhism
- **REL10.230** Religions of Asia
- **PHRE11.330** Introduction to Daoism
- **PHIL09.330** Asian Thought (M/G)

### Eastern European and Russian Studies

- **RUSS** All Russian Classes
- **GEOG16.346** Geography of the C.I.S. (former Soviet Union) (M/G)
- **HIST05.343** Russia to 1914
- **HIST05.344** Russia since 1914
- **POSC07.341** Politics of Russia, Eastern Europe and Eurasia
- **POSC07.351** Russian Foreign Policy

### Middle East Studies

- **ARAB** All Arabic Courses
- **GEOG16.347** Geography of the Middle East (M/G)
- **HIST05.379** Ancient Egypt
- **HIST05.381** Islamic Civilizations
- **HIST05.307** Ancient Mediterranean World
- **HIST05.308** Modern Middle East
- **HIST05.417** Women in Islam
- **HIST05.439** Ottoman Empire
- **HIST05.444** Islamist Movements
- **HIST05.404** Arab-Israeli Conflict
- **POSC07.347** Government and Politics of the Middle East

### Latin American and Iberian Studies

- **SPAN** All Spanish Classes
- **ANTH02.210** Natives of South America (M/G)(GenEd)
- **GEOG16.344** Geography of Latin America (M/G)
- **HIST05.347** Traditional Latin America
- **HIST05.350** Modern Latin America
- **HIST05.362** History of Mexico & the Caribbean
- **HIST05.409** Latin American Revolutions and Reform
- **HIST05.411** Topics in Latin-American History
- **HONR05.390** Linguistics and Cultures of Native South America
- **HONR05.390** Modern Descendants of the Incas

### Western European Studies

- **ARHS03.103** Art History Survey I
- **ARHS03.104** Art History Survey II
- **ARHS03.205** Art History Survey III
- **ENGL02.309** British Literature I
- **ENGL02.311** British Literature II
- **ENGL02.330** Classical Literature in Translation
- **ENGL02.421** The English Novel
- **ENGL02.430** Anglo-Saxon and Medieval Literature
Scholarships, Internships and Career Opportunities  Students with a strong academic background should consider applying for some of the scholarship programs that send graduating seniors abroad, especially the Fulbright Program and the Rotary Ambassadorial Scholarship Program. For more information about these scholarships visit the following website www.rowan.edu/internationalcenter or make an appointment with the International Studies coordinator in the International Center, located in Bunce 333.

Internships in international trade, government, communications, business management and marketing can also provide students with valuable skills and work experience. For a listing of companies involved in such areas in the southern New Jersey and Philadelphia area, contact your local Chamber of Commerce. For information about international internship opportunities, you can also contact your professors, your department, or the International Center.

JEWISH STUDIES CONCENTRATION
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Advisor
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hartman@rowan.edu

Dianne Ashton
Advisor
Bunce, Suite 315
856.256.4500 x4076
ashtond@rowan.edu

Melissa Klapper
Advisor
Robinson Hall, 216N
856.256.4500, x3982
klapper@rowan.edu

Program Requirements 18 s.h.

Jewish Focus Core (9 credits from among the following):

- HIST05.404 Arab-Israeli Conflict 3 s.h.
- HIST05.406 Jewish Holocaust 1933-1945 3 s.h.

Prerequisite of Historical Methods course required only for History majors

PART OF THE JEWISH STUDIES CONCENTRATION
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klapper@rowan.edu

Program Requirements 18 s.h.

Jewish Focus Core (9 credits from among the following):

- HIST05.404 Arab-Israeli Conflict 3 s.h.
- HIST05.406 Jewish Holocaust 1933-1945 3 s.h.

Prerequisite of Historical Methods course required only for History majors
LEADERSHIP STUDIES CONCENTRATION
James Coaxum, III
Education Leadership Department
3087 Herman James Hall
856.256.4779
coaxum@rowan.edu

The undergraduate Concentration in Leadership Studies is an interdisciplinary effort, designed to address the needs of students, from various academic backgrounds, who wish to gain knowledge and experience in developing and practicing leadership skills. The concentration allows students to explore leadership inside and outside the classroom in addition to providing them with the opportunity to practice leadership within an organizational setting. The program focuses on the nature of leadership in a variety of settings and will help students prepare for leadership responsibility on campus, in the community, and in their professions. The concentration consists of 18 credit hours.

Students must complete 18 credits hours to satisfy the Concentration in Leadership Studies. There are 9 credit hours in the Leadership Core; 3 credit hours in the Communication Core; and, 6 credit hours in the Interdisciplinary Core. Any student wishing to pursue a Concentration in Leadership Studies should contact the coordinator for further information and advisement.

Concentration Requirements
- Leadership Core: 9 credit hours
- Communication Core: 3 credit hours
- Interdisciplinary Core: 6 credit hours

Required Courses
- Leadership Core
  - EDSU28.100 Leadership Theory
  - EDSU28.205 Leadership Seminar I
  - EDSU28.305 Leadership Seminar II (capstone)

- Leadership Communication Core
  - CMS04.220 Interpersonal Communication

- Interdisciplinary Core
  - (Choose any two)
    - MGT06.300 Organizational Behavior
    - MGT06.304 Organizational Change and Development
    - SOC08.353 The Sociology of Complex Organizations
    - SOC08.230 Self and Society
    - EDPA02.320 Public Administration
    - PSY08.310 Industrial/Organizational Psychology
    - PSY05.206 Social Psychology
    - HTH37.170 Stress Management

THOMAS N. BANTIVOGLIO HONORS PROGRAM
The Whitney Center
856.256.4643

The Thomas N. Bantivoglio Honors Concentration Program is an eight (8) course program open to Rowan students in all academic majors and colleges. As students participate in their disciplinary majors the Honors Program complements their growth towards career preparation and civic participation. Participation in the Bantivoglio Honors Program affords students a rich educational experience. At graduation ceremonies Bantivoglio Scholars receive special recognition, and their accomplishments are highlighted in the Commencement Program and on their diplomas.

The program emphasizes interdisciplinary learning, challenging scholastic work, enhanced classroom experiences, and participation in a learning community of intellectually curious and academically talented student colleagues and committed faculty. Classes are small so that students have the opportunity to engage in active learning with faculty who are committed.
to helping students develop their skills as scholars by working collaboratively with other Honors students in a wide range of academic fields. Students study topics such as global warming that are more effectively considered using perspectives from more than one discipline, and they are encouraged to find ways to integrate the content from their major fields of study with the content from other areas of study. The integration element of Honors classes enriches students’ educational experiences by providing them with a way to make connections among ideas and disciplines. Enhanced educational experiences in the form of field trips, special speakers, independent study projects with individual professors, and participation at academic and professional conferences supplement the Honors curriculum.

Honors courses can be used to complete general education, Rowan Experience requirements, non-program and free electives, and/or specific degree requirements.

Other program benefits include the privilege of designated Honors-only housing where interaction among the Honors students is encouraged and supported by extra-curricular activities. Honors students also have priority registration, extended library borrowing privileges, financial assistance to study abroad, and paid research assistantships.

Applications for admission to the Bantivoglio Honors Program are reviewed by the Coordinator and the Honors Faculty Board Admissions Committee. Freshman admissions are based on standardized test scores, significant achievement in high school, participation in extra-curricular activities, essays, and a letter of recommendation. Rowan University students may apply to the concentration if they have a GPA of 3.45 or higher and can complete the concentration by their graduation. Graduation with Honors Program recognition requires the completion of Honors coursework, an overall GPA of 3.33, and participation in extracurricular Honors activities and service projects. Ideally, four (4) Honors courses should be interdisciplinary and four (4) courses should be discipline-specific.

Students must continue to make progress toward completing the Honors Program within the normal time period to earn their major degree and must participate in Honors activities in order to remain in the program.

**URBAN STUDIES CONCENTRATION**

Demond Miller  
Advisor  
Robinson Hall  
856.256.4500 ext. 3517  
millerd@rowan.edu

New Jersey, the nation’s most urban and most densely populated state, provides a compelling laboratory for the study of urbanism, urban places and associated problems such as sprawl, segregation, income disparity, poverty, crime, health and other issues. The Urban Studies concentration provides a format for students to engage in a systematic, yet wide ranging, study of urbanism on a local, national and global scale. The Urban Studies concentration is interdisciplinary and available to students from all majors.

Students are required to complete at least 21 credits (seven courses). Of these, at least 9 credits (three courses) must be taken in the Urban Studies Core. Among these Core courses, students must take courses in three of the following five subject areas: Economics, Geography, History, Political Science, and Sociology. An additional 12 credits (four courses) must be completed from either the remaining Urban Studies Core classes, from the related disciplinary clusters detailed below, or from the list of eligible elective courses following the cluster listing. Students may take up to, but not more than, three of these additional courses from a single Department. Thus, no student can count more than four courses from one department toward their Urban Studies Concentration (one of the Core classes and up to three additional courses). The concentration may be pursued in conjunction with a major program; it can also be integrated with general education requirements.

**Core Courses**

Economics Courses  
ECON04.360 Urban Economics  
ECON04.210 Environmental Economics

Geography Course  
GEOG16.302 Urban Geography

History Courses  
HIST05.334 Urban History of the United States  
HIST05.474 U.S. Labor History

Political Science  
TBA

Sociology Courses  
SOCO8.320 Urban Sociology  
SOCO8.431 Social Psychology of City Life
WOMEN’S AND GENDER STUDIES CONCENTRATION
Ane Turner Johnson
Coordinator
James Hall
856.256.4500 ext. 3818
johnsona@rowan.edu

Women’s and Gender Studies is a multi-disciplinary global concentration offering courses to students in all majors. Courses from the concentration may be used as electives or as part of the general education requirement and many Women’s and Gender Studies courses fulfill the global/multicultural designation. The major objectives of the concentration are to increase knowledge about women and gender; to examine women’s and men’s roles across disciplines; to stimulate re-evaluation of the roles of women and men in society; to increase awareness of the status of women; and to value the contributions of women across cultures and time periods.

The successful completion of 18 semester hours, including the core course (Women and Gender in Perspective), is required. Students interested in taking a particular course in Women’s and Gender Studies or pursuing a concentration are strongly encouraged to contact the Coordinator of the program for further information and advisement. Interested students can also contact the Registrar’s Office to declare a concentration in Women’s and Gender Studies. The Program in Women’s and Gender Studies posts a list of courses offered each semester, and courses are also listed in the Schedule of Courses under Women’s and Gender Studies.

Each student enrolled in the Women’s and Gender Studies Concentration is required to:
1. Take the core course, Women and Gender Perspective (INTR01.130);
2. Take fifteen (15) credits of approved Women’s and Gender Studies courses (ranked First and Second Tier), of which nine (9) credits must be from the First Tier.
3. Complete a portfolio that includes three papers from three different Women’s Studies courses, a one-page self-assessment essay, and a senior exit survey.

Required Core Course (3 s.h.)

| INTR01.130 | Women and Gender in Perspective |

First Tier (minimum of three courses [9 s.h.] required for Concentration)

| ANTH02.322 | Sex and Sex Roles in a Cross Cultural Perspective |
| ARHS03.230 | Survey of Women Artists |
| CMS04.310 | Images of Gender in Popular Culture |
| CMS04.320 | Communicating Gender |
| ECON04.225 | Women in the Economy |
| ENGL02.200 | Women in Literature |
| HIST05.417 | Women in Islam |
| HIST05.418 | Women in Europe to 1700 |
| HIST05.419 | Women in Modern Europe |
| HIST05.422 | Women in American History |
| HIST05.425 | History of Feminisms |
| HIST05.429 | Proseminar in History: Women in African History |
| HIST05.455 | Gender, Sexuality and History |
| INTR01.200 | Issues in Women's Health |
| INTR01.430 | Women, Sex, and Power: A Capstone Seminar in Women's Studies |
| LAWJ05.346 | Women, Crime and Criminal Justice |
| PHIL09.328 | Philosophy and Gender |
| PHIL09.346 | Feminist Ethics |
| POSC07.311 | Women and American Politics |
| PSY01.200 | Psychology of Women and Cultural Experience |
| RTF03.272 | Images of Women in Film |
| SOC08.370 | The Sociology of Women in Society |
| SOC08.440 | Selected Topics: Understanding Gender |
| SOC08.493 | Seminar on Gender Roles |

Second Tier Courses (maximum of two courses [6 s.h.] counted toward Concentration)

<p>| ENGL02.205 | Adolescent Literature |
| ENGL02.216 | African American Literature I |
| ENGL02.316 | African American Literature II |
| HIST05.408 | Chinese Cultural History |
| HIST05.429 | Proseminar in History: History of Witchcraft |
| INTR01.158 | From Nancy Drew to Lara Croft: Historical and Critical Dimensions of the Female Detective Genre |
| PHIL09.368 | Philosophy of Science |</p>
<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>PHIL09.369</td>
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<td>PSY05.310</td>
<td>Psychology of Human Sexuality</td>
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<td>SOC08.220</td>
<td>The Sociology of the Family</td>
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<td>SOC08.399</td>
<td>Sociology of the Holocaust-WI</td>
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</table>
William G. Rohrer College of Business

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Mission
We empower students to achieve sustainable careers through professionally oriented programs and real-world immersion experiences, integrating relevant faculty research, entrepreneurial thinking, responsible leadership, and community collaboration.

We achieve our mission through a commitment to –

Professionally Oriented Programs and Sustainable Careers: Our students develop the strong disciplinary expertise, poise and professionalism necessary to excel in their first positions, as well as the skills to tackle new opportunities as technologies and business models evolve. We feature career-oriented dual-degree options, major-minor pairings, and the ability to combine certificate programs with existing majors.

Entrepreneurial Thinking and Responsible Leadership: We offer entrepreneurially focused curricular and co-curricular programs to help students develop the creativity, initiative, and persistence that characterize the entrepreneurial mindset. As a PRME founding signatory, we are committed to developing students’ abilities to generate sustainable value for their employers and society at large.

Relevant Faculty Research: We are aligned with the University’s broad definition of research, which includes activities that positively impact the educational experience, the scholarly community, and the economic vitality of the region.

Real-world Immersion and Community Collaboration: We provide multiple real-world immersion experiences for our students that set them apart in a crowded job market. This, combined with our commitment to the economic development of the region, compels us to actively engage with the business and nonprofit communities in our region in ways that benefit all.

Vision
To be a first choice business school for enterprising students and discerning employers, a research hub, and an economic catalyst for the region and beyond.

Accreditation
Rowan University's business programs are accredited by AACSB International (The Association to Advance Collegiate Schools of Business). To achieve this prestigious accreditation, the business programs successfully demonstrated a wide range of quality standards relating to faculty qualification, strategic management of resources, interactions of faculty and students, as well as a commitment to continuous improvement and achievement of learning goals in degree programs.

In addition, the College is just one of a few AACSB International schools in the nation to have the Management Information Systems Program also accredited by ABET, the Accreditation Board for Engineering and Technology, Inc.

Programs Offered
The Rohrer College of Business offers the following degree programs to serve its undergraduate students: a Bachelor of Science in Accounting, Entrepreneurship, Finance, Human Resource Management, Marketing, Management Information Systems, and Bachelor of Science in Business Administration with a Specialization in Supply Chain and Logistical Systems. The Rohrer College of Business also offers the following minors: Business Administration, Entrepreneurship, Human Resource Management, Management Information Systems, and Marketing.

Departments
The Rohrer College of Business houses the departments of Accounting and Finance, Management and Entrepreneurship, and Marketing and Business Information Systems.

MINOR IN BUSINESS ADMINISTRATION
The Minor in Business Administration requires students to complete 12 credit hours in general education requirements. A student must achieve a minimum 2.5 GPA in these courses:

Required Prerequisite Courses 12 s.h.

- ECON04.101 Intro to Economics-A Macroeconomic Perspective
- ECON04.102 Intro to Economics-A Microeconomic Perspective
- STAT02.260 Statistics I
- MATH03.125 Calculus Techniques & Applications
  or MATH01.130 Calculus I

Business Courses 21 s.h.

The Minor in Business requires students to take 21 credit hours in business courses, all of which must be taken from the Rohrer College of Business core. Students must achieve a 2.5 GPA in all business courses. The lower division courses must be completed before upper division courses may be taken.

Required courses
Lower Division

- MGT98.242 Legal Environment of Business
- ACC03.210 Principles of Accounting I
- ACC03.211 Principles of Accounting II
The Accounting and Finance Department awards a B.S. in Accounting and a B.S. in Finance. Foundation courses offer students, regardless of their majors, a solid basis in accounting and financial theory. At the upper levels, courses are designed to qualify students for a wide range of careers in the accounting and the financial environment.

**BACHELOR OF SCIENCE IN ACCOUNTING**

The B.S. in Accounting requires the common core of the College of Business courses. Courses within the accounting major provide students with a broad understanding of accounting theory and practice, incorporating and infusing international and ethical issues. The program prepares students for a diversified range of career opportunities and meets the requirements to sit for the Certified Public Accountant (CPA) Examination, as well as the Certified Management Accountant (CMA) Examination and the Certified Internal Auditor (CIA) Examination.

Students working toward a B.S. in Accounting must achieve a 2.00 grade point average overall as well as a 2.50 grade point average to graduate.

**General Education**

All students must complete the University General Education requirements as described on page 33

**Rowan Experience**

All students must complete the Rowan Experience requirement as described on page 35

**Required Courses**

*(may be included in General Education)*

- MATH01.130 Calculus I
- MATH03.125 or Calculus Techniques and Applications
- STAT02.260 Statistics I
- ECON04.101 Introduction to Economics: Macroeconomic Perspective
- ECON04.102 Introduction to Economics: Microeconomic Perspective
- STAT02.261 Statistics II
- ACC03.210 Principles of Accounting I
- ACC03.211 Principles of Accounting II
- MGT06.300 Legal Environment of Business
- MKT09.200 Principles of Marketing
- MGT06.305 Operations Management
- FIN04.300 Principles of Finance
- MGT06.402 Organizational Behavior
- MIS02.234 Management Information Systems
- MGT06.402 Business Policy
- ACC03.310 Intermediate Accounting I
- ACC03.311 Intermediate Accounting II
- ACC03.326 Cost Accounting
- ACC03.410 Auditing
- ACC03.416 Advanced Accounting
- ACC03.428 Integrative Accounting Seminar
- ACC03.432 Federal Taxation
- ACC03.445 International Accounting
- ACC03.432 Accounting Information Systems

**Business Electives**

Choice of any College of Business course, or Business Ethics (PHIL09.322), excluding any internship other than Supervised Internship in Accounting (ACC03.300)

The Following business electives are recommended:
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC03.300</td>
<td>Supervised Internship in Accounting</td>
</tr>
<tr>
<td>ACC03.431</td>
<td>Taxation of Business Entities</td>
</tr>
<tr>
<td>ACC98.300</td>
<td>Law for Accountants</td>
</tr>
<tr>
<td>PHIL09.322</td>
<td>Business Ethics</td>
</tr>
</tbody>
</table>

**Free Electives**  
7-9 s.h.

**Total Credits for the Program**  
120 s.h.

### BACHELOR OF SCIENCE IN FINANCE

The B.S. in Finance requires the common core of College of Business courses. It provides students with a broad understanding of financial theory and institutions. The program prepares students for a variety of career opportunities within financial institutions, governmental agencies and private industry. These include financial analysis, cash management, credit analysis, pension and investment fund management, capital budgeting analysis, investment and commercial banking, and securities management.

Students working toward a B.S. in Finance must maintain a 2.00 grade point average overall as well as a 2.50 grade point average overall in the Business core and finance specialization.

#### General Education

All students must complete the University General Education requirements as described on page 33

#### Rowan Experience

All Students must complete the Rowan Experience requirements as described on page 35

#### Required Courses

*(may be included in General Education)*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH01.130</td>
<td>Calculus I</td>
</tr>
<tr>
<td>or MATH03.125</td>
<td>Calculus Techniques and Applications</td>
</tr>
<tr>
<td>STAT02.260</td>
<td>Statistics I</td>
</tr>
</tbody>
</table>
| **Take one course from the list of approved General Education computing courses having a course identification number of CS0x.xxx**
| ECON04.101  | Introduction to Economics: Macroeconomic Perspective |
| ECON04.102  | Introduction to Economics: Microeconomic Perspective |
| STAT02.261  | Statistics II                                    |
| MKT09.200   | Principles of Marketing                          |
| ACC03.210   | Principles of Accounting I                       |
| ACC03.211   | Principles of Accounting II                      |
| MGT06.300   | Organizational Behavior                          |
| MGT06.305   | Operations Management                            |
| FIN04.300   | Principles of Finance                            |
| MIS02.234   | Management Information Systems                   |
| MGT06.402   | Business Policy                                  |
| ACC03.310   | Intermediate Accounting I                        |
| ACC03.432   | Federal Taxation                                 |
| FIN04.422   | Financial Management I                           |
| FIN04.423   | Financial Management II                          |
| FIN04.431   | Investments                                      |
| FIN04.433   | Financial Institutions and Markets               |
| FIN04.435   | International Financial Management               |

**Electives**  
Elective courses are generally offered only once an academic year. Select any (3) three of the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC03.311</td>
<td>Intermediate Accounting II</td>
</tr>
<tr>
<td>FIN04.424</td>
<td>Seminar in Finance</td>
</tr>
<tr>
<td>FIN04.425</td>
<td>Financial Derivatives</td>
</tr>
<tr>
<td>FIN04.430</td>
<td>Supervised Internship in Finance</td>
</tr>
<tr>
<td>FIN04.437</td>
<td>Selected Topics in Finance</td>
</tr>
<tr>
<td>FIN04.438</td>
<td>Portfolio Management</td>
</tr>
<tr>
<td>FIN04.450</td>
<td>Personal Financial Planning</td>
</tr>
<tr>
<td>FIN04.358</td>
<td>Bank Management</td>
</tr>
</tbody>
</table>

**Business Elective**  
3 s.h.  
Choice of any level College of Business course or Business Ethics (PHIL09.322), and excluding any internship other than Supervised Internship in Finance (FIN04.330)

**Free Electives**  
7-8 s.h.
The Management and Entrepreneurship Department awards B.S. degrees in Management, Entrepreneurship, and Human Resource Management. These business programs provide students with a solid grounding in management theory and practice and with a strong professional foundation for a wide variety of organizational functions. Students benefit from a curriculum that combines liberal arts requirements with intensive business theory and fundamentals, and hands-on learning opportunities.

**BACHELOR OF SCIENCE IN MANAGEMENT**

The B.S. in Management prepares students for meaningful entry level positions in management, and a foundation for future career growth. The program is designed to provide a strong foundation in both traditional and innovative management techniques, blending theory and practice by requiring classroom instruction, internships, and interaction with management practitioners. Students enrolled in the management program are expected to:

1. Learn important management concepts, skills and techniques focused on managing and supervising other workers
2. Think critically
3. Analyze and solve organizational problems
4. Improve their oral and written communication skills, and
5. Build their team skills

The program emphasizes the management of the new, diverse workforce; a concern for the increasing level of legal, and ethical and social responsibilities for workplace organizations; the importance of information technology in business decision making; understanding and being able to utilize essential quantitative tools for managerial decision-making in order to maintain a competitive advantage; and the globalization of the business environment.

Students working toward a B.S. in Management must maintain a 2.00 cumulative grade point average and a 2.50 grade point average in all business courses completed at Rowan.

**General Education**

All students must complete the University General Education requirements as described on page 33

**Rowan Experience**

All students must complete the Rowan Experience requirement as described on page 35

**Required Courses for Management Degree (may be included in General Education)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH01.130</td>
<td>Calculus 1</td>
</tr>
<tr>
<td>or MATH03.125</td>
<td>Calculus Techniques and Applications</td>
</tr>
<tr>
<td>STAT02.260</td>
<td>Statistics 1</td>
</tr>
<tr>
<td>CS0x.xxx</td>
<td>**</td>
</tr>
<tr>
<td>ECON04.101</td>
<td>Introduction to Economics: Macroeconomic Perspective</td>
</tr>
<tr>
<td>ECON04.102</td>
<td>Introduction to Economics: Microeconomic Perspective</td>
</tr>
<tr>
<td>ACC03.210</td>
<td>Principles of Accounting I</td>
</tr>
<tr>
<td>ACC03.211</td>
<td>Principles of Accounting II</td>
</tr>
<tr>
<td>MGT98.242</td>
<td>Legal Environment of Business</td>
</tr>
<tr>
<td>MKT09.200</td>
<td>Principles of Marketing</td>
</tr>
<tr>
<td>MGT06.305</td>
<td>Operations Management</td>
</tr>
<tr>
<td>FIN04.300</td>
<td>Principles of Finance</td>
</tr>
<tr>
<td>MGT06.300</td>
<td>Organizational Behavior</td>
</tr>
<tr>
<td>or MGT06.309</td>
<td>Organizational Behavior(WI)</td>
</tr>
<tr>
<td>MIS02.234</td>
<td>Management Information Systems</td>
</tr>
<tr>
<td>MGT06.402</td>
<td>Business Policy</td>
</tr>
<tr>
<td>WA01.408</td>
<td>Writing as Managers (WI)</td>
</tr>
<tr>
<td>MGT06.310</td>
<td>Leadership and Supervision for Management</td>
</tr>
<tr>
<td>MGT06.311</td>
<td>Decision-Making Tools for Managers</td>
</tr>
<tr>
<td>MGT06.330</td>
<td>Managing International Business</td>
</tr>
<tr>
<td>MGT06.405</td>
<td>Business Management Simulation</td>
</tr>
<tr>
<td>MGT06.361</td>
<td>Supervised Internship</td>
</tr>
</tbody>
</table>

65
Choose 5 courses from the list below with at least one being from each of the three banks below:

**Quantitative Skills Bank**
- MGT06.404 Quality Management
- MGT06.354 Managerial Data Analysis
- MGT06.406 Improving Business Processes
- MGT06.407 Business Analytics
- ENTO6.426 New Venture Development
- ACC03.326 Cost Accounting
- FNO4.422 Financial Management I
- MKT09.384 Research Methods in Marketing-WI
- ECON04.302 Intermediate Microeconomics

**Qualitative People Skills Bank**
- MGT06.321 Managing Teams in Organizations
- MGT06.304 Organizational Change and Development
- HRM06.302 Management of Human Resources
- HRM06.420 Principles of Training and Training Management
- HRM06.315 Recruitment and Selection
- ENTO6.327 Strategic Issues in Family Business
- MKT09.382 Sales Force Management
- MKT09.376 Consumer Behavior
- PHIL09.322 Business Ethics
- MGT06.361 Supervised Internship (additional 3.0 s.h.)

**Organizational Task Skills Bank**
- MKT09.378 Product, Price and New Venture Development
- ENTO6.240 Entrepreneurship and Innovation
- ENTO6.326 Entrepreneurship and Small Business Management
- MKT09.360 Services Marketing
- MGT06.312 Special Topics in Management I
- MGT06.313 Special Topics in Management II
- MKT09.350 Management of Advertising and Promotion
- ENTO6.342 Financing and Legal Aspects of Entrepreneurship
- HRM98.337 Legal Aspects of Human Resource Management (WI)
- MKT09.375 Retailing
- MIS02.312 E-Business: IS Perspectives
- HRM16.401 Labor/Employee Relations

**Free Electives**

Total Credits for Program 120 s.h.

**CERTIFICATE OF UNDERGRADUATE STUDY IN MANAGEMENT AND LEADERSHIP**

Dilip Mirchandani
Advisor
Bunce Hall 272
856.256.4048
mirchandani@rowan.edu

The Certificate of Undergraduate Study (CUGS) in Management and Leadership is designed to give students a working knowledge of the softer, qualitative, and behavioral aspects of management and will help their preparedness for entry into the workplace. The four courses below will enable students to: 1) understand how to communicate effectively in organizational / business settings; 2) understand theories about motivation and team building; 3) understand theories underlying the different types of leadership and 4) understand theories of organizational change and development.

To be awarded the CUGS in Management and Leadership, students must complete all four courses required for the CUGS in Management and Leadership with at least a 2.0 GPA average. The above mentioned pre-requisites make this CUGS best
suited for students who are sophomores, and have completed the writing / composition course sequence, and would like to develop an understanding of organizational management and leadership skills in their junior year and beyond.

**BACHELOR OF SCIENCE IN ENTREPRENEURSHIP**

The theory and practice of entrepreneurship is becoming increasingly important for solving economic and social challenges. We develop the ability of our students to identify, determine feasibility and act upon entrepreneurial opportunities. Student learning is infused with an emphasis on innovation, entrepreneurial thinking and venture effectiveness using entrepreneurial problems, cases, and project-based learning. These exposures provide students with the foundation to initiate new enterprises, create socially responsible non-profit entities, extend family ventures or craft corporate extensions.

Students working toward a B.S. in Entrepreneurship must maintain a 2.00 grade point average overall and a 2.50 grade point average in all business courses taken. Students will also be enrolled in the course “Entrepreneurial Experiences” every semester where they should complete at least 10 points of specified experiences each semester. A passing grade in the Entrepreneurial Experiences course is required in the final semester to graduate (requiring a cumulative total of 100 points of experience). Special arrangements exist for transfer or change of major students. Please see your advisor.

**General Education**

All students must complete the University General Education requirements as described on page 33

**Rowan Experience**

All students must complete the Rowan Experience requirement as described on page 35

**Required Courses**

*(may be included in General Education)*

- MATH01.130 Calculus I
- or MATH03.125 Calculus Techniques and Applications
- STAT02.260 Statistics I
- CS0x.xxx **

**One course from the list of approved General Education computing courses having a course identification number of CS0x.xxx**

- ECON04.101 Introduction to Economics: Macroeconomic Perspective
- ECON04.102 Introduction to Economics: Microeconomic Perspective
- MKT09.200 Principles of Marketing
- ACC03.210 Principles of Accounting I
- ACC03.211 Principles of Accounting II
- MGT06.242 Legal Environment of Business
- MGT06.305 Operations Management
- FIN04.300 Principles of Finance
- MGT06.300 Organizational Behavior
- or MGT06.309 Organizational Behavior (WI)
- MGT06.402 Business Policy
- ENT06.240 Entrepreneurship and Innovation
- MGT06.330 Managing International Business (M/G)
- or MGT09.379 International Marketing (M/G)
- MKT09.384 Research Methods in Marketing (WI)
- ENT06.426 New Venture Development
- ENT06.342 Financing and Legal Aspect of Entrepreneurship
- ENT06.415 Management Consulting Field Study
- ENT06.100 Entrepreneurial Experiences

Select 6 s.h. from the following list:

- ENT06.326 Entrepreneurship and Small Business Management
- ENT06.327 Strategic Issues in Family Business
- ENT06.328 Evaluating Franchising Opportunities
- ENT06.346 Social Entrepreneurship
- MGT06.361 Supervised Internship
- ENT06.344 Entrepreneurial Growth Strategies
- ENT06.450 Technology Entrepreneurship
- ACC03.328 Entrepreneurial Accounting

Select 9 s.h. from the following list:

Any ENT course or
- MKT09.378 Product, Price, and New Venture Management
- MKT09.360 Services Marketing
- MKT09.391 Business to Business Marketing
- MGT06.304 Organizational Change and Development
- MGT06.405 Business Management Simulation
MINOR IN ENTREPRENEURSHIP
With the creation of an Entrepreneurship Minor, students from all colleges of Rowan University will have an opportunity to
learn entrepreneurial knowledge and skills by enrolling and completing entrepreneurship courses. Students' entrepreneurial
accomplishments will be established when they graduate with the ENT minor along with their chosen academic major. To
apply, students must have completed at least twelve (letter graded) credit hours at Rowan University and hold at least a 2.5
GPA.
Requirements
12 s.h.
MKT09.200 Principles of Marketing
ENT06.240 Entrepreneurship and Innovation
ENT06.425 New Venture Development
ENT06.442 Financing and Legal Aspects of Entrepreneurship
Electives: Select two (6 s.h.) courses from the list below:
ENT06.450 Technology Entrepreneurship
ENT06.327 Strategic Issues in Family Business
ENT06.328 Evaluating Franchising Opportunities
ENT06.346 Social Entrepreneurship
ENT06.344 Entrepreneurial Growth Strategies

BACHELOR OF SCIENCE IN HUMAN RESOURCE MANAGEMENT
Human Resource Management consists of planned organizational activities designed to improve employee efficiency and
equality, such as staffing, compensation, and training. This major should be of interest to students pursuing careers as human
resource managers, as well as to those who anticipate that they will someday be responsible for making hiring, performance
appraisal, and pay decisions. Students working toward a B.S. in Human Resource Management must maintain a 2.00 grade
point average overall and a 2.50 grade point average in all business courses taken.

General Education
All students must complete the University General Education requirements as described on page 33

Rowan Experience
All students must complete the Rowan Experience requirement as described on page 35

Required Courses
(may be included in General Education)
MATH01.130 Calculus I
or MATH03.125 Calculus Techniques and Applications
STAT02.260 Statistics I
CS0x.xxx **

**Take one course from the list of approved General Education computing courses having a course identification number of
CS0x.xxx.

ECON04.101 Introduction to Economics: Macroeconomic Perspective
ECON04.102 Introduction to Economics: Microeconomic Perspective
MKT09.200 Principles of Marketing
ACCO3.310 Principles of Accounting I
ACCO3.311 Principles of Accounting II
MGT08.242 Legal Environment of Business
MGT06.305 Operations Management
FIN04.300 Principles of Finance
MGT06.300 Organizational Behavior
or MGT06.309 Organizational Behavior (WI)
MGT06.402 Business Policy
MIS02.234 Management Information Systems
HRM06.302 Management of Human Resources
MGT06.330 Managing International Business
HRM06.315 Recruitment and Selection
HRM06.401 Labor/Employer Relations
HRM06.425 Management of Compensation
MINOR IN HUMAN RESOURCES (HR)

The goal of the minor program is to provide non-Business majors with the opportunity to qualify for entry-level human resource management positions. The objective of the program is to understand the legal and regulatory environment of human resource management, to develop the capability of using state-of-the-art hiring and recruiting techniques, and to learn how to harmonize an organization’s compensation systems with its strategic goals. The program is based on the required human resource management coursework of the major in human resource management except that it has fewer required courses and fewer elective courses.

Requirements  

15 s.h.

HRM06.302 Human Resource Management  
or PSY08.220 Personnel Psychology  
MGT08.242 Legal Environment of Business  
HRM06.315 Recruitment and Selection  
HRM06.425 Management of Compensation  
HRM08.337 Legal Aspects of Human Resource Management

Electives: Select two (6 s.h.) courses from the list below

MGT06.361 Supervised Internship*  
PSY01.422 Field Experience in Psychology*  
HRM06.420 Principles of Training  
HRM16.401 Labor/Employee Relations  
MGT06.304 Organizational Change and Development  
PSY05.402 Psychology of Conflict and Conflict Resolution  
HRM06.318 Human Resource Information Systems  
PSY01.329 Health Psychology

* The internship or field experience must involve human resource management duties in order to count towards the minor.

To Apply

Students must complete at least twelve (letter graded) credit hours at Rowan and hold at least a 2.5 GPA. Students must have completed or be currently enrolled in either HRM06.302 Human Resource Management or PSY08.220 Personnel Psychology. Application for the minor can be made by sending an email to Dr. Joel Rudin, rudin@rowan.edu

Department of Marketing and Business Information Systems

Berrin Guner  
Chair  
Edgar F. Bunce Hall, Room 215  
856.256.4013  
guner@rowan.edu

The Marketing Department awards Bachelor of Science Degrees in Marketing (MKT) and Management Information Systems (MIS), and Business Administration: Supply Chain and Logistical Systems.

The marketing program focuses on strategic, as well as tactical, marketing concepts; it integrates the classical “Four P’s” approach throughout its courses (product, price, promotion, place). Offerings stress the use of modern techniques to analyze and develop solutions to a wide variety of marketing opportunities and constraints.

The Management Information Systems Program prepares students for careers in a rapidly changing technological world by training them to analyze business problems, challenges, and opportunities and to subsequently design, develop, implement and maintain business solutions through the use of information and information technology.
The Supply Chain and Logistical Systems Specialization is an interdisciplinary program that incorporates components of accounting, management, management information systems, and marketing in order to prepare students for this rapidly expanding field by training them to understand the systems, costs, and tools used to manage domestic and international supply chains.

Students majoring in Marketing, MIS, or Business Administration: Supply Chain and Logistical Systems must maintain a 2.00 grade point average overall and a 2.50 grade point average in all business courses taken at Rowan University.

Students are encouraged to utilize their non-program courses and free electives to pursue minors and concentrations in other fields of study to increase their knowledge and enhance their employability in a dynamic job market.

**BACHELOR OF SCIENCE IN MARKETING**

**General Education**
All students must complete the University General Education requirements as described on page 33.

**Rowan Experience**
All students must complete the Rowan Experience requirement as described on page 35.

**Required Courses**
*(may be included in General Education)*

- MATH01.130 Calculus I
- or MATH03.125 Calculus Techniques and Applications
- STAT02.260 Statistics I (Equivalent of College Algebra)
- CS0x.xxx **

**Take one course from the list of approved General Education computing courses having a course number of CS0x.xxx**

- ECON04.101 Introduction to Economics: Macroeconomic Perspective
- ECON04.102 Introduction to Economics: Microeconomic Perspective
- AC02.910 Principles of Accounting I
- AC02.911 Principles of Accounting II
- MGT98.242 Legal Environment of Business
- MKT09.200 Principles of Marketing
- MKT06.305 Operations Management
- FIN04.300 Principles of Finance
- MGT06.300 Organizational Behavior
- MIS02.234 Management Information Systems
- MGT06.402 Business Policy

**Major Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKT09.112</td>
<td>12 s.h.</td>
</tr>
<tr>
<td>MKT09.376</td>
<td></td>
</tr>
<tr>
<td>MKT09.384</td>
<td></td>
</tr>
<tr>
<td>MKT09.379</td>
<td></td>
</tr>
<tr>
<td>MGT09.493</td>
<td></td>
</tr>
</tbody>
</table>

**Marketing Electives**

Electives courses are generally offered only once an academic year. Select 15 s.h. from the following list of any 300- or 400-level MKT course:

- MKT09.305 Internet Marketing
- MKT09.315 Personal Selling
- MKT09.330 Marketing Channels
- MKT09.350 Management of Advertising and Promotion
- MKT09.360 Services Marketing
- MKT09.373 Retailing
- MKT09.378 Product, Price & New Venture
- MKT09.375 Business Logistics
- MKT09.387 Supply Chain Management and Logistics
- MKT09.382 Sales Force Management
- MKT09.386 The Marketing Plan
- MKT09.390 Selected Topics in Marketing
- MKT09.391 Business to Business Marketing
- MKT09.411 Supervised Internship in Marketing

**Marketing or Business Electives:**

The Business electives can be any two courses (6 s.h.) from the following list:

- Any non-required 300 or 400 level course offered by the Marketing Department
- Any Non-Required 300 or 400 level College of Business course except the Supervised Internships offered by the Management and Entrepreneurship or Accounting and Finance Departments
- MKT09.101 Marketing and the Business Environment (Rowan Seminar for incoming freshmen)
### MINOR IN MARKETING

**Required**
- STAT02.260 Statistics I *(may be included in General Education)*
- MKT09.200 Principles of Marketing
- MKT09.376 Consumer Behavior
- MKT09.384 Research Methods in Marketing
- MKT09.379 International Marketing
- MKT09.386 The Marketing Plan

**Electives**
Select one (3 s.h.) course from the list below or any 300- or 400-level MKT course:
- MKT09.375 Business Logistics
- MKT09.391 Business to Business Marketing
- MKT09.305 Internet Marketing
- MKT09.330 Marketing Channels
- MKT09.350 Management of Advertising and Promotion
- MKT09.360 Services Marketing
- MKT09.315 Personal Selling
- MKT09.378 Product, Price, and New Venture
- MKT09.372 Retailing
- MKT09.382 Sales Force Management
- MKT09.390 Selected Topics in Marketing
- MKT09.411 Supervised Internship in Marketing

**Total Credits for the Program** 21 s.h.

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**BACHELOR OF SCIENCE IN MANAGEMENT INFORMATION SYSTEMS (MIS)**

Students working toward a B.S. in Management Information Systems must maintain a 2.00 cumulative grade point average and a 2.50 grade point average in all business courses completed at Rowan.

### General Education
All students must complete the University General Education requirements as described on 33

### Rowan Experience
All students must complete the Rowan Experience requirement as described on 35

### Required Courses *(may be included in General Education)*
- MATH01.130 Calculus I
- or MATH03.125 Calculus Techniques and Applications
- STAT02.260 Statistics I (Equivalent of College Algebra)
- ECON04.101 Intro to Economics-A Macroeconomic Perspective
- ECON04.102 Intro to Economics-A Microeconomic Perspective
- CS04.140 Enterprise Computing I
- MKT09.200 Principles of Marketing
- ACC03.210 Principles of Accounting I
- ACC03.211 Principles of Accounting II
- MGT08.242 Legal Environment of Business
- MGT06.305 Operations Management
- FIN04.300 Principles of Finance
- MGT06.300 Organizational Behavior
- MIS02.334 Management Information Systems
- MGT06.402 Business Policy

### Major Requirements
- MIS02.330 Business Systems
- MIS02.322 Principles of Systems Design
- MIS02.338 Design of Database Systems
- MIS02.336 Advanced Database Management
- MIS02.327 Network Management
- MIS02.428 Business Web Applications
- MIS02.335 Project Management
- MGT06.330 Managing International Business
- or MKT09.379 International Marketing (M/G)

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**Total Credits for Program** 30 s.h.
MIS Elective Select 2 Courses
Select two 300 or 400 level non-required courses that are offered by the College of Business, excluding any internship other than the MIS Supervised Internship (MIS02.344) or any course that is part of the Computer Science minor or Permission of the academic advisor.

Free Electives
7-9 s.h.

Total Credits for the Program
120 s.h.

MINOR IN MANAGEMENT INFORMATION SYSTEMS
Required
12 s.h.

- MIS02.233 Principles of Management Information Systems
- MIS02.234 Management Information Systems
- MIS02.330 Business Systems
- MIS02.338 Design of Database Systems
- MIS02.332 Principles of Systems Design

Electives: Select two (6 s.h.) courses from the list below:

- MIS02.325 Project Management
- MIS02.336 Advanced Database Management
- MIS02.327 Network Management
- MIS02.332 E-Business: I.S. Perspective
- MIS02.333 E-Business: I.S. Perspective (WI)
- CS04.140 Enterprise Computing I
- ACC03.320 Accounting Information Systems

Total Credits for the Program
18 s.h.

BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION, SUPPLY CHAIN AND BUSINESS SYSTEMS

General Education
All students must complete the University General Education requirements as described on page 33

Rowan Experience
All students must complete the Rowan Experience requirement as described on page 35

Required Courses
(may be included in General Education)

- MATH01.130 Calculus I
- MATH03.125 Calculus Techniques and Applications
- STAT02.260 Statistics I (Equivalent of College Algebra)
- CS0x.xxx **

** Take one course from the list of approved General Education computing courses having a course number of CS0x.xxx.

- ECON04.101 Introduction to Economics: Macroeconomic Perspective
- ECON04.102 Introduction to Economics: Microeconomic Perspective
- ACC03.210 Principles of Accounting I
- ACC03.211 Principles of Accounting II
- MGT08.242 Legal Environment of Business
- MKT09.200 Principles of Marketing
- MKT06.305 Operations Management
- FIN04.300 Principles of Finance
- MGT06.300 Organizational Behavior
- MIS02.334 Management Information Systems
- MGT06.402 Business Policy

Major Requirements
27 s.h.

- MKT09.375 Business Logistics
- MIS02.322 Principles of System Design
- MKT09.395 Global Supply Chain
- MKT09.388 Principles of Transportation
- MGT06.406 Improving Business Processes
- MKT09.387 Supply Chain Management and Logistics
- MKT09.406 Strategic Supply Chain Management
- MKT09.384 Research Methods in Marketing (WI)

Supervised Internship: Any existing supervised internship course offered in RCOB for any RCOB major program.

Two courses from the following
6 s.h.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKT09.360</td>
<td>Services Marketing</td>
<td></td>
</tr>
<tr>
<td>MKT09.391</td>
<td>Business to Business Marketing</td>
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<tr>
<td>MKT09.330</td>
<td>Marketing Channels</td>
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<td></td>
<td><strong>Free Electives</strong></td>
<td><strong>9 s.h.</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Total Credits for Program</strong></td>
<td><strong>120-122 s.h.</strong></td>
</tr>
</tbody>
</table>
College of Communication and Creative Arts

Sanford Tweedie
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Lori Block
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History
The College of Communication was established July 1, 1996, after unanimous final approval by the Rowan University Board of Trustees at their June 1996 meeting. In 2012, the Department of Art joined the college, and the college was renamed the College of Communication and Creative Arts to reflect the full range of programs and courses.

Programs Offered
The College offers eight undergraduate majors: Advertising, Art, Communication Studies, Journalism, Public Relations, Radio, Television, and Film, Studio Art, and Writing Arts. The Department of Communication Studies houses the general education requirement of Public Speaking for the University. The Department of Writing Arts administers the general education writing program for the University. Minors are offered in Advertising, Art, Art History, Communication Studies, Journalism, and Writing Arts. Concentrations are available in Audio Recording, Creative Writing and New Media. The College houses two graduate programs: the M.A. in Public Relations and the M.A. in Writing, and six Certificates of Graduate Study (Creative Writing; Editing and Publishing for Writers; Integrated Marketing and New Media; School Public Relations; Writing and New Media; Writing, Composition, and Rhetoric).

Introduction
The College of Communication and Creative Arts at Rowan University blends the theoretical, the creative, and the practical, building upon an expansive base of general education courses that serve to develop a liberal arts perspective in all areas. Experimental learning is a strong component of the programs and internships are encouraged in all majors.

Departments
The College of Communication and Creative Arts houses six departments: Art, Communication Studies, Journalism, Public Relations and Advertising, Radio, Television, and Film, and Writing Arts.

Services
In addition to regular classrooms, the College of Communication and Creative Arts makes extensive use of specialized laboratories. Students learn in new digital production facilities that include two full video/film production studios, a satellite connection, three radio production labs, digital video/film editing suites, and a 130-seat screening theatre. Students can learn layout, desktop publishing, and numerous other skills in the journalism laboratory. Courses in fine art and graphic design are held in a variety of studio spaces, providing equipment and facilities for a wide range of creative experiences. The college also provides students with two networked writing labs, and a full service Writing Center, providing support for students across the university.
Core Requirements
All of the College of Communication and Creative Arts B.A. programs require 33-39 semester hours of major courses. The B.F.A. in Studio Art, a highly intensive studio experience, requires 78 credit hours of art courses.

General Education
All students must complete the University General Education requirements as described on page 33

Rowan Experience
All students must complete the Rowan Experience requirements as described on page 35

Department of Art
Keith Adams
Interim Co-Chair
Westby Hall
856.256.4788
adamske@rowan.edu

Jill Gower
Interim Co-Chair
Westby Hall
856.256.4789
gower@rowan.edu

The Department of Art offers a continuing tradition of inspiring education in the fine arts, design, art education, and art history. The department offers both majors and elective students the opportunities to experience the visual arts as an important facet of a broader university education.

The Art Department offers the following programs: The Bachelor of Fine Arts in Studio Art (BFA), The Bachelor of Arts in Art (BA), BFA with a Specialization in Graphic Design, BFA with a Specialization in Biomedical Art and Visualization, Dual major of BA in Art and BA in Education/Endorsement in the Teaching of Art (K-12), Minor in Art, and a Minor in Art History.

Each candidate applying for admission as a studio art major or minor is required to personally present a portfolio containing twelve examples (a minimum of six original representational drawings) of his/her best work for review by the art faculty. Photographs or slides may be substituted for large or three-dimensional work. A 250-word essay discussing why the applicant wishes to pursue studies in the visual arts is also required. Applicants may upload their portfolio to SlideRoom once their admissions to the university is completed. These admission standards apply to all art students: freshmen, transfers from other institutions and Rowan University students changing their majors.

Note: In addition to tuition, fees and normal book costs, art majors should anticipate additional fees for materials and equipment used in studio courses.

Accreditation
Specialized, national arts accreditation has been granted by The National Association of Schools of Art & Design.

BACHELOR OF FINE ARTS IN STUDIO ART
David E. Vaccaro
Advisor
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vaccaro@rowan.edu

The Bachelor of Fine Arts in Studio Art (BFA) A professional, studio-intensive, degree program for students who wish to become illustrators, designers or fine artists. The standards are high, the work is demanding, and the rewards are great. The BFA at Rowan is a general fine arts degree. It provides students with a thorough grounding in fundamental principles and techniques with opportunities for emphasis in one or more specific fine arts areas. Studio areas include Ceramics, Graphic Design, Illustration, Metals/Jewelry, Painting, Photography, Printmaking, and Sculpture.

General Education
All students must complete the University General Education requirements as described on page 33

Rowan Experience
All students must complete the Rowan Experience requirements as described on page 35

Major Requirements
Foundation Core
The BFA in Biomedical Art and Visualization (BMAV) program combines art, design, science and medical based content using a variety of digital media and computer graphic technologies. The major allows the student to focus on future career possibilities in the areas of medical and scientific visualization, information design, animation and interactive educational games and applications. The major is based on the traditional field of scientific and medical illustration with the curriculum for this program incorporates leading-edge, innovative concepts and digital media techniques, which include: digital painting, drawing, and graphics; 3D modeling, 2D/3D animation, interactive design and visualizations. This program is designed to prepare students for a professional career in the field(s) of scientific and medical illustration, animation, information design interactive simulation, and visualization. The degree is designed to have a comprehensive and interdisciplinary focus on applied arts and sciences. The Biomedical Art and Visualization major is at the forefront of newly emerging digital media markets, whereby scientific and medical visualization are in demand in these areas: consumer health and pharmaceutical markets, medical device and biotechnology media markets, veterinary medicine markets, television & film, publishers (magazines, journals, news, textbooks) medical & scientific advertising, hospitals & healthcare agencies, university service bureaus, research institutes, government agencies, medical legal firms and forensic reconstruction / criminal investigation visuals, museums and cultural institution exhibitions, serious gaming and simulation, and instructional design and e-learning.

### General Education
All students must complete the University General Education requirements as described on page 33

### Rowan Experience
All students must complete the Rowan Experience requirements as described on page 35

### Major Requirements

#### Foundation Core

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART02.100</td>
<td>Representational Drawing</td>
</tr>
<tr>
<td>ART02.105</td>
<td>Color &amp; Design - 2D</td>
</tr>
<tr>
<td>ART02.240</td>
<td>Intro to Sculpture - 3D</td>
</tr>
</tbody>
</table>

#### Studio Choices

**Sophomore Year:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART09.310</td>
<td>Digital Media &amp; Techniques</td>
</tr>
<tr>
<td>ART02.110</td>
<td>Figure Drawing</td>
</tr>
<tr>
<td>ART09.308</td>
<td>Color Theory</td>
</tr>
</tbody>
</table>

Primary Studio and support courses are determined with academic and studio advisors. Studios include Ceramics, Graphic Design, Illustration, Metals/Jewelry, Painting, Photography, Printmaking, and Sculpture.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART09.390</td>
<td>Work in Progress Review</td>
</tr>
<tr>
<td>ART09.490</td>
<td>BFA Senior Thesis/Exhibition</td>
</tr>
</tbody>
</table>

#### Art Studio Electives

**Art History**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARHS03.103</td>
<td>Art History Survey I</td>
</tr>
<tr>
<td>ARHS03.104</td>
<td>Art History Survey II</td>
</tr>
<tr>
<td>ARHS03.205</td>
<td>Art History Survey III</td>
</tr>
</tbody>
</table>

**Art History Choice**

Other Required courses

- Additional 3 s.h. from the Artistic and Creative Experiences Bank

### Program Total

120 s.h.
College of Communication and Creative Arts

ART09.301 Digital Media & Techniques

Primary Studio
ART09.251 Introduction to Figure Anatomy for the Artist
ART09.252 Intro to Natural Science & Zoological Illustration
ART09.356 Biomedical Art: Digital Rendering Techniques
ART09.253 Introduction to Digital 3D Modeling
ART09.360 Biomedical Art: Storyboarding & Animation
ART09.453 Introduction to Game Media Design
ART09.454 Surgical Illustration and Media
ART09.373 Advanced Problems in Biomedical Art & Visualization
ART09.361 Medical Sculpture & Forensic Reconstruction
ART09.456 Biomedical Art BFA Thesis & Portfolio Capstone

Support Studio
ART09.343 Introduction to Graphic Design I
ART09.364 Adv Graphic Design VI (Visual Communication)
ART11.250 Photography I

Art History
ARHS03.103 Art History Survey I
ARHS03.104 Art History Survey II
ARHS03.205 Art History Survey III

Science Courses
BIOL01.104 Biology 1: Diversity, Evolution, and Adaptation
BIOL01.104 Biology 2: Concepts In Genetics
BIOL01.203 Biology 3: Introduction To Cell Biology
BIOL10.210 Human Anatomy and Physiology I
BIOL10.212 Human Anatomy and Physiology II
BIOL07.301 Comparative Vertebrate Anatomy
or BIOL01.428 Anatomy & Physiology I

Review and Exhibition Requirements
ART02.222 Review: Foundation Core Review
ART09.390 Work in Progress Review
ART09.490 Senior Thesis Exhibition

Program Total Requirements 129 s.h.

BACHELOR OF ARTS IN ART
David E. Vaccaro
Advisor
Westby Hall
856.256.4091
vaccaro@rowan.edu

A liberal arts degree program for students who wish to become art teachers or desire a broad academically-oriented education with an emphasis in art.

General Education
All students must complete the University General Education requirements as described on page 33

Rowan Experience
All students must complete the University Rowan Experience requirements as described on page 35

Major Requirements
Foundation Core
ART02.100 Representational Drawing
ART02.200 Expressive Drawing
ART02.105 Color and Design-2D
ART02.240 Intro to Sculpture - 3D
ART02.222 Studio Core Portfolio Review
ART09.401 Senior Project Art
ARHS03.103 Art History Survey I
ARHS03.104 Art History Survey II
ARHS03.205 Art History Survey III

Studio Choices
Primary Studio and support courses are determined with academic and studio advisors. Studios include Biomedical Art and Visualization, Ceramics, Graphic Design, Illustration, Metals/Jewelry, Painting, Photography, Printmaking, and Sculpture.

**Other Required courses**

- Additional 6 s.h. from the History/Humanities Language Bank
- Additional 3 s.h. from the Artistic and Creative Experiences Bank

**Program Total**

120 s.h.

---

**BACHELOR OF ARTS IN ART - ART EDUCATION**

Jane E. Graziano  
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856.256.4500 x4045  
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David E. Vaccaro  
Advisor/Art  
Westby Hall  
856.256.4091  
vaccaro@rowan.edu

Sheri Rodriguez  
Advisor/Education  
856.256.4759  
rodriguezs@rowan.edu

This program offers students an opportunity to satisfy degree requirements for a BA in Art and a BA in Education, and New Jersey State Teacher Certification K-12 specialization in Art. The program's goals are to prepare students to become teachers of the visual arts by building a strong foundation in art knowledge and skills, and educational theory and practice. For more in-depth studio opportunities students enrolled in this degree program may choose to apply for the Bachelor of Fine Arts degree program at the end of their sophomore year.

Further information about this program can be obtained from the Department of Art 856. 256.4520 and the Department of Teacher Education 856.256.4738 or 4739. Information for the Post-Baccalaureate Certification program can be obtained from The Graduate School 856.256.4053.

---

**General Education**

All students must complete the University General Education requirements as described on page 33

**Rowan Experience**

All students must complete the Rowan Experience requirements as described on page 35

**Art Major Requirements**

- **Foundation Core**  
  - ART02.100  
    Representational Drawing  
  - ART02.200  
    Expressive Drawing  
  - ART02.105  
    Color & Design - 2D  
  - ART02.240  
    Intro to Sculpture - 3D  
  - ART02.222  
    Studio Core Portfolio Review

- **Art History**  
  - ARHS03.103  
    Art History Survey I  
  - ARHS03.104  
    Art History Survey II  
  - ARHS03.205  
    Art History Survey III

- **Studio**  
  - ART09.301  
    Digital Media & Techniques  
  - ART02.222  
    Introduction to Painting  
  - ART02.240  
    Introduction to Sculpture  
  - or ART09.240  
    Introduction to Ceramics

- **Art Major Studio Elective**  
  - Pursuant to New Jersey's Department of Education requirements for Teacher of Art Certificate, an additional 12 s.h. of advanced studio are required.
    - ART09.401  
      Senior Project Art

- **Other Required Courses**  
  - SPED08.130  
    Human Exceptionality  
  - FNDS21.230  
    Characteristics of Knowledge Acquisition  
  - ART09.200  
    Theory & Analysis of Art Education  
  - PSY09.209  
    Child Development
The Minor in Art is open to any interested Rowan student. A portfolio review is required. Transfer students are required to take a minimum of fifteen credit hours toward the minor at Rowan University.

Program
The Minor in Art consists of 24 semester hours made up of five core courses and three studio electives, as follows:

Foundation Core
- ART02.100 Representational Drawing
- ART02.105 Color and Design-2D
- ART02.200 Expressive Drawing
- ART02.240 Intro to Sculpture - 3D
- ARHS03.130 Art Appreciation

Studio Electives: (Choose three)
- ART11.250 Photography I
- ART11.255 Photography II
- ART02.220 Intro to Painting
- ART02.240 Intro to Sculpture
- ART02.260 Intro to Printmaking
- ART09.210 Intro to Metals/Jewelry
- ART09.225 Puppetry I
- ART09.240 Intro to Ceramics
- ART09.228 Intro to Illustration
- ART09.343 Intro to Graphic Design I
- ART09.351 Computer Art I
- ART02.110 Figure Drawing
- ART02.315 Intermed. Painting
- ART02.301 Intermed. Sculpture
- ART02.317 Intermed. Printmaking
- ART09.226 Intermed. Puppetry
- ART09.311 Intermed. Metals/Jewelry
- ART09.344 Graphic Design II Typography
- ART09.352 Intermed. Ceramics
- ART09.336 Intermed. Illustration
- ART09.452 Computer Art II
- ART11.405 Advanced Photography

Program Total 120 s.h.
BACHELOR OF FINE ARTS IN STUDIO ART WITH SPECIALIZATION IN GRAPHIC DESIGN
David E. Vaccaro
Advisor
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856.256.4091
vaccaro@rowan.edu

A professional, studio-intensive, BFA specialization for students who wish to become graphic designers. The graphic design industry is highly competitive and broad ranging. This specialization allows Rowan University students who wish to enter the graphic design field the added advantage of demonstrating to potential employers that they have followed a sequential course of study. The curriculum consists of the seven graphic design courses offered by the Department of Art and fulfills the graphic design specialization requirements. This BFA specialization provides a comprehensive education for students who are interested in entering the graphic design profession.

General Education
All students must complete the University General Education requirements as described on page 33

Rowan Experience
All students must complete the University General Education requirements as described on page 35

Major Requirements

<table>
<thead>
<tr>
<th>Foundation Core</th>
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<tbody>
<tr>
<td>ART02.100</td>
</tr>
<tr>
<td>Representational Drawing</td>
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<tr>
<td>ART02.200</td>
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<tr>
<td>Expressive Drawing</td>
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<tr>
<td></td>
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<tr>
<td>ART02.105</td>
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<tr>
<td>Color &amp; Design - 2D</td>
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<tr>
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</tr>
<tr>
<td>ART02.240</td>
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<tr>
<td>Intro to Sculpture - 3D</td>
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</tr>
<tr>
<td>ART02.222</td>
</tr>
<tr>
<td>Studio Core Portfolio Review</td>
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</table>

<table>
<thead>
<tr>
<th>Primary Studios and Studio Choices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sophomore Year:</td>
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<tr>
<td>ART09.301</td>
</tr>
<tr>
<td>Digital Media &amp; Techniques</td>
</tr>
<tr>
<td>ART02.110</td>
</tr>
<tr>
<td>Figure Drawing</td>
</tr>
<tr>
<td>ART09.308</td>
</tr>
<tr>
<td>Color Theory</td>
</tr>
</tbody>
</table>

Primary Studio and support courses determined with academic and studio advisors.

Note: Not all courses are offered each semester.

| ART09.343       |
| Introduction to Graphic Design I |
| ART09.344       |
| Intermediate Graphic Design II (Typography) |
| ART09.349       |
| Intermediate Graphic Design III (Visual Identity) |
| ART09.350       |
| Intermediate Graphic Design IV (Packaging) |
| ART09.363       |
| Advanced Graphic Design V (Publication) |
| ART09.364       |
| Adv Graphic Design VI (Visual Communication) |
| ART09.464       |
| Adv Graphic Design VIII (Portfolio) |

Distributive studio electives include: Biomedical Art and Visualization, Ceramics, Illustration, Metals/Jewelry, Painting, Photography, Printmaking, and Sculpture.

| ART09.390       |
| Work in Progress Review |
| ART09.490       |
| Senior Thesis/Exhibition |

Art Studio Electives

| ARHS03.103      |
| Art History Survey I |
| ARHS03.104      |
| Art History Survey II |
| ARHS03.205      |
| Art History Survey III |

Art History Choice

Other Required courses

Additional 3 s.h. from the Artistic and Creative Experiences Bank

Program Total 120 s.h.
The Specialization in Biomedical Art and Visualization is an arts-based area of study that uses elements of fine art and design to specialize in the portrayal of scientific processes and information. It requires that students develop understanding of aesthetic arrangement, refining visual organization skills in drawing, illustration, animation and graphic communication. This visual arts-based knowledge is integrated with content information from the natural and medical science fields. The curriculum consists of the seven courses offered by the Department of Art and fulfills the Biomedical Art and Visualization specialization requirements.

**General Education**
All students must complete the University General Education requirements as described on page 33.

**Rowan Experience**
All students must complete the University General Education requirements as described on page 35.

**Major Requirements**

**Foundation Core**
- ART02.100 Representational Drawing
- ART02.200 Expressive Drawing
- ART02.105 Color & Design - 2D
- ART02.240 Intro to Sculpture - 3D
- ART02.222 Studio Core Portfolio Review

**Primary Studios and Studio Choices**

**Sophomore Year:**
- ART09.301 Digital Media & Techniques
- ART02.110 Figure Drawing
- ART09.308 Color Theory

Primary Studio and support courses determined with academic and studio advisors.  
*Note:* Not all courses are offered each semester.

- ART09.251 Anatomy for the Artist
- ART09.252 Information Visualization: Line, Color, and Form
- ART09.253 Introduction to Biomedical Digital 3D Modeling & Visualization
- ART09.351 Introduction to Biomedical Illustration
- ART09.352 Biomedical Visualization in Motion
- ART09.453 Biomedical Art: Simulation & Education Game Design
- ART09.452 Surgical Illustration and Media

Distributive studio electives include Ceramics, Graphic Design, Illustration, Metals/Jewelry, Painting, Photography, Printmaking, and Sculpture.

- ART09.390 Work in Progress Review
- ART09.490 Senior Thesis/Exhibition

**Art Studio Electives**

**Art History**
- ARHS03.103 Art History Survey I
- ARHS03.104 Art History Survey II
- ARHS03.205 Art History Survey III

**Other Required courses**
Additional 3 s.h. from the Artistic and Creative Experiences Bank

**Program Total**
120 s.h.

**MINOR IN ART HISTORY**

David E. Vaccaro  
Advisor  
Westby Hall  
856.256.4091  
vaccaro@rowan.edu

**Eligibility**
The Minor in Art History is open to any interested Rowan student. Transfer students are required to take a minimum of twelve credit hours toward the minor at Rowan University.

**Program Requirements**
The Minor in Art History consists of 18 semester hours. There are three required Art History core courses and three Art History electives, as follows:

**Art History Core Courses:**
Note: These courses are offered every semester.

ARHS03.103  Art History Survey I
ARHS03.104  Art History Survey II
ARHS03.205  Art History Survey III

Art History Electives (Choose three)

Note: If intermediate courses are selected, prerequisites listed in the catalog descriptions of these courses must be met. Courses marked with an asterisk (*) are not offered every semester.

ARHS03.310  History of American Art
ARHS03.220  Modern Art
ARHS03.252  Concepts in Art: Criticism (WI)(*)
ARHS03.340  Survey of Women Artists(*)
ARHS03.231  Survey of Asian Art(*)
ARHS03.420  Art Since 1945(*)
ARHS03.425  Special Problems Art History (course may be repeated)

Department of Communication Studies
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This department offers a Bachelor of Arts in the discipline of Communication Studies that enables students to develop a sophisticated understanding of communication theory, research, and strategies. Courses such as Images of Gender in Popular Culture, Health Communication, Political Communication, Family Communication, Ethical Issues in Human Communication, Interpersonal Communication, Small Group Communication, Rhetorical Theory, and Seminar in Communication Studies provide a broad and rigorous grounding in the theory and practice of communication in our daily lives.

BACHELOR OF ARTS IN COMMUNICATION STUDIES

General Education
All students must complete the University General Education requirements as described on page 33

Rowan Experience
All students must complete the Rowan Experience requirements as described on page 35

Core Requirements
(Must be completed with grades no lower than a C-)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>CMS04.200</td>
<td>Introduction to Communication Studies</td>
</tr>
<tr>
<td>CMS04.250</td>
<td>Communication Theory</td>
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<tr>
<td>CMS04.300</td>
<td>Ethical Issues in Human Communication</td>
</tr>
<tr>
<td>CMS04.350</td>
<td>Communication Studies Research Methods</td>
</tr>
<tr>
<td>CMS04.390</td>
<td>Rhetorical Criticism</td>
</tr>
<tr>
<td>CMS04.450</td>
<td>Seminar in Communication Studies</td>
</tr>
<tr>
<td>CMS04.455</td>
<td>Senior Transition</td>
</tr>
</tbody>
</table>

20 s.h.

Communication Studies Specializations

Select four courses from one of the following groups (must be completed with grades no lower than a C-):

Rhetoric/Cultural Criticism

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMS04.210</td>
<td>Mass Media and Their Influences</td>
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<tr>
<td>CMS04.270</td>
<td>Persuasion and Social Influence</td>
</tr>
<tr>
<td>CMS04.290</td>
<td>Rhetorical Theory</td>
</tr>
<tr>
<td>CMS04.310</td>
<td>Images of Gender in Popular Culture</td>
</tr>
<tr>
<td>CMS04.315</td>
<td>Participatory Media</td>
</tr>
<tr>
<td>CMS04.317</td>
<td>Digital Communities</td>
</tr>
<tr>
<td>CMS04.330</td>
<td>International Media Communication</td>
</tr>
<tr>
<td>CMS04.370</td>
<td>Political Communication</td>
</tr>
<tr>
<td>CMS04.375</td>
<td>Special Topics in Communication</td>
</tr>
<tr>
<td>CMS04.385</td>
<td>Constructing Health</td>
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</table>

12 s.h.

Interpersonal/Organizational Communication

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>CMS04.220</td>
<td>Interpersonal Communication</td>
</tr>
<tr>
<td>CMS04.240</td>
<td>Small Group Communication</td>
</tr>
<tr>
<td>CMS04.255</td>
<td>Nonverbal Communication</td>
</tr>
<tr>
<td>CMS04.260</td>
<td>Organizational Communication Theory and Research</td>
</tr>
</tbody>
</table>

Cross-Specializations Elective 3 s.h.
Each student will select and complete one course from the emphasis area in which they are NOT specializing in (with a grade no lower than a C-).

Related Electives 6 s.h.
Each student must select 2 courses related to the major. These can be any courses offered by the Department of the Communication Studies (not counting those that have been used to fulfill the requirements listed above) or any relevant courses offered in the College of Communication and Creative Arts, chosen in concert with the student's academic advisor.

Other Requirements
- Psychology Course
- Economics or Political Science Course
- Total of 3 Math/Science Courses
- Total of 4 History/Humanities/Language Courses
- Sociology Course
- History or Philosophy Course
- Total of four (4) Social & Behavioral Science Courses

Free Electives 36 s.h.
To graduate, students must have a C- or better in core, specialization and cross specialization courses and a 2.0 overall.

Total Credits in Program 120 s.h.
The Department of Journalism houses the Journalism major and minor.

**BACHELOR OF ARTS IN JOURNALISM**

The Bachelor of Arts in Journalism prepares students for a variety of journalism career opportunities in writing, broadcast, multimedia and editing/publishing.

**General Education**

All students must complete the University General Education requirements as described on page 33.

**Rowan Experience**

All students must complete the Rowan Experience requirements as described on page 35.

**Core Courses Required**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>JRN02.205</td>
<td>Journalism Principles and Practices</td>
</tr>
<tr>
<td>JRN02.310</td>
<td>News Reporting I</td>
</tr>
<tr>
<td>JRN02.311</td>
<td>News Reporting II</td>
</tr>
<tr>
<td>JRN02.321</td>
<td>Online Journalism I</td>
</tr>
<tr>
<td>JRN02.325</td>
<td>Online Journalism II</td>
</tr>
<tr>
<td>JRN02.319</td>
<td>Media Ethics</td>
</tr>
<tr>
<td>JRN02.411</td>
<td>Copy Editing</td>
</tr>
<tr>
<td>JRN02.335</td>
<td>Media Law</td>
</tr>
<tr>
<td>JRN02.410</td>
<td>Journalism Senior Seminar</td>
</tr>
</tbody>
</table>

**Sequences**

(Each student must choose at least one sequence.)

**Writing**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>JRN02.312</td>
<td>Feature Writing</td>
</tr>
<tr>
<td>JRN02.313</td>
<td>Magazine Article Writing</td>
</tr>
<tr>
<td>JRN02.356, 58, 59</td>
<td>Journalism Internship Fall, Spring or Summer</td>
</tr>
</tbody>
</table>

Choice from Approved Options list

**Broadcast**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>JRN02.341</td>
<td>Broadcast News Writing</td>
</tr>
<tr>
<td>JRN02.307</td>
<td>On-Camera Field Reporting (Fall)</td>
</tr>
<tr>
<td>JRN02.305</td>
<td>TV Newscast (Spring)</td>
</tr>
</tbody>
</table>

Choice from Approved Options list

**Multimedia**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>JRN02.317</td>
<td>Publication Layout and Design</td>
</tr>
<tr>
<td>JRN02.314</td>
<td>Photojournalism</td>
</tr>
<tr>
<td>RTF03.295</td>
<td>Intro to New Media</td>
</tr>
</tbody>
</table>

Choice from Approved Options list

**Editing and Publishing**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>JRN02.317</td>
<td>Publication Layout and Design</td>
</tr>
<tr>
<td>JRN02.425</td>
<td>Advanced Publication Layout</td>
</tr>
<tr>
<td>JRN02.322</td>
<td>The Publishing Industry (Spring)</td>
</tr>
</tbody>
</table>

Choice from Approved Options list

**Approved Options for Fourth Sequence Course**

Choose from this list for your "choice" in your sequence. Any other courses you select from this list will be counted as free electives.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>JRN02.425</td>
<td>Advanced Publication Layout</td>
</tr>
<tr>
<td>JRN02.341</td>
<td>Broadcast News Writing</td>
</tr>
<tr>
<td>JRN02.323</td>
<td>Crime Reporting</td>
</tr>
<tr>
<td>JRN02.312</td>
<td>Feature Writing</td>
</tr>
<tr>
<td>JRN02.324</td>
<td>Health Reporting</td>
</tr>
<tr>
<td>RTF03.295</td>
<td>Intro to New Media</td>
</tr>
<tr>
<td>JRN02.318</td>
<td>Investigative Journalism</td>
</tr>
</tbody>
</table>
Free Electives 39 s.h.
Try to use at least 12 s.h. to build an area of expertise relevant to your program.

**Total Hours Required for Graduation (with Gen Ed Courses) = 120 s.h.**

Students must earn a grade of at least a C minus in each course under Core Requirements and Sequences. C minus or above is required in all prerequisites to other courses.

Students must maintain a 2.5 GPA in their 39 credits of the major, and a 2.0 overall GPA to graduate with a B.A. in Journalism.

Transfer courses of 300 level or above that correlate with Rowan's courses will be accepted in the major.

Students may earn up to 9 credits in internships. Any other internships can be taken on their own, but not for credit.

### MINOR IN JOURNALISM

This program is designed to address the needs of students who wish to combine two areas of academic study into one profession (such as business journalism or writing about the arts) or to increase their understanding of journalism from an academic standpoint, an option that may be particularly useful for education majors.

The program consists of 18 credits, and students must complete College Composition I (COMP01.111) and College Composition II (COMP01.112) and achieve an overall 2.0 GPA in order to be admitted to the minor.

**Required Courses**

- JRN02.205 Journalism Principles and Practices
- JRN02.310 News Reporting I
- JRN02.321 Online Journalism I

**Electives: (choose three)**

- JRN02.425 Advanced Publication Layout
- JRN02.341 Broadcast News Writing
- JRN02.411 Copy Editing
- JRN02.323 Crime Reporting
- JRN02.312 Feature Writing
- JRN02.324 Health Reporting
- RTF03.295 Introduction to New Media
- JRN02.318 Investigative Journalism
- JRN02.410 Journalism Senior Seminar
- JRN02.313 Magazine Article Writing
- JRN02.319 Media Ethics
- JRN02.335 Media Law
- JRN02.311 News Reporting II
- JRN02.307 On-Camera Field Reporting (Fall)
- JRN02.335 Online Journalism II
- JRN02.314 Photojournalism
- JRN02.317 Publication Layout and Design
- JRN02.320 Radio News (Spring)
- JRN02.326 Sports Broadcast
- JRN02.361 Sports Journalism I
- JRN02.362 Sports Journalism II
- JRN02.332 The Publishing Industry (Spring)
- JRN02.305 TV Newscast (Spring)
Substitution of one course NOT on the above list of electives may be made with the approval of the student’s advisor.

**Department of Public Relations and Advertising**

**Suzanne FitzGerald**  
Chair  
Bozorth Hall  
856.256.4265  
sparks@rowan.edu

The Public Relations and Advertising Department offers majors in public relations and advertising and a minor in advertising. Core courses, such as Basic Public Relations Writing, offer students a solid foundation in communication, while upper-level courses qualify students for a wide range of careers in public relations, advertising, and related fields.

The Department also offers a graduate program leading to a Master of Arts in Public Relations. The Department advises a nationally acclaimed chapter of the Public Relations Student Society of America and a student chapter of the American Advertising Federation. Rowan University's Public Relations program was the 16th program in the country to receive CEPR (Certified in Education for Public Relations) accreditation from the Public Relations Society of America.

**BACHELOR OF ARTS IN PUBLIC RELATIONS**

**General Education**
All students must complete the University General Education requirements as described on page 33.

**Rowan Experience**
All students must complete the Rowan Experience requirements as described on page 35.

**Major Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PR06.350</td>
<td>Introduction to Public Relations</td>
</tr>
<tr>
<td>ADV04.330</td>
<td>Introduction to Advertising</td>
</tr>
<tr>
<td>PR06.310</td>
<td>Intro PR/Adv Research</td>
</tr>
<tr>
<td>PR06.301</td>
<td>Basic Public Relations Writing</td>
</tr>
<tr>
<td>PR06.305</td>
<td>Advanced Public Relations Writing</td>
</tr>
<tr>
<td>JRN02.317</td>
<td>Publication Layout &amp; Design</td>
</tr>
<tr>
<td>PR06.355</td>
<td>PR/AD Law and Ethics</td>
</tr>
<tr>
<td>PR99.302</td>
<td>Public Opinion</td>
</tr>
<tr>
<td>PR06.353</td>
<td>Case Studies in Public Relations (WD)(Fall)</td>
</tr>
<tr>
<td>PR06.454</td>
<td>PR Planning (WI)(Spring)</td>
</tr>
</tbody>
</table>

**Related Electives**

Select two courses from the following groups:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADV04.360</td>
<td>Integrated Marketing Communication</td>
</tr>
<tr>
<td>ADV04.432</td>
<td>Media Planning</td>
</tr>
<tr>
<td>CMS04.210</td>
<td>Mass Media</td>
</tr>
<tr>
<td>CMS04.240</td>
<td>Small Group Communication</td>
</tr>
<tr>
<td>CMS04.250</td>
<td>Communication Theory</td>
</tr>
<tr>
<td>CMS04.270</td>
<td>Persuasion and Social Influence</td>
</tr>
<tr>
<td>CMS04.370</td>
<td>Political Communication</td>
</tr>
<tr>
<td>CMS04.380</td>
<td>Health Communication</td>
</tr>
<tr>
<td>JRN02.310</td>
<td>News Reporting I</td>
</tr>
<tr>
<td>JRN02.312</td>
<td>Feature Writing</td>
</tr>
<tr>
<td>JRN02.313</td>
<td>Magazine Article Writing</td>
</tr>
<tr>
<td>JRN02.319</td>
<td>Media Ethics</td>
</tr>
<tr>
<td>JRN02.335</td>
<td>Media Law</td>
</tr>
<tr>
<td>MGT06.300</td>
<td>Organizational Behavior</td>
</tr>
<tr>
<td>PR06.354</td>
<td>Impact of PR on the News</td>
</tr>
<tr>
<td>PR06.359</td>
<td>PR Practicum</td>
</tr>
<tr>
<td>PR06.360</td>
<td>PR/Adv Internship I</td>
</tr>
<tr>
<td>PR06.362</td>
<td>PR/Adv Internship II</td>
</tr>
<tr>
<td>PR06.364</td>
<td>PR/Adv Internship III</td>
</tr>
<tr>
<td>RTF03.220</td>
<td>The Television Industry</td>
</tr>
</tbody>
</table>

**Other Requirements**

- Total of two (2) Math/Science courses
- Total of two (2) History/Humanities/Language/Literature courses (must include one Literature)
- Total of two (2) Social & Behavioral Science courses

**Free Electives**

39 s.h.

**Total Credits in Program**

120 s.h.
BACHELOR OF ARTS IN ADVERTISING

**General Education**
All students must complete the University General Education requirements as described on page 33

**Rowan Experience**
All students must complete the Rowan Experience requirements as described on page 35

**Major Requirements**
33 s.h.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADV04.330</td>
<td>Introduction to Advertising</td>
</tr>
<tr>
<td>PR06.350</td>
<td>Introduction to Public Relations</td>
</tr>
<tr>
<td>PR06.310</td>
<td>Intro PR/Adv Research</td>
</tr>
<tr>
<td>ADV04.375</td>
<td>Advertising Copywriting</td>
</tr>
<tr>
<td>ADV04.421</td>
<td>Account Planning</td>
</tr>
<tr>
<td>or ADV04.420</td>
<td>Portfolio Preparation</td>
</tr>
<tr>
<td>JRN02.317</td>
<td>Publication Layout &amp; Design</td>
</tr>
<tr>
<td>PR06.355</td>
<td>PR/AD Law and Ethics</td>
</tr>
<tr>
<td>ADV04.360</td>
<td>Integrated Marketing Communication</td>
</tr>
<tr>
<td>or MKT09.200</td>
<td>Principles of Marketing</td>
</tr>
<tr>
<td>ADV04.432</td>
<td>Media Planning</td>
</tr>
<tr>
<td>ADV04.352</td>
<td>Advertising Strategies (Fall)</td>
</tr>
<tr>
<td>ADV04.434</td>
<td>Advertising Campaigns (Spring)</td>
</tr>
</tbody>
</table>

**Related Electives**
6 s.h.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADV04.355</td>
<td>Advertising Practicum</td>
</tr>
<tr>
<td>CMS04.210</td>
<td>Mass Media</td>
</tr>
<tr>
<td>CMS04.250</td>
<td>Communication Theory</td>
</tr>
<tr>
<td>CMS04.240</td>
<td>Small Group Communication</td>
</tr>
<tr>
<td>CMS04.270</td>
<td>Persuasion and Social Influence</td>
</tr>
<tr>
<td>CMS04.370</td>
<td>Political Communication</td>
</tr>
<tr>
<td>CMS04.380</td>
<td>Health Communication</td>
</tr>
<tr>
<td>JRN02.310</td>
<td>News Reporting I</td>
</tr>
<tr>
<td>JRN02.312</td>
<td>Feature Writing</td>
</tr>
<tr>
<td>JRN02.313</td>
<td>Magazine Article Writing</td>
</tr>
<tr>
<td>JRN02.319</td>
<td>Media Ethics</td>
</tr>
<tr>
<td>JRN02.335</td>
<td>Media Law</td>
</tr>
<tr>
<td>MGT06.300</td>
<td>Organizational Behavior</td>
</tr>
<tr>
<td>PR06.354</td>
<td>Impact of PR on the News</td>
</tr>
<tr>
<td>PR06.360</td>
<td>PR/Adv Internship I</td>
</tr>
<tr>
<td>PR06.362</td>
<td>PR/Adv Internship II</td>
</tr>
<tr>
<td>PR06.364</td>
<td>PR/Adv Internship III</td>
</tr>
<tr>
<td>RTF03.220</td>
<td>The Television Industry</td>
</tr>
</tbody>
</table>

**Other Requirements**
- Total of two (2) Math/Science courses
- Total of two (2) History/Humanities/Language/Literature courses (must include one Literature course)
- Total of two (2) Social & Behavioral Science courses

**Free Electives**
39 s.h.

**Total Credits in Program**
120 s.h.

**MINOR IN ADVERTISING**
18 s.h.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADV04.330</td>
<td>Intro to Advertising</td>
</tr>
<tr>
<td>ADV04.375</td>
<td>Adv Copywriting</td>
</tr>
<tr>
<td>ADV04.421</td>
<td>Account Planning</td>
</tr>
<tr>
<td>PR06.310</td>
<td>Intro PR/Adv Research</td>
</tr>
<tr>
<td>ADV04.360</td>
<td>Integrated Marketing Communication</td>
</tr>
<tr>
<td>PR06.355</td>
<td>PR/AD Law and Ethics</td>
</tr>
</tbody>
</table>

**Department of Radio, Television, and Film**
Keith M. Brand  
Chair  
Bozorth Hall  
856.256.4006  
brandk@rowan.edu
The Department offers a Bachelor of Arts in Radio, Television, and Film (RTF) that prepares students for career opportunities in traditional and emerging media industries by covering a wide range of topics, including media production, business, history, and aesthetics. Students can select from two advising tracks within the major. The RTF Production track emphasizes media writing and production skills, while the RTF Critical Studies track emphasizes writing and research skills. Both tracks include a broad exploration of the history, business practice, and aesthetics of the media. Students completing either track receive a broad-based liberal arts education and a strong preparation for either media production or critical studies-related careers.

Outside of the classroom, learning continues as students are engaged in student clubs and organizations, including Cinema Workshop (16mm and digital filmmaking), The Rowan Television Network (the University's Cable Channel), and WGLS-FM (the University's radio station). In addition, the department offers juniors and seniors an extensive internship program that includes internships at businesses in the Philadelphia, New Jersey, and the New York Metropolitan areas.

**BACHELOR OF ARTS IN RADIO, TELEVISION, AND FILM**

**General Education**
All students must complete the University General Education requirements as described on page 33

**Rowan Experience**
All students must complete the Rowan Experience requirements as described on page 35

**Radio, Television and Film Core Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTF03.270</td>
<td>Film History and Appreciation I (CCI)</td>
</tr>
<tr>
<td>RTF03.205</td>
<td>TV History and Appreciation (CCI)</td>
</tr>
<tr>
<td>RTF03.275</td>
<td>Applied Media Aesthetics (CCII or permission)</td>
</tr>
<tr>
<td>RTF03.224</td>
<td>Sound Communication (CCII or permission)</td>
</tr>
<tr>
<td>RTF03.370</td>
<td>Film Production I (Applied Media Aesthetics)</td>
</tr>
<tr>
<td>RTF03.222</td>
<td>TV Production I (Applied Media Aesthetics)</td>
</tr>
</tbody>
</table>

**Industry Conventions**

Select 2 of the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTF03.220</td>
<td>The Television Industry (CCI)</td>
</tr>
<tr>
<td>RTF03.221</td>
<td>The Radio Industry (CCI)</td>
</tr>
<tr>
<td>RTF03.273</td>
<td>The Movie Industry (CCI)</td>
</tr>
<tr>
<td>RTF03.295</td>
<td>Intro to New Media (CCII)</td>
</tr>
</tbody>
</table>

**Media Writing**

Select 2 of the following writing-based courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTF03.471</td>
<td>Techniques in Documentary Films, W.I. (Film 1, TV1, or permission)</td>
</tr>
<tr>
<td>RTF03.393</td>
<td>Film Scenario, W.I. (75 s.h., CCII)</td>
</tr>
<tr>
<td>RTF03.433</td>
<td>TV Program Packaging, W.I. (CCI, The Television Industry)</td>
</tr>
<tr>
<td>RTF03.434</td>
<td>TV Program Packaging 2, W.I. (TV Program Packaging)</td>
</tr>
<tr>
<td>RTF10.523</td>
<td>Graduate Screenwriting, W.I. (Senior &amp; instructor permission)</td>
</tr>
</tbody>
</table>

**Genre/Medium Studies**

Select 1 of the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTF03.372</td>
<td>American Film Directors (CCII, 45 s.h.)</td>
</tr>
<tr>
<td>RTF03.471</td>
<td>Techniques in Documentary Films, W.I. (Film 1, TV1, or permission)</td>
</tr>
<tr>
<td>RTF03.271</td>
<td>Film History and Appreciation II (30 s.h.)</td>
</tr>
<tr>
<td>RTF03.272</td>
<td>Images of Women in Film (30 s.h.)</td>
</tr>
<tr>
<td>RTF03.420</td>
<td>Current Issues in Electronic Media (The Television Industry, 90 s.h.)</td>
</tr>
<tr>
<td>RTF03.294</td>
<td>Contemporary International Cinema (CCI, CCII)</td>
</tr>
<tr>
<td>RTF03.340</td>
<td>RTF Research &amp; Criticism (CCI, CCII, 75 s.h.)</td>
</tr>
<tr>
<td>RTF03.373</td>
<td>Film Noir (CCII, 45 s.h.)</td>
</tr>
<tr>
<td>RTF03.206</td>
<td>TV History and Appreciation, 1960’s-70’s (CCII)</td>
</tr>
<tr>
<td>CMS04.215</td>
<td>Fiction to Film (30 s.h.)</td>
</tr>
</tbody>
</table>

**RTF Tracks**

Choose to focus on courses from the Production Track bank or the Critical Studies Track bank.

**Production Track**

Select 4 of the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTF03.221</td>
<td>TV Production II (TV Production I, Sound Comm.)</td>
</tr>
<tr>
<td>RTF03.371</td>
<td>Film Production II (Film Production I, Sound Comm.)</td>
</tr>
<tr>
<td>RTF03.395</td>
<td>Sound Communication II (Media Aesthetics, Sound Comm.)</td>
</tr>
<tr>
<td>RTF03.450</td>
<td>TV Documentary and Field Production (TV Production I, II, or permission)</td>
</tr>
</tbody>
</table>
RTF03.470 Advanced Film Production (Film Prod. I, II; or permission)
RTF03.394 New Media Production (Intro to New Media)
RTF03.472 New Media Production II (New Media Production)
RTF03.471 Techniques in Documentary Films, W.I. (Film 1, TV1, or permission)

Critical Studies Track
Select 4 courses.
RTF03.340 RTF Research & Criticism (CCI, CCII, 75 s.h.)
RTF03.420 Current Issues in Electronic Media (The Television Industry, 90 s.h.)
and
Select any 2 additional courses from the Genre/Medium Studies course bank
Free Electives 33 s.h.
Total Credits in Program 120-121 s.h.

Department of Writing Arts
Jennifer Courtney
Interim Chair
Hawthorn Hall
856.256.4847
courtneyj@rowan.edu

The Department of Writing Arts offers a variety of curricula, ranging from the First-Year Writing program to a Master of Arts in Writing. The department’s Bachelor of Arts in Writing Arts allows those with an interest in writing to pursue a 34-credit degree program, either as a primary or dual major. The latter group includes many who double major in Elementary Education or Early Childhood Education. In addition, the Department offers an accelerated BA/MA, a concentration in Creative Writing, a minor in Writing Arts, and a Liberal Studies Program B Sequence in Writing Arts. More information on all the programs is available at www.rowan.edu/writingarts

BACHELOR OF ARTS IN WRITING ARTS
The Writing Arts major provides broad-based study and practice in written communication, drawing on the disciplinary strengths of the College of Communication and Creative Arts and from departments across the University. Writing Arts offers students intensive experience in a variety of writing forms, creative and expository, personal and public. Students learn how writers compose in print and new media forms and how audiences react to their writing. In classroom workshops and peer response groups, through lecture and discussion, and by creating and composing multiple drafts and revisions, students develop sensitivity to rhetorical considerations of audience, purpose, and genre. Through these diverse experiences, students are prepared for success in a wide variety of settings beyond the University.

General Education
All students must complete the University General Education requirements as described on page 33

Rowan Experience
All students must complete the Rowan Experience requirements as described on page 35

Non-Program Courses
Major Requirements
CMS04.250 Communication Theory
or WA01.201 How Writers Read
WA01.200 Introduction to Writing Arts
WA07.290 Creative Writing I
or WA07.309 Writing Children’s Stories
WA01.300 The Writer’s Mind
WA01.301 Writing, Research, and Technology
WA01.405 Evaluating Writing
WA01.450 Writing Arts Portfolio Seminar [1 credit]

Related Electives
15 s.h.

WRITING SPECIALIZATION
You must choose 12 s.h. from any of the courses listed below. If you choose all 12 s.h. from one of the three specializations, that specialization will appear on your transcript. If you complete more than one specialization, you must take at least nine separate credits in each specialization. See www.rowan.edu/wa for advice on shaping the specialization.

Creative Writing
WA07.290 Creative Writing I
or WA07.309 Writing Children’s Stories (not the one chosen in required courses)
WA07.291 Creative Writing II
### WA07.391 Fiction Writing
### WA07.395 Writing Poetry
### WA07.392 Fundamentals of Playwriting
### WA01.304 Writing Creative Nonfiction
### WA01.409 Tutoring Writing
### WA07.370 Professions in WA [1 credit]
### JRN02.372 The Publishing Industry
### RTF03.393 Film Scenario Writing
### Internship or Research Practicum

#### Technical and Professional Writing

- **WA01.302 Intro to Technical Writing**
- **WA01.400 Writing for the Workplace**
- **WA01.370 Professions in WA [1 credit]**
- **WA01.409 Tutoring Writing**
- **CMS04.290 Rhetorical Theory**
- **JRN02.312 Magazine Article Writing**
- **JRN02.332 The Publishing Industry**
- **RTF03.295 Introduction to New Media**
- **Internship or Research Practicum**

#### New Media Writing and Publishing

- **WA01.400 Writing for the Workplace**
- **WA01.370 Professions in WA [1 credit]**
- **CMS04.215 Fiction to Film**
- **CMS04.315 Participatory Media**
- **JRN02.314 Photojournalism**
- **JRN02.317 Publication Layout and Design**
- **JRN02.321 Online Journalism I**
- **JRN02.332 The Publishing Industry**
- **JRN02.335 Media Law**
- **RTF03.275 Applied Media Aesthetics: Sight, Sound and Story**
- **RTF03.295 Introduction to New Media**
- **Internship or Research Practicum**

#### Elements of Language

- **CMS04.225 Semantics**
- **CMS04.325 Linguistics**
- **ENGL05.301 American English Grammar**
- **ANTH02.250 Introduction to Anthropological Linguistics**

#### Completion of second semester of 200-level foreign language

**NOTE:** Languages that offer this level course: Arabic, Chinese, French, German, Italian, Japanese, Russian, and Spanish. Also, while the requirement is 3 credits, other courses prior to this second semester 200-level course will likely be necessary.

#### Other Requirements

- **Total of three (3) Math/Science Courses**
- **Total of four (4) History/Humanities/Language courses, one of which must be a History or Philosophy course.**
- **Total of four (4) Social & Behavioral Science courses, one of which must be a Psychology course, and one of which must be a Sociology course.**

#### Free Electives

43 s.h.

#### Total

120-121 s.h.

### MINOR IN WRITING ARTS

No matter what field one is preparing for, good writing is likely to be integral to success. The minor in Writing Arts provides interested students the opportunity to improve their own writing and to better understand and evaluate the writing of others. Doing so enhances one’s ability to communicate in a variety of subjects.

The twenty-two hour minor in Writing Arts provides a streamlined version of the major in Writing Arts. Students complete many of the same required courses and other courses that parallel our related electives offerings.

#### Required

16 s.h.

- All courses are 3 s.h., except for Portfolio Seminar, which is 1 s.h.

#### Introductory Level Course

- **WA01.200 Introduction to Writing Arts**

#### Choose one

- **WA07.290 Creative Writing I**
- **WA07.309 Writing Children’s Stories**
Advanced Level Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>WA01.300</td>
<td>The Writer's Mind</td>
<td>6 s.h.</td>
</tr>
<tr>
<td>WA01.301</td>
<td>Writing, Research, &amp; Technology</td>
<td></td>
</tr>
</tbody>
</table>

Senior Level Capstone Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>WA01.450</td>
<td>Senior Seminar: Evaluating Writing</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>WA01.405</td>
<td>Portfolio Seminar</td>
<td></td>
</tr>
</tbody>
</table>

Electives

Choose any two 6 s.h.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>WA01.302</td>
<td>Intro to Technical Writing</td>
<td>6 s.h.</td>
</tr>
<tr>
<td>WA01.304</td>
<td>Writing with Style</td>
<td></td>
</tr>
<tr>
<td>WA01.400</td>
<td>Writing for the Workplace</td>
<td></td>
</tr>
<tr>
<td>WA01.409</td>
<td>Tutoring Writing</td>
<td></td>
</tr>
<tr>
<td>WA07.290</td>
<td>Creative Writing I, if not taken above</td>
<td></td>
</tr>
<tr>
<td>WA07.291</td>
<td>Creative Writing II</td>
<td></td>
</tr>
<tr>
<td>WA07.309</td>
<td>Writing Children's Stories, if not taken above</td>
<td></td>
</tr>
<tr>
<td>WA07.391</td>
<td>Writing Fiction</td>
<td></td>
</tr>
<tr>
<td>WA07.395</td>
<td>Writing Poetry</td>
<td></td>
</tr>
<tr>
<td>RTF03.393</td>
<td>Film Scenario Writing</td>
<td></td>
</tr>
<tr>
<td>CMS04.325</td>
<td>Linguistics</td>
<td></td>
</tr>
<tr>
<td>ENGL02.301</td>
<td>American English Grammar</td>
<td></td>
</tr>
<tr>
<td>JRN02.312</td>
<td>Magazine Article Writing</td>
<td></td>
</tr>
</tbody>
</table>

ACCELERATED BA IN WRITING ARTS/MA IN WRITING

The accelerated BA in Writing Arts/MA in Writing allows exceptional, highly motivated students to complete both a bachelor's and a master's degree in five years rather than the normal six. In this "4+1" program, students begin taking graduate courses during their senior year, advancing their graduate studies while still at the undergraduate level and while paying undergraduate tuition and fees. Twelve graduate credits are applied to both the undergraduate and graduate requirements under this dual degree program.

Application procedures and further information are available at: www.rowan.edu/writingarts

CREATIVE WRITING CONCENTRATION

The Writing Arts Department at Rowan University offers a program of study in creative writing leading to a concentration. To fulfill the requirements for the concentration, students must complete 18 hours of course work selected from a variety of courses in the writing of poetry, fiction, children's stories, plays, television and film scenarios.

The concentration is only open to students who are not Writing Arts majors. Writing Arts majors should instead complete the creative writing specialization within the major. Students do not have to be in the concentration to take creative writing courses.

Once enrolled in the Creative Writing Concentration, students can look forward to these goals and achievements:

- The ability to understand and apply creative writing craft elements in a variety of genres
- The ability to read and critique texts through the strategies of close reading
- A deeper understanding of the relationship between the writer, the audience, and the work
- The opportunity to experiment creatively with various genres as the student develops a voice and a style

**Creative Writing Concentration Requirements**

To complete the Concentration in Creative Writing, students must complete 18 hours of coursework selected from the following list:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>WA07.290</td>
<td>Creative Writing I</td>
</tr>
<tr>
<td>WA07.291</td>
<td>Creative Writing II</td>
</tr>
<tr>
<td>WA07.309</td>
<td>Writing Children's Stories</td>
</tr>
<tr>
<td>WA07.391</td>
<td>Writing Fiction</td>
</tr>
<tr>
<td>WA07.395</td>
<td>Writing Poetry</td>
</tr>
<tr>
<td>WA01.300</td>
<td>The Writer's Mind</td>
</tr>
<tr>
<td>WA01.304</td>
<td>Writing Creative Nonfiction</td>
</tr>
<tr>
<td>WA01.320</td>
<td>Internship in Writing Arts</td>
</tr>
<tr>
<td>RTF03.393</td>
<td>Film Scenario Writing</td>
</tr>
<tr>
<td>JRN02.312</td>
<td>Magazine Article Writing</td>
</tr>
</tbody>
</table>

Students may also receive credit for selected special topic courses with permission of advisor.

It is also possible for students to take the following graduate classes in creative writing in accordance with the senior privilege policy:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAWR01.558</td>
<td>Fiction Workshop</td>
</tr>
<tr>
<td>MAWR01.622</td>
<td>Publishing for Creative Writers</td>
</tr>
<tr>
<td>MAWR01.620</td>
<td>Writing Stories for Children and Young Adults</td>
</tr>
<tr>
<td>MAWR01.566</td>
<td>Editing the Literary Journal</td>
</tr>
</tbody>
</table>
NEW MEDIA CONCENTRATION

The Concentration in New Media is an interdisciplinary program of study offered within the College of Communication and Creative Arts. Students will take 18 credit hours to pursue a particular interest in new media – meaning evolving media that focus on interactive and digital technology, often disseminated through social networks. Students will receive advanced and specialized education for technical proficiency, digital literacy, and digital professionalism, which is the application of their skills and competencies to professional contexts.

The concentration includes three required core courses and three related electives, which will enable students to be conversant in ideas and confident in their new media abilities. Students will have grounding in both the theory and practice of using cutting-edge technology to create digital content.

The New Media Concentration will provide opportunities for students to:

1. **Examine and explore concepts and theories within the study of new media, which will involve:**
   - grounding students in the study of new media from applied, critical, ethical, and theoretical perspectives.
   - strengthening students' digital literacy with respect to:
     - theoretical, conceptual, and historical examinations of digital media
     - critical examinations of messages, relationships, and audience in the digital sphere

2. **Develop confidence and ability in new media production, which will include:**
   - providing students with a well-rounded technical proficiency that translates to practical, applied skills in publishing content of all sorts within a digital context.
   - helping students understand the business and economic fundamentals of new media.
   - aiding students in post-undergraduate opportunities by allowing for the creation and reflection of a digital portfolio of work that is relevant to their chosen professional path.

3. **Cultivate ethical approaches to entrepreneurship, creativity, and global/social awareness within professional, civic and personal spheres of life.**

**New Media Concentration Course Requirements**

To complete the New Media Concentration, students must complete a total of 18 credit hours. Nine of those credit hours come from three required core course that must be taken in sequence:

- RTF03.295 Introduction to New Media
- RTF03.394 New Media Production
  (Prerequisite: Introduction to New Media, RTF03.295)
- INTR01.490 New Media Practicum
  (Prerequisite: New Media Production RTF03.394)

**Total** 9 s.h.

The remaining 9 credit hours come from a selection of three of the following courses:

- ART09.377 Graphic Design & Typography Essentials
- CMS04.315 Participatory Media
- CMS04.316 Mediated Interpersonal Communication
- CMS04.317 Digital Communities
- JRN02.205 Journalism Principles & Practices
- JRN02.314 Photojournalism
- JRN02.319 Media Ethics
- JRN02.321 Online Journalism I
- JRN02.325 Online Journalism II
- JRN02.335 Media Law
- JRN02.411 Copyediting
- MAPR06.515 Online Public Relations
- RTF03.224 Sound Communication
- RTF03.275 Applied Media Aesthetics: Sight, Sound and Story
- RTF03.472 New Media Production 2
- WA01.301 Writing, Research, and Technology
- MAWR01.555 Writing Electronic Communities
- MAWR01.559 Visual Rhetoric and Multimodal Composition
- MAWR01.604 Information Architecture
- MAWR01.620 Internet and Writing Studies
| Program Total | Internship (w/in College major) | 18 s.h. |
College of Education

Monika Williams Shealey, Ph.D.
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Executive Director of the Center for Access, Success, and Equity (CASE)
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Stacey Leftwich, Ed.D.
Executive Director of Educator Support and Partnerships
Herman D. James Hall
856.256.4707
leftwich@rowan.edu

Mission
To positively impact and develop local, regional, national and global educational communities by:

- collaborating with partners in the field to promote learning and the mental and physical health of diverse learners in all settings
- integrating teaching, research, and service to advance knowledge in the field
- preparing and supporting professionals through the development of knowledge, skills and dispositions with the ultimate goal of ensuring equitable educational opportunities for all learners.

Vision
The College of Education will be a leading force in preparing and supporting reflective practitioners who use education to transform our global society.

Goals
Rowan University has an historic and unwavering commitment to preparing candidates, educators, and other professionals who will demonstrate the knowledge, skills, and dispositions indicative of the potential for outstanding success in their future careers. “The Learning Community in Action” is the conceptual framework for all programs in the College of Education at Rowan University. Therefore, the College of Education strives to model learning community principles for both initial and advanced candidates who will in turn create learning communities in their professional positions. Candidate performances are measured according to the knowledge, skills and dispositions defined in the Conceptual Framework as developed in response to appropriate national and/or state standards.

Programs Offered
The College of Education offers the BA in Education (Early Childhood, Elementary, Subject-Matter, and Health and Physical Education specializations); and the BA in Literacy Studies. The College of Education also offers non-degree teacher certification programs in Reading and Teacher of Students with Disabilities as well as numerous graduate programs.
In addition, the Minor in Education is offered.
Accreditation
Rowan University's teacher education program, one of the largest and most comprehensive in New Jersey and in the nation, has been accredited by the National Council for Accreditation of Teacher Education (NCATE) now known as the Council for the Accreditation of Educator Preparation (CAEP) since 1956. In addition, College of Education programs have received National Recognition from the following professional organizations:

- ACEI Association for Childhood Education International
- ACTFL American Council on the Teaching of Foreign Languages
- CEC Council for Exceptional Children
- ELCC Educational Leadership Constituent Council
- IRA International Reading Association
- NAЕYC National Association for the Education of Young Children
- NASP National Association of School Psychologists
- NASPE National Association for Sport and Physical Education
- NCSS National Council for the Social Studies
- NCTE National Council of Teachers of English
- NCTM National Council of Teachers of Mathematics
- NSTA National Science Teachers Association
- TESOL Teachers of English to Speakers of Other Languages

In addition, the M.A. in Counseling in Educational Settings program is accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP). The New Jersey State Department of Education also approves Rowan's programs.

Admission, Retention and Eligibility for Teacher Certification
Admission to Rowan University does not guarantee admission as a teacher certification candidate. Students desiring admission as a teacher certification candidate must file an application. Admission to teaching certification programs is at Benchmark1 and has specific program requirements as outlined on Program Guides. Students are notified of their acceptance at the beginning of their junior year. The same process applies to two-year transfer students, but is generally compressed to take place in the fall semester of the junior year.

This outline describes the minimum college requirements. Students should check with their advisors and certifying department for specific expectations, program requirements and standards.

Departments
The College of Education is composed of five (5) academic departments. They include:

- Educational Services and Leadership
- Interdisciplinary and Inclusive Education
- Language, Literacy, and Sociocultural Education
- Science, Technology, Engineering, Art, and Mathematics (STEAM)

Support Services
In addition to the academic departments, the College of Education houses several offices that support the academic program including:

The Office of Field Experiences
The Office of Field Experiences coordinates all field placements, including school or clinical settings required for graduation and state certification applications. The mission of the College of Education is to prepare educators to transform classrooms and schools into learning communities that foster academic achievement, social responsibility, personal responsibility and social justice. The Office of Field Experiences is located in the College of Education Advising Center in Herman D. James Hall, 2nd floor. Hours are 8:30 a.m. to 4:30 p.m., Monday through Friday.

The College of Education Advising Center (CEAC)
The College of Education Advising Center provides students with the necessary support and guidance as they pursue their educational goals and courses through the College of Education. It is a resource that offers program advisement for current and prospective students. The center is focused on providing accurate and timely information to assist students who are working toward a degree and/or licensure in a number of professional education careers.

The John J. Schaub Instructional Technology Center
The John J. Schaub Instructional Technology Center consists of a Computer Laboratory and an Instructional Materials Center (IMC). The Instructional Technology Center provides facilities, technology, materials and training in the four areas of Instructional Technology: print technology, audio-visual technology, computer technology, and integrated technology. It is the primary instructional technology resource and training facility for students and faculty in the College of Education. The IMC houses PreK-12 teaching kits and other materials related to the educational programs offered by the College of Education.
Education. It is a comfortable study space that serves as a teachers' library and workroom for students in the College of Education.

**The Center for Access, Success, and Equity (CASE)**
The Center for Access, Success, and Equity was created to address three overarching topics in education today: access, success, and equity for students in P-20 institutions. The overall goal is to “turn research into practice” and have a direct impact on the educational outcomes of students by completing extensive research, offering professional services, and engaging in policy creation and reform. We view all three of these actions as overlapping and intertwined with one another, with one component complementing, or leading into, the next. It is our hope to develop a three-prong system that incorporates all of these highly important educational factors into our daily operations.

**Special Education Requirements for All Teacher Certification Candidates**
Candidates for Teacher Certification are required to have coursework in special education. All candidates are required to take the following course:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPED08.130</td>
<td>Human Exceptionality</td>
<td>3 s.h.</td>
</tr>
</tbody>
</table>

All candidates (with exception of those in Early Childhood program) take the following course:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPED08.316</td>
<td>Differentiated Instruction in the Inclusive Classroom</td>
<td>2 s.h.</td>
</tr>
</tbody>
</table>

**Department of Educational Services and Leadership**
MaryBeth Walpole, Ph.D.
Chair
Herman D. James Hall
856.256.4706
walpole@rowan.edu

The Department of Educational Services and Leadership offers post-baccalaureate and graduate programs that provide students with the knowledge, skills, and dispositions to bring about transformative leadership and change that promote highly effective educational institutions. The department is organized around what educational leaders and practitioners need to know and be able to do in order to foster learning organizations that are responsive to societal needs and demands regarding P-16 education. To this end students can enroll in programs that lead to a doctorate in educational leadership and master's degree and/or certificate programs in school counseling, school psychology, school nursing, school administration, school supervision, higher education administration, academic advising, and instruction. We offer a variety of modalities in our course offerings including accelerated programs, online and hybrid programs, as well as traditional on-campus classes. All of our programs are approved by the New Jersey Department of Education and the National Council for the Accreditation of Teacher Education (NCATE). In addition, the school psychology program is approved by the National Association of School Psychologists (NASP), and the school counseling program is approved by the Council for Accreditation of Counseling and Related Educational Programs (CACREP). The Department is housed in the College of Education and is located in James Hall. The Department's faculty is mindful of adult learning needs and seeks to engage students academically, professionally and personally. We look forward to reviewing your application and providing you with the necessary information that will assist you in making an informed decision regarding your professional plans.

**Certificate of Undergraduate Study In Access, Success, & Equity for Educational Innovation**
MaryBeth Walpole
Professor and Chair, Educational Services and Leadership
James Hall 3038
856.256.4706
walpole@rowan.edu

This Certificate of Undergraduate Study Access, Success, & Equity for Educational Innovation has been developed with the goal of developing graduates who can work in a variety of organizations and agencies related broadly to the educational purpose, including foundations, governmental and community agencies, charter and private schools, and non-profit as well as for profit organizations, among others. The curriculum includes the history of education, the teaching and learning process as well as the structure and function of organizations and their administration. Additionally, courses include a specific focus on the issues of access, success, and equity in education that remain stubbornly unimproved and the ways in which education and the educational process can be harnessed for social change and improvement. These courses will help participants develop their effectiveness in educational organizations and agencies, which ultimately is intended to improve the educational outcomes of learners.

**Certificate of Undergraduate Study in Access, Success, & Equity for Educational Innovation**

The requirements include the following five courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>FNDS21.150</td>
<td>History of American Education</td>
</tr>
<tr>
<td>FNDS21.230</td>
<td>Characteristics of Knowledge Acquisition</td>
</tr>
<tr>
<td>EDSU28.210</td>
<td>Educational Organizations</td>
</tr>
<tr>
<td>EDSU28.211</td>
<td>Access, Success, and Equity in Education</td>
</tr>
</tbody>
</table>
To be awarded the CUGS in Access, Success, & Equity for Educational Innovation, students must complete all courses required for the CUGS in Access, Success, & Equity for Educational Innovation with at least a 1.70 (C-) average.

Department of Interdisciplinary and Inclusive Education

Joy Xin
Chair
Herman D. James Hall
856.256.4734
xin@rowan.edu

The Department of Interdisciplinary and Inclusive Education offers a variety of opportunities for caring and dedicated undergraduate, post-baccalaureate and graduate students to pursue initial certification as early childhood or elementary teachers as well as an endorsement as a Teacher of Students with Disabilities. In addition, the department offers graduate programs that provide advanced study in curriculum and teaching, including the M.Ed. in Teacher Leadership, the M.S.T. in Elementary Education and the M.A. in Special Education program. The M.A. in Learning Disabilities program is also offered for students interested in pursuing certification as a Learning Disabilities Specialist. The department is committed to fostering student growth as instructional leaders who have a developmental perspective, cooperative disposition, and reflective orientation and are committed to the principles of access, success, and equity for all students. All programs in the department are nationally accredited and have been approved by the New Jersey Department of Education.

TEACHER OF STUDENTS WITH DISABILITIES ENDORSEMENT

Amy Accardo
Program Coordinator
Herman D. James Hall
856.256.4708
accardo@rowan.edu

Heather Dolbow
Program Advisor
Herman D. James Hall
856.256.4420
dolbow@rowan.edu

The Department of Interdisciplinary and Inclusive Education offers the Teacher of Students with Disabilities Endorsement Program in two ways. A student can be enrolled as an undergraduate in one of the College of Education’s initial endorsement programs. The other option is open to those who currently hold a Bachelor degree and are eligible for at least a certificate of eligibility (CE) in elementary education, early childhood education, subject matter education or physical and health education. The Teacher of Students with Disabilities Endorsement is only granted when a student has successfully fulfilled all requirements for an initial teaching certification.

Students entering the program must have a 3.0 GPA and have a minimum of 3.0 GPA at the conclusion of the program to receive the endorsement with successful completion of all TOSD required coursework. Some course substitutions are permitted for certain education majors, however, students MUST consult with their advisors for detailed information. Required courses are listed below.

Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPED08.130</td>
<td>Human Exceptionality (pre-requisite)</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>READ30.280</td>
<td>Teaching Literacy</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>READ30.351</td>
<td>Differentiated Literacy Instruction (pre-requisite)</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>SPED08.316</td>
<td>Differentiated Instruction in the Inclusive Classroom</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>SPED08.360</td>
<td>Positive Behavioral Support Systems for Students with Exceptional Learning Needs</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>SPED08.307</td>
<td>Assessment of Students with Exceptional Learning Needs</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>SPED08.350</td>
<td>Practicum I</td>
<td>1 s.h.</td>
</tr>
<tr>
<td>SPED08.308</td>
<td>Assistive Technology and Transition Planning</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>SPED08.415</td>
<td>Specialized Instruction for Students with Exceptional Learning Needs</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>SPED08.351</td>
<td>Practicum II</td>
<td>1 s.h.</td>
</tr>
<tr>
<td>SPED08.445</td>
<td>Clinical Seminar in Special Education</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>SPED08.450</td>
<td>Clinical Practice in Special Education</td>
<td>4 s.h.</td>
</tr>
</tbody>
</table>

Note: Candidates for the Teacher of Students with Disabilities Certification must pass the Praxis II Specialty Area Test: Application of Core Principles across Categories of Disabilities (0354 paper based or 5354 online) prior to admission to Clinical Seminar/Clinical Practice.
Department of Language, Literacy, and Sociocultural Education

Herman D. James Hall
856.256.4750

The Department of Language, Literacy, and Sociocultural Education includes academic programs in reading, English as a Second Language (ESL) education, bilingual/bicultural education, and subject matter teaching (English Social Studies, and world languages). Students in the programs represented by this department are encouraged to consider their roles as educators in a broad context, exploring the connection and tensions that exist among schools, cultures, and society.

The department offers many opportunities for individuals interested in pursuing exciting and fulfilling careers in educational settings, including courses that explore working in urban contexts. Our undergraduate and graduate programs are designed for students seeking in-depth preparation to teach in P-12 classrooms. The department offers many required language, reading and subject matter education courses for all undergraduate teacher education programs. In addition, the department offers an undergraduate endorsement program which leads to a Teacher of Reading instructional license, a major in Literacies Studies, and a post-baccalaureate endorsement program in reading. The department also offers graduate programs in Bilingual/Bicultural education, English Language Arts education (teacher certification), Social Studies education (teacher certification), world languages education (teacher certification), reading, and English as a Second Language (ESL) education.

The department has highly qualified faculty that seek to maximize students’ educational experience at Rowan University. Its programs are nationally accredited by the Council for the Accreditation of Educator Preparation (CAEP) as well as other relevant professional organizations. All of our programs are approved by the New Jersey Department of Education. The department is also committed to serving the university and the community through its programs, partnerships and outreach. It is dedicated to improving the literacy of under prepared college students and as such offers remedial courses to incoming college students. The department also operates the Rowan Reading Clinic that serves P-12 children with reading difficulties in the greater south Jersey region.

BACHELOR OF ARTS IN LIBERAL STUDIES WITH A SPECIALIZATION IN LITERACY STUDIES

Xiufang Chen
Program Coordinator
Herman D. James Hall
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Elementary Education Track
Alicia Groatman
Program Advisor
Herman D. James Hall
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Early Childhood Education Track
Alexandra Gryta
Program Advisor
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856.256.5837
gryta@rowan.edu

The Language, Literacy, and Sociocultural Education Department offers two tracks for the Liberal Studies with a Specialization in Literacy Studies at the Baccalaureate level. One is open to Elementary Education majors and another to Early Childhood Education majors. Students must meet University admission requirements and declare the Liberal Studies with a Specialization in Literacy Studies track. Acceptance into the certification programs and passing grade on Praxis I tests (Mathematics, Reading, & Writing) are required. To graduate, candidates must achieve minimum content area GPA of 2.5 and achieve an overall GPA of at least 2.0. Required courses are listed below.

General Education
All students must complete the University General Education requirements as described on page 33

Rowan Experience
All students must complete the Rowan Experience Requirements as described on page 35

Program Requirements:
General Education/Rowan Experience/Liberal Studies 55 s.h.
Core Required Courses 14 s.h.
Required Courses for Elementary Education Majors 33 s.h.
**Required Courses for Early Childhood Education Majors** 38 s.h.

**Total Semester Hours** 122 s.h. (for Elementary Education Majors)

**Total Semester Hours** 127 s.h. (for Early Childhood Education Majors)

### Core Required Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>READ30.350</td>
<td>Using Children's Literature in the Reading/Writing Classroom</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>READ30.347</td>
<td>Phonics and Spelling in the Reading and Writing Classroom</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>READ30.421</td>
<td>School Reading Problems</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>READ30.451</td>
<td>Supervised Clinical Practice in Reading</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ENGL02.101</td>
<td>Literary Studies for English Majors</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ENGL02.317</td>
<td>Children's Literature Texts and Contexts</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ENGL05.301</td>
<td>American English Grammar</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>WA07.290</td>
<td>Creative Writing I</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>or WA07.309</td>
<td>Writing Children's Stories</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>WA01.401</td>
<td>Writer's Mind</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>WA01.315</td>
<td>Writing with Technologies</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>WA01.415</td>
<td>Situating Writing</td>
<td>3 s.h.</td>
</tr>
</tbody>
</table>

### TEACHER OF READING ENDORSEMENT PROGRAM and POST BACCALAUREATE PROGRAM FOR TEACHER OF READING

Susan Browne  
Advisor  
Department of Language Literacy and Sociocultural Education

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The Post Baccalaureate Program in Teacher of Reading is an endorsement program that leads to certification as a Teacher of Reading. It is available to students who have already been admitted to teacher certification programs or who already hold New Jersey teaching certificates. Reading certification is granted only when a student has fulfilled all requirements for a major teaching certificate. To matriculate, students must complete an introductory reading course and satisfy the requirements listed below.

The program requires students to successfully complete 30 semester hours of coursework in reading and reading-related areas to obtain Teacher of Reading Certification. Students may fulfill the requirement for the New Jersey Teacher of Reading Endorsement with undergraduate coursework, graduate coursework, or a combination of the two.

### Admissions Requirements

The Teacher of Reading Endorsement Program is available to students who are currently enrolled in the BA in Education. The Post Baccalaureate Program in Reading is available to students who already hold New Jersey teaching certificates (CEAS or Standard).

Additional admissions criteria include:

- An overall GPA of 3.0 based on 30 semester hours of coursework
- Completion of Teaching Literacy or its approved equivalent
- A 3.0 GPA in reading courses completed prior to application
- Completion of an Application form with Passing Essay

### Program Requirements

To complete the program, students must have an overall GPA of 3.0 based on 30 semester hours of coursework and pass the PRAXIS II Specialty Area Test, Introduction to the Teaching of Reading (also a New Jersey certification requirement).

### Course Requirements

#### ELEMENTARY EDUCATION MAJORS

**Area A: Reading Theory and Pedagogy**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>READ30.280</td>
<td>Teaching Literacy</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>READ30.351</td>
<td>Differentiated Literacy Instruction*</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>ELEM02.338</td>
<td>Practicum in Mathematics and Literacy**</td>
<td>1 s.h.</td>
</tr>
<tr>
<td>READ30.347</td>
<td>Phonics and Spelling Instruction</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>READ30.350</td>
<td>Using Children's Literature in Reading/Writing Classroom</td>
<td>3 s.h.</td>
</tr>
</tbody>
</table>

**Area B: Application through Tutoring (Two Courses)**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>READ30.421</td>
<td>School Reading Problems (Prerequisites READ 30.280, 30.351, 30.347)</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>READ30.451</td>
<td>Supervised Clinical Practice (Prerequisite READ30.421)</td>
<td>3 s.h.</td>
</tr>
</tbody>
</table>

**Area C: Core Supporting Courses (Maximum of 12 Semester hours)**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FNDS21.230</td>
<td>Characteristics of Knowledge Aquisation</td>
<td>3 s.h.</td>
</tr>
</tbody>
</table>
### EARLY CHILDHOOD EDUCATION MAJORS

**Area A: Reading Theory and Pedagogy**
- **READ30.320** Language Development and Emergent Literacy* 4 s.h.
- **READ30.347** Phonics and Spelling Instruction 3 s.h.
- **READ30.350** Using Children’s Literature in Reading/Writing Classroom 3 s.h.

**Area B: Application through Tutoring (Two Courses)**
- **READ30.421** School Reading Problems (Prerequisites 30.280, 30.351, 30.347) 4 s.h.
- **READ30.451** Supervised Clinical Practice (Prerequisites READ 30.421) 3 s.h.

**Area C: Core Supporting Courses (Maximum of 12 Semester hours)**
- **FNDS21.230** Characteristics of Knowledge Acquisition 3 s.h.
- **SPED08.130** Human Exceptionality 3 s.h.
- **EDUC01.272** Teaching in Learning Communities II 3 s.h.
- **READ30.120** Literacies in Today’s World 3 s.h.
- **WA01.401** Writer’s Mind 3 s.h.

### SECONDARY/SUBJECT MATTER EDUCATION MAJORS

**Area A: Reading Theory and Pedagogy**
- **READ30.280** Teaching Literacy 3 s.h.
- **READ30.310** Teaching Reading and Writing in Content Areas 3 s.h.
- **READ30.347** Phonics and Spelling Instruction 3 s.h.
- **READ30.350** Using Children’s Literature in Reading/Writing Classroom 3 s.h.

**Area B: Application through Tutoring (Two Courses)**
- **READ30.421** School Reading Problems (Prerequisites 30.280, 30.351, 30.347) 4 s.h.
- **READ30.451** Supervised Clinical Practice (Prerequisites READ 30.421) 3 s.h.

**Area C: Core Supporting Courses (Maximum of 12 Semester hours)**
- **FNDS21.230** Characteristics of Knowledge Acquisition 3 s.h.
- **EDUC01.272** Teaching in Learning Communities II 3 s.h.
- **SPED08.130** Human Exceptionality 3 s.h.
- **READ30.120** Literacies in Today’s World 3 s.h.
- **WA01.401** Writer’s Mind 3 s.h.
- **WA01.358** Writing and Craft for Elementary Students 1 s.h.

### POST BACCALAUREATE (Graduate Course Options)

**Area A: Reading Theory and Pedagogy**
- **READ30.515** Teaching Reading and Writing Across the Grades 3 s.h.
- **READ30.545** Using Multicultural Literature in the K-12 Reading and Writing Classroom 3 s.h.
- **READ30.520** Content Area Literacy 3 s.h.
- **READ30.530** Teaching Reading to the Exceptional Child 3 s.h.
- **READ30.535** Word Study: Phonics, Spelling, and Vocabulary Instruction 3 s.h.

**Area B: Application through Tutoring (Two Courses) - Post Baccalaureate (Graduate Course Options)**
- **READ30.550** Diagnosis of Remedial Reading Problems 3 s.h.
- **READ30.560** Correction of Remedial Reading Problems 3 s.h.
- **READ30.570** Clinical Experiences in Reading 6 s.h.

*Description of courses can be found in the Graduate Catalog.*

**Area C: Core/Supporting Courses**
- **FNDS21.230** Characteristics of Knowledge Acquisition 3 s.h.
- **SPED08.130** Human Exceptionality 3 s.h.
- **READ30.120** Literacies in Today’s World 3 s.h.
- **EDUC01.272** Teaching in Learning Communities II 3 s.h.
- **SECD03.350** Teaching Students of Linguistic and Cultural Diversity 1 s.h.
- **PSY22.512** Educational Psychology 3 s.h.
- **PSY22.586** Psychology of Motivation and Learning 3 s.h.
- **WA01.401** Writer’s Mind 3 s.h.
Writing and Craft for Elementary Students 1 s.h.

Department of Science, Technology, Engineering, Art and Mathematics (STEAM)
Issam Abi-El-Mona
Chair
Herman D. James Hall
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"Teachers are more than any other class the guardians of civilization." -Bertrand Russell, British Philosopher and Writer

The Department of Science, Technology, Engineering, Art and Mathematics (STEAM) offers a variety of opportunities for caring and dedicated undergraduate, post-baccalaureate and graduate students to pursue initial certification in the subject matter areas of Art, Math, Music, Science, and Health and Physical Education. The department offers a dual-major undergraduate program in Art, Music and Health and Physical Education culminating in a Bachelor degree in the content major, a Bachelor of Arts in Education degree and teaching certification with a specialization in each of these fields. In addition, it offers a graduate program in Science (includes Biology, Chemistry, Physics and Physical Science) and Math education culminating in a Master of Arts degree in STEM with a teaching certification. The department is committed to fostering the growth of innovative instructional leaders who have a social constructivist and developmental perspective, and are committed to the principles of access, success, and equity for all students through collaborative 21st- century educational practices in the arts and sciences. All programs in the department have been approved by the New Jersey Department of Education.

BACHELOR OF ARTS IN EDUCATION, SPECIALIZATION IN EARLY CHILDHOOD EDUCATION
Heather Dolbow
Herman D. James Hall
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The B.A. in Education, with Specialization in Early Childhood Education has four required strands of study: 1) General Education courses, 2) Rowan Experience courses, 3) the Professional Specialization Sequence, and 4) the dual major requirements, where Early Childhood Education Specialization candidates are required to complete major requirements in one of four academic disciplines: American Studies, Liberal Studies: Humanities/Social Sciences [with restriction], Liberal Studies: Literacy Studies or Writing Arts approved by the University for certification.

Students accepted into the Specialization are expected to adhere to the prescribed sequence of courses and to consult with their advisors in Education at least once a semester. Early Childhood courses may not be offered every semester.

General Education
All students must complete the University General Education requirements as described on page 33

Rowan Experience
All students must complete the Rowan Experience Requirements as described on page 35

Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPED08.130</td>
<td>Human Exceptionality</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>PSY09.209</td>
<td>Child Development</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ART09.110</td>
<td>Experiencing Art</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>or MUSG06.218</td>
<td>Music and the Child</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>MATH11.201</td>
<td>Structures of Mathematics I</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>MATH11.301</td>
<td>Structures of Mathematics II</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>FNDS21.150</td>
<td>History of American Education</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>FNDS21.230</td>
<td>Characteristics of Knowledge Acquisition</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>or PSY22.215</td>
<td>Educational Psychology</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HLT00.103</td>
<td>Health and Wellness</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ECED23.220</td>
<td>Contemporary Child in the Family and Community</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>INCL02.210</td>
<td>Principles and Pedagogies in the Inclusive Classroom</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>ELEM02.210</td>
<td>Seminar: Principles and Pedagogies in the Inclusive Classroom</td>
<td>1 s.h.</td>
</tr>
<tr>
<td>SMED33.420</td>
<td>Educational Technology</td>
<td>1 s.h.</td>
</tr>
<tr>
<td>READ30.320</td>
<td>Language Development: Emergent Literacy</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>ECED23.320</td>
<td>Building Brains: Competency and Resiliency</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ECED23.321</td>
<td>Effective learning environments for diverse children</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ECED23.322</td>
<td>Planning, Integrating and Adapting Curriculum: Math and Science</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ECED23.430</td>
<td>Observation, Assessment, and Evaluation of Diverse Learners</td>
<td>3 s.h.</td>
</tr>
</tbody>
</table>
ECED23.431  Planning, Integrating, and Adapting Curriculum: Across the Content  3 s.h.
ECED23.446  Clinical Practice in Early Childhood Education  10 s.h.
ECED23.447  Early Childhood Education Clinical Seminar  1 s.h.
SECD03.350  Teaching Students of Linguistic and Cultural Diversity  1 s.h.
*Lab Science (Bio or Physical)  4 s.h.
*Non-Lab Science (Bio or Physical)  3 s.h.
Geography (any)  3 s.h.
History (any)  3 s.h.
Sociology (any) (Sociology of the Family Strongly Recommended)  3 s.h.
COMP01.111  College Composition I  3 s.h.
COMP01.112  College Composition II  3 s.h.
CMS04.205  Public Speaking  3 s.h.
General Education Literature  3 s.h.

Total Semester Hours  126+ s.h.

*Early Childhood Education students must have a physical science and a biological science; 1 lab and 1 non-lab science.

BACHELOR OF ARTS IN EDUCATION, SPECIALIZATION IN ELEMENTARY EDUCATION
Aimee Burgin
Heather Dolbow
April Ellerbe
Elementary Education
Program Advisors
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ssc@rowan.edu

The B.A. in Education, with Specialization in Elementary Education has four required strands of study: 1) General Education courses, 2) Core Education courses, 3) the Professional Specialization Sequence, and 4) the Dual Major requirements, where Elementary Education Specialization candidates are required to complete major requirements in one of ten certification-eligible dual majors approved by the University. Students accepted into the Specialization are expected to adhere to the prescribed sequence of courses and to consult with their advisors in Education at least once a semester.

General Education
All students must complete the University General Education requirements as described on page 33

Rowan Experience
All students must complete the Rowan Experience Requirements as described on page 35

Required Courses
COMP01.111  College Composition I  3 s.h.
COMP01.112  College Composition II  3 s.h.
CMS04.205  Public Speaking  3 s.h.
MATH01.201  Structures of Mathematics I  3 s.h.
SPED08.130  Human Exceptionality  3 s.h.
PSY09.209  Child Development  3 s.h.
MATH01.301  Structures of Mathematics II  3 s.h.
FNDS21.230  Characteristics of Knowledge Acquisition  3 s.h.
HIST05.150  History of American Education  3 s.h.
HLT00.103  Health and Wellness  3 s.h.
INCL02.210  Principles and Pedagogies in the Inclusive Classroom  2 s.h.
ELEM02.210  Seminar: Principles and Pedagogies in the Inclusive Classroom  1 s.h.
SMED33.420  Educational Technology  1 s.h.
READ30.280  Teaching Literacy  3 s.h.
READ30.351  Differentiated Literacy Instruction  2 s.h.
ELEM02.448  Clinical Practice in Elementary Education  10 s.h.
INCL02.330  Differentiating Instruction in the Inclusive Classroom  2 s.h.
INCL02.450  Instruction and Assessment in the Inclusive Classroom  3 s.h.
INCL02.310  STREAM I: Social Studies, ELA, & the Arts in the Inclusive Classroom  2 s.h.
INCL02.315  STREAM I Practicum  1 s.h.
INCL02.320  STREAM II: STEM & Health in the Inclusive Classroom  3 s.h.
INCL02.325  Mathematics Strategies in the Inclusive Classroom  3 s.h.
INCL02.335  STREAM II Practicum  1 s.h.
INCL02.440  Diversity Seminar  2 s.h.
Lab Science (Biological or Physical*)  4 s.h.
Science (Biological or Physical*)  3 s.h.
College of Education

Geography (any) 3 s.h.
U.S. History (any) 3 s.h.
Sociology (any) 3 s.h.
Literature (any General Education) 3 s.h.
Artistic and Creative Experience Elective 3 s.h.

*For certification purposes: Candidates must complete both a Biological and Physical Science course (one must be a 4 SH Lab).

Total Semester Hours 121 s.h.

Dual Major Requirements
Elementary Education majors may choose one of the following dual majors:
- American Studies
- Chemistry
- English
- Geography
- History
- Liberal Studies: Humanities/Social Science (See advising guide for restrictions.)
- Liberal Studies: Literacy Studies
- Mathematics
- Math/Science
- Spanish
- Writing Arts

BACHELOR OF ARTS IN EDUCATION, SPECIALIZATION IN K-12 SUBJECT-MATTER EDUCATION
Program Advisors located in the College of Education Advising Center
Cristine Mason for SME Art, Music, Math, and Science
Herman D. James Hall
856.256.5836
mason@rowan.edu

Nadia Rahin for SME English, History and Spanish
Herman D. James Hall
856.256.4664
rahin@rowan.edu

The B.A. in Education, with Specialization in K-12 Subject-Matter Education has four required strands of study:
1. General Education courses
2. Common Education Core courses
3. Professional Specialization Sequence
4. Dual major requirements, where K-12 Subject-Matter Education Specialization candidates are required to complete major requirements in one of eleven academic disciplines approved by the University for Certification

In keeping with the College of Education’s overarching focus on the theme of "learning community," faculty in Subject-Matter Education strive to transcend traditional rote forms of learning and model a more collaborative, interactive, and intellectually challenging pedagogy that is true to the richness and rigor of the academic disciplines they represent. As teacher candidates experience and participate in such learning environments in their Subject-Matter Education classes at Rowan, they develop the commitment, confidence, and ability to go into the field and create K-12 classroom environments in which students work actively with the teacher and with each other to investigate important and meaningful ideas in a particular academic discipline.

Admission to Rowan University does not guarantee admission to the Subject-Matter Education Program. For most majors, we are able to admit all qualified students but there is a cap each year. A minimum number of credits in the subject major must be completed satisfactorily prior to admission to junior-level courses and practica.

General Education
All students must complete the University General Education requirements as described on page 33

Rowan Experience
All students must complete the Rowan Experience Requirements as described on page 35

Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPED08.130</td>
<td>Human Exceptionality</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>PSY09.210</td>
<td>Adolescent Development</td>
<td>3 s.h.</td>
</tr>
</tbody>
</table>
### Characteristics of Knowledge Acquisition 3 s.h.
### History of American Education 3 s.h.
### Health and Wellness or Biology 3 s.h.
### Teaching in Learning Communities I 3 s.h.
### Teaching in Learning Communities II 3 s.h.
### Teaching Reading and Writing in the Content Area 3 s.h.
### Differentiated Instruction in the Inclusive Classroom 2 s.h.
### Teaching and Learning A: Elementary Art Methods 3 s.h.
### Teaching and Learning Music A: Elementary General Music 3 s.h.
### Teaching and Learning A: Mathematics 3 s.h.
### Teaching and Learning A: Science 3 s.h.
### Teaching and Learning A: English/Language Arts 3 s.h.
### Teaching and Learning A: Foreign Language (Spanish) 3 s.h.
### Teaching and Learning A: Social Studies 3 s.h.
### Practicum Teaching and Learning A: Content Area 1 s.h.
### Educational Technology 1 s.h.
### Teaching and Learning B: Secondary Art Methods 3 s.h.
### Teaching and Learning B: Vocal Methods/Techniques 3 s.h.
### Teaching and Learning B: Instrument Methods/Techniques 3 s.h.
### Teaching and Learning B: Mathematics 3 s.h.
### Teaching and Learning B: Science 3 s.h.
### Teaching and Learning B: English/Language Arts 3 s.h.
### Teaching and Learning B: Foreign Language (Spanish) 3 s.h.
### Teaching and Learning B: Social Studies 3 s.h.
### Practicum Teaching and Learning B: Content Area 1 s.h.
### Teaching Students of Linguistic/Cultural Diversity 1 s.h.
### Clinical Practice in Subject Matter Education 10 s.h.
### Subject Matter Clinical Seminar 1 s.h.
### College Composition I 3 s.h.
### College Composition II 3 s.h.
### Public Speaking 3 s.h.
### Math Elective 3 s.h.
### Lab Science 4 s.h.
### Literature 3 s.h.
### Artistic and Creative Experience 3 s.h.

**Total Semester Hours: 122 s.h.**

**History majors must take:**
- HIST05.150 US History to 1865 3 s.h.
- HIST05.151 US History Since 1865 3 s.h.
- HIST05.100 Western Civilization to 1660 3 s.h.
- HIST05.101 Western Civilization since 1660 3 s.h.
- HIST05.120 World History after 1500 3 s.h.

**Mathematics majors must take:**
- MATH01.310 College Geometry 4 s.h.
- MATH01.410 History of Mathematics 3 s.h.

**Dual Major Requirements**

Dual Major requirements for each content-area specialization can be obtained by contacting the program advisors or by visiting: [www.rowan.edu/colleges/education/programs](http://www.rowan.edu/colleges/education/programs)

K-12 Subject Matter Education majors may choose one of the following dual majors:
- Art
- Biology
- Chemistry
- English
- Foreign Language (Spanish)
- History*
- Mathematics*
- Music
- Physical Science: Chemistry
- Physical Science: Physics
- Physics
BACHELOR OF ARTS IN EDUCATION, SPECIALIZATION IN HEALTH AND PHYSICAL EDUCATION

Dr. Richard Fopeano
Coordinator
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Melvin Pinckney
Advisor
Herman D. James Hall
856.256.4576
pinckney@rowan.edu

General Education
All students must complete the University General Education requirements as described on page 33

Rowan Experience
All students must complete the Rowan Experience Requirements as described on page 35

Required Courses
To complete the program, students must have a minimum of 3.0 overall GPA, 3.0 GPA in the specialization, successfully complete the Core Academic Skills for Educators exam and the Health and Physical Education Praxis II exam. No grades less than a C - will be counted toward graduation.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT02.100</td>
<td>Elementary Statistics I</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>NUT00.200</td>
<td>Basic Nutrition</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HLT00.327</td>
<td>Consumer Health Decisions</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HES00.109</td>
<td>Adventure/Experiential Learning</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>SOC08.120</td>
<td>Introduction to Sociology</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>PSY09.209</td>
<td>Child Development</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>or PSY09.210</td>
<td>Adolescent Development</td>
<td></td>
</tr>
<tr>
<td>PSY01.107</td>
<td>Essential Psychology</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>PHYS00.150</td>
<td>Physics</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>or BIOL01.113</td>
<td>General Biol Human Focus</td>
<td></td>
</tr>
<tr>
<td>or CHEM05.102</td>
<td>Chemistry of Everyday Life</td>
<td></td>
</tr>
<tr>
<td>THD08.135</td>
<td>Elements of Dance</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>EDUC01.270</td>
<td>Teaching in Learning Communities I</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HPE00.286</td>
<td>Teaching in Learning Communities II</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>READ03.280</td>
<td>Teaching Reading and Writing in the Content Areas</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>FNDS21.150</td>
<td>History of American Education</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>SPED08.130</td>
<td>Human Exceptionalities</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>FNDS21.230</td>
<td>Characteristics of Knowledge Acquisition</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HES00.116</td>
<td>Safety, First Aid BSC UNDR of Athletic Injury</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HES00.272</td>
<td>Technology &amp; Assessment HES</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HES00.241</td>
<td>Structure Function of the Human Body I (or A&amp;P I)</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HES00.242</td>
<td>Structure Function of the Human Body II (or A&amp;P II)</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HPE00.240</td>
<td>Motor Development and Motor Learning</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HES00.343</td>
<td>Kinesiology</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HES00.344</td>
<td>Exercise Physiology</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HPE00.252</td>
<td>Foundations of Fitness</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HPE00.316</td>
<td>Teaching Concepts of Dance in Physical Education</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HPE00.310</td>
<td>Teaching Concepts of Secondary Physical Education I</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HPE00.320</td>
<td>Teaching Concepts Secondary Physical Education II</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HPE00.325</td>
<td>Teaching Concepts HED I</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HPE00.326</td>
<td>Teaching Concepts HED II</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HPE00.453</td>
<td>School Health Program Planning</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>HPE00.336</td>
<td>Teaching Concepts Elementary PE</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HPE00.432</td>
<td>Teaching Concepts of Adapted PE</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HPE00.450</td>
<td>K-12 Curriculum/Instruction</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HPE00.392</td>
<td>Field experience in Teaching Health and Physical Education</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HPE00.461</td>
<td>Clinical Practice Secondary HPE</td>
<td>5 s.h.</td>
</tr>
<tr>
<td>HPE00.460</td>
<td>Clinical Practice Elementary HPE</td>
<td>5 s.h.</td>
</tr>
<tr>
<td>HPE00.466</td>
<td>Clinical Practice Seminar in HPE</td>
<td>2 s.h.</td>
</tr>
</tbody>
</table>

Total Semester Hours 129 s.h.
MINOR IN EDUCATION
Alexandria Daniels
Program Advisor
Herman D. James Hall
856.256.5183
daniels@rowan.edu

The major goals of the Minor in Education are three-fold:
1. Create an avenue for students at Rowan who have an interest in Education but do not want to complete a full BA in Education. This work will be noted on their transcripts as a Minor.
2. Create an avenue for Internal/External Transfer Candidates (for P-3, K-5, and K-12 Subject-Matter) to complete a Minor rather than spending a minimum of 5 additional semesters to complete the Major in Education. Candidates who are not currently Education majors but who are interested in becoming Early Childhood (P-3), Elementary (K-5) or Subject-Matter (K-12) Education majors via the internal transfer process;
3. Create an avenue for students who leave the program having completed most, if not all, of the courses in the proposed major including all required courses for the minor, to have an official designation for their work in Education.

Required courses for Minor in Education

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPED08.130</td>
<td>Human Exceptionality (Gen Ed)</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>EDUC01.270</td>
<td>Teaching in Learning Communities I</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>EDUC01.272</td>
<td>Teaching in Learning Communities II (or equivalent)</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>READ30.280</td>
<td>Teaching Literacy (Elementary Education)</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>READ30.319</td>
<td>Teaching Reading and Writing in the Content Area (Subject Matter Education)</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>SMED33.420</td>
<td>Educational Technology</td>
<td>1 s.h.</td>
</tr>
<tr>
<td>FNDS21.230</td>
<td>Characteristics of Knowledge Acquisition</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>FNDS21.150</td>
<td>History of American Education</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>PSY09.209</td>
<td>Child Development (P-3 or K-5)</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>or PSY09.210</td>
<td>Adolescent Development (K-12)</td>
<td></td>
</tr>
</tbody>
</table>

Total Semester Hours 25 s.h.

BACHELOR OF ARTS IN LITERACY STUDIES
Xiufang Chen
Program Coordinator
Herman D. James Hall
856.256.4500 x3835
chenx@rowan.edu

Heather Dolbow
Program Advisor
Herman D. James Hall
856.256.5837
dolbow@rowan.edu

The Bachelor of Arts in Literacy Studies offers Elementary and Early Childhood Education majors a dual degree option with a strong literacy and liberal studies focus. The major goals of this program are to prepare effective, highly qualified graduates who 1) have a broad knowledge base that spans the English/Language Arts Common Core State Standards, 2) use best instructional and assessment practices, 3) have content knowledge in Literacy, Math, Science and Social Studies, and 4) qualify for Certification as a Teacher of Reading in New Jersey.

General Education
All students must complete the University General Education requirements as described on page 33.

Rowan Experience
All students must complete the Rowan Experience Requirements as described on page 35.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>WA07.290</td>
<td>Creative Writing I</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>or WA07.309</td>
<td>Writing Children's Stories</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>WA01.401</td>
<td>Writer's Mind</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>WA01.315</td>
<td>Writing with Technologies</td>
<td>3 s.h.</td>
</tr>
</tbody>
</table>

**General education/Rowan experience/other required courses**  
55 s.h.

**Free Electives minimum**  
31 s.h.

**Total Hours Required for Graduation (with Gen Ed Courses): minimum of 120 s.h.**

Acceptance into the certification programs with a minimum GPA of 3.0 and passing grade on Praxis Core tests (Mathematics, Reading, & Writing) are required. To graduate, candidates must achieve minimum content area GPA of 2.5 and achieve an overall GPA of at least 3.0 for education dual major.
Mission
The mission of the Henry M. Rowan College of Engineering is to provide programs that are effectively responsive to regional aspirations and that address the needs and the changing characteristics of the leading-edge engineers of the future. The College aims to educate students prepared to apply technology for the betterment of society and to serve as global change agents for the future. Rowan University also recognizes that the College will aid in the economic and cultural development of southern New Jersey, while generating opportunities for its diverse graduates in local, national and international industries.

Objectives
The objectives of the undergraduate engineering programs are to enable students to:

- Understand and apply the core science and mathematics principles that form the basis of engineering disciplines
- Work individually and in teams to identify and solve complex engineering problems and develop an understanding of interdisciplinary problem solving
- Understand and apply advanced technology (computers and laboratory equipment) to solve complex engineering problems
- Understand the importance of the humanities and social sciences as part of a well rounded education and the practice of engineering
- Have a strong sense of the importance of ethics in an engineering setting as well as other aspects of their lives
- Develop communication skills so that they can perform engineering functions effectively

Accreditation
Chemical, Civil, Electrical & Computer, and Mechanical are ABET accredited. ABET is a professional accrediting organization that is nationally recognized by the Council on Higher Education Accreditation (CHEA). In cooperation with its associated professional and technical societies, ABET has developed criteria, or standards, for the evaluation of educational programs.

The criteria require that the programs demonstrate that graduates have mastered the knowledge and skills required and that the institution has in place a process for continuous improvement. The Engineering Accreditation Commission (EAC) of ABET administers the criteria, conducts the evaluations and accredits the programs.

Programs Offered
The Henry M. Rowan College of Engineering has five programs leading to bachelor of science degrees in biomedical, chemical, civil, electrical & computer, and mechanical engineering. A GPA in the major of 2.0 or greater is required for graduation from all undergraduate programs. The undergraduate programs include technology focus areas throughout the curricula. The technology areas are monitored continuously to maintain a leading edge as technology advances. The flexibility inherent in this approach allows the College to respond quickly to changes in technology, and to be responsive to the needs of students, the region, industry, and the profession.

Core Requirements
All Engineering undergraduate students take a common core of courses within the Freshman year. These courses are:

- Freshman Engineering Clinic I, II (Rowan Seminar experience is embedded in Fr Clinic I)
- College Composition I
- Calculus I, II
Biomedical engineering is at the intersection of engineering, medicine, and biology, with the focus on the improvement of health care systems. Rowan's BME program will educate its students to analyze and design innovative solutions with the goal of improving quality of life and effectiveness of patient care. The BME program features a hands-on, real world, project-based curriculum that has proven successful in developing the engineer of the future, and it will prepare students to contribute to health care solutions in an increasingly multidisciplinary environment.

**Mission and Goals**
Rowan's Biomedical Engineering program will provide students with a firm grounding in engineering principles along with a solid background in life sciences, chemistry, and mathematics. Graduates of the program will possess the skills to be leaders in industry, to pursue further studies in graduate and medical school, and to contribute as a practicing engineer.

**Rowan BME Program Educational Objectives**
Rowan’s BME program will prepare its students to be successful and productive members of the engineering profession through a rigorous program of study featuring continuous and increasingly challenging subject matter complemented with project-based learning, supervision, and mentoring. Therefore, graduates of Rowan’s BME program will have demonstrated that they are able to solve current and evolving engineering needs and challenges of their chosen field of work.

**Rowan BME Program Student Outcomes**
Student outcomes are technical and professional skills our students are expected to attain by the time of graduation. At the time of graduation, graduates of the Rowan BME program will have attained the following skills that are necessary for a successful engineer:

a. an ability to apply knowledge of mathematics, science, and engineering;
b. an ability to design and conduct experiments, as well as to analyze and interpret data;
c. an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability;
d. an ability to function on multidisciplinary teams;
e. an ability to identify, formulate, and solve engineering problems;
f. an understanding of professional and ethical responsibility;
g. an ability to communicate effectively;
h. the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context;
i. a recognition of the need for, and an ability to engage in life-long learning;
j. a knowledge of contemporary issues;
k. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

**BACHELOR OF SCIENCE IN BIOMEDICAL ENGINEERING**
Mark E. Byrne
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Henry M. Rowan Hall
856.256.5300
byrnem@rowan.edu
### General Education
All students must complete the University General Education requirements as described on page 33

### Rowan Experience
All students must complete the Rowan Experience requirements as described on page 35

### Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH01.130</td>
<td>Calculus I</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>MATH01.131</td>
<td>Calculus II</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>MATH01.230</td>
<td>Calculus III</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>MATH01.235</td>
<td>Math for Engineering Analysis</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>COMP01.111</td>
<td>College Comp I</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>CS04.103</td>
<td>CS and Programming</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>PHYS00.220</td>
<td>Introductory Mechanics</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>PHYS00.222</td>
<td>Introductory Electricity &amp; Magnetism</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>CHEM06.100</td>
<td>Chemistry I</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>CHEM06.101</td>
<td>Chemistry II</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>ENGR01.101</td>
<td>Freshman Engineering Clinic I</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>ENGR01.102</td>
<td>Freshman Engineering Clinic II</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>ENGR01.201</td>
<td>Sophomore Engineering Clinic I</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>ENGR01.202</td>
<td>Sophomore Engineering Clinic II</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>ENGR01.301</td>
<td>Junior Engineering Clinic I</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>ENGR01.302</td>
<td>Junior Engineering Clinic II</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>ENGR01.401</td>
<td>Senior Engineering Clinic I</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>ENGR01.402</td>
<td>Senior Engineering Clinic II</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>ECE09.404</td>
<td>Bioinstrumentation</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>PHIL09.341</td>
<td>Biomedical Ethics</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ENTO6.240</td>
<td>Entrepreneurship and Innovation</td>
<td>3 s.h.</td>
</tr>
</tbody>
</table>

*Contact advisor to discuss the following courses*

- TBD: Electrical Foundations in Biomedical Engineering (4 s.h.)
- TBD: Chemical Foundations in Biomedical Engineering (4 s.h.)
- TBD: Mechanical Foundations in Biomedical Engineering (4 s.h.)
- TBD: Physiological Foundations in Biomedical Engineering (4 s.h.)
- TBD: Tissue Engineering & Biomaterials (3 s.h.)
- TBD: Biostatistics (3 s.h.)
- TBD: Simulation in Biomed Systems (2 s.h.)
- TBD: Biomedical Signal Proc & Modeling (3 s.h.)
- TBD: Engineering Frontiers Seminar (0 s.h.)

### Science and Engineering Electives
Must be approved by advisor. Total credit hours are 19 s.h.

### Total Credits in Program
131 s.h.

### Department of Chemical Engineering

**Mariano J. Savelski**  
Department Head  
Henry M. Rowan Hall  
856.256.5310  
savelski@rowan.edu

Chemical Engineering is the application of mathematics and sciences, with special emphasis on chemistry, in the development, design, and supervision of processes to manufacture useful products. Chemical engineers are part of numerous industries and technologies including petrochemicals, pharmaceuticals, biotechnology, food and consumer products, polymers, microelectronics, electronic and advanced materials, sustainable technologies, safety, health and environment.

### Mission and Goals
The Rowan University Chemical Engineering Program is a student-centered, primarily undergraduate program that incorporates leading-edge educational methods and technology with engineering practice. We prepare students for careers in the global chemical process industry and related fields, and for advanced degree study. Our program provides students...
with a strong foundation in chemical engineering science and design, and emphasizes the development of effective communication and teaming skills, and professional responsibility in preparation for a career in a diverse global workforce. Throughout the curriculum, students are exposed to chemical engineering methods using hands-on, state-of-the-art experiments, modern computer tools, and problem synthesis and solution approaches. The Chemical Engineering Program is committed to technical excellence, professional responsibility, and lifelong learning.

We use this mission statement along with the following three goals, to try to achieve the best possible learning environment for our students:

**Goal 1** Develop engineers who are successfully using their chemical engineering expertise to adapt to the evolving technological challenges of a wide variety of professional fields.

**Goal 2** Develop engineers who, within several years of graduation, are functioning independently and collaboratively in providing creative solution strategies to problems for their employer.

**Goal 3** Develop engineers who engage in professional growth and responsible practice.

**BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING**

Mariano J. Savelski
Department Head
Henry M. Rowan Hall
856.256.5310
savelski@rowan.edu

**General Education and Rowan Experience**

All Chemical Engineering majors are required to fulfill the General Education / Rowan Experience requirements of a Specialized Degree Model. In this model, your Math, Science and Communications requirements are met from the required courses in the Chemical Engineering program. Other Rowan Experience courses are met throughout your required program of study. For example, Senior Engineering Clinic II is the Writing Intensive (WI) course and Freshman Clinic I is the Rowan Seminar (RS) course. You need to choose 15 credits of General Education courses (typically five courses that are 3 credits each) that meet the following criteria:

- Two (6 credits) History Humanities Language (HHL) courses
- Two (6 credits) Social and Behavioral Sciences (SBS) courses (ECON04.102 Microeconomics and one that you choose)
- One (3 credits) Artistic and Creative Expression (ACE) course
- One of the above General Education courses must be a Multicultural/Global (listed as M/G or MCUL) course
- One of the above General Education courses must be a Literature-based (LIT) course.
- A course can be designated as both LIT and MCUL (e.g. ENGL02.112, Readings in Asian Lit) which will meet both criteria, but you still have to take 5 (five) courses.

Double counting of HHL, SBS, and ACE courses is not permitted. If a course meets the requirements of two categories (e.g., HHL and ACE), you must use it in one or the other. Therefore, you will still need to take 5 courses (15 credits).

**Required Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH01.110</td>
<td>Calculus I</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>MATH01.111</td>
<td>Calculus II</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>MATH01.230</td>
<td>Calculus III</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>MATH01.235</td>
<td>Math for Engineering Analysis</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>CHEM06.100</td>
<td>College Chemistry I</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>CHEM06.101</td>
<td>College Chemistry II</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>CHEM07.200</td>
<td>Organic Chemistry I</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>ECON04.102</td>
<td>Microeconomics</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>PHYS00.220</td>
<td>Introductory Mechanics</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>CS04.103</td>
<td>Computer Science and Programming</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>or CS10.104</td>
<td>Intro to Scientific Programming</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>or CS10.102</td>
<td>Introduction to Programming</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ENGR01.101</td>
<td>Freshman Engineering Clinic I</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>ENGR01.102</td>
<td>Freshman Engineering Clinic II</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>ENGR01.201</td>
<td>Sophomore Engineering Clinic I*</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>ENGR01.202</td>
<td>Sophomore Engineering Clinic II*</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>CHE06.201</td>
<td>Principles of Chemical Processes I</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>CHE06.202</td>
<td>Principles of Chemical Processes II</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>CHE06.241</td>
<td>Chemical Engineering Fluid Mechanics</td>
<td>2 s.h.</td>
</tr>
</tbody>
</table>
### Minor in Chemical Engineering

This Minor in Chemical Engineering (ChE) will offer students a foundation in material and energy balances, transport phenomena, and separation processes relevant to the manufacturing industry. The minor is designed for students from other engineering disciplines as well as students from science majors who may be interested in pursuing a career or graduate studies in chemical engineering. The minor is a minimum of 18 semester hour credits total of ChE courses. Students in the minor take a minimum of 9 credits of required ChE courses and a minimum of 9 credits of course work chosen from a bank of ChE courses. These courses provide the necessary fundamentals and allow a focus in an area of interest. Students must have a minimum of 2.0 GPA in the minor-specific courses. Admission requires the approval of the ChE Department Head. The applicant will need to have completed MATH01.130 Calculus I, MATH01.131 Calculus II, MATH01.230 Calculus III, MATH01.235 Mathematics for Engineering Analysis (or equivalent MATH 01.231 Ordinary Differential Equations and MATH01.210 Linear Algebra), CHEM06.100 College Chemistry I, CHEM06.101 College Chemistry II, and PHYS00.220 Introductory Mechanics (or equivalent Physics I – Calculus-based) before being considered for acceptance into the minor. A minimum cumulative GPA of 3.0 in the aforementioned courses is required for admission into the ChE minor. Current ChE students who transfer out of the major will be automatically eligible for admission into the ChE minor.

**Required Courses 9 s.h. (minimum)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE06.201</td>
<td>Principles of Chemical Processes I*</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>CHE06.202</td>
<td>Principles of Chemical Processes II*</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>CHE06.241</td>
<td>Chemical Engineering Fluid Mechanics</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>or ENGR01.341</td>
<td>Fluid Mechanics</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>or ENGR01.342</td>
<td>Engineering Fluid Mechanics</td>
<td>3 s.h.</td>
</tr>
</tbody>
</table>

Chemical Engineering Senior Elective 3 s.h. The Senior Electives are courses in the following range: CHE06.440 to CHE06.495. *CHE06.203 Principles of Chemical Processes 4 s.h. may be substituted for both CHE06.201 Principles of Chemical Processes I and CHE06.202 Principles of Chemical Processes II

**Elective Courses** Choose 9 s.h. (minimum) from the following

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE06.309</td>
<td>Process Fluid Transport</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>CHE06.310</td>
<td>Chemical Engineering Thermodynamics I</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>CHE06.311</td>
<td>Heat Transfer Processes</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>CHE06.312</td>
<td>Separation Processes I</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>CHE06.314</td>
<td>Separation Processes II</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>CHE06.315</td>
<td>Chemical Engineering Thermodynamics II</td>
<td>3 s.h.</td>
</tr>
</tbody>
</table>

**Students must ensure that they have the appropriate prerequisites for any of the classes. Prerequisites for each class can be found in the Banner Course Catalog. Find the catalog entry for the course that you are interested in taking, scroll to the bottom of the page. The ChE Department Head will review course equivalencies.**
This specialization provides a mechanism to give students credit for their focused study in materials on their transcripts. Extending this opportunity to students is valuable to them because of growing industrial interest in these areas of chemical engineering.

In South Jersey, there are a number of local industries, such as Solvay Solexis, Metrologic, DuPont, and VWR Scientific, whose success is based on the application of materials science. Within the region, there are only a limited number of schools that can supply qualified people to meet the needs of their labor force. By providing skilled graduates, this project will ensure that these companies can meet these needs and allow them to expand their enterprises. The local economy has an ever-increasing pressure for well-trained technicians, scientists, and engineers.

Materials science is inherently multi-disciplinary, requiring of its practitioners a broad range of knowledge and a variety of skills. Students in the proposed program will be able to follow the complete cycle of materials science from concept to research design to synthesis, to measurement of and explanation for the physical properties of the material to successful application. Coupled with the organization of learning for chemical engineering students within the program comes a distinct and strong effort to motivate students to pursue careers in materials research. Ultimately, these efforts should help us retain a diverse pool of talented students in New Jersey instead of being lost to out-of-state institutions.

This specialization is a cohesive set of courses that focus on materials within chemical engineering. To obtain this specialization in materials, at least 12 semester hours of credit are required. The requirements to earn a specialization in materials are as follows:

### Course Credits

<table>
<thead>
<tr>
<th>Course Credits</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Engineering Materials (CHE06.381)</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>Jr/Sr Clinic Materials-related project (ENGR01.301, 302, 401, 402)</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>ChE or Chemistry Elective - from approved list</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>Out of Discipline Elective - from approved list</td>
<td>3 s.h.</td>
</tr>
</tbody>
</table>

In order to earn the specialization in materials, students can earn four credits by working on an approved materials project in 2 semesters of Junior/Senior Engineering Clinic. These projects can be housed in any of the four engineering disciplines, but must be approved by the Chemical Engineering faculty as having substantial materials content. Note that students can also fulfill the project requirement through independent study on materials-related projects (Independent Study in Engineering ENGR01.391).

Students earn the remaining six credits towards the specialization by taking one elective from each of the following lists. In order to underscore the diverse applications and multi-disciplinary nature of materials science, we will require students to take one chemistry or chemical engineering elective, and one materials elective outside of chemical engineering. Note that a chemistry course can be used to fulfill either requirement, but no one course can be used to fulfill both. Alternative courses to that given below must be approved by the specialization advisor.

#### Approved Materials Electives from ChE or Chemistry

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE06.466</td>
<td>Polymer Processing</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>CHE06.490</td>
<td>Approved Special Topics Course</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>CHEM05.430</td>
<td>Approved Advanced Topics in Chemistry,</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>CHEM07.405</td>
<td>Introduction to Polymer Chemistry</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>CHEM07.475</td>
<td>Polymer Synthesis</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>CHEM07.478</td>
<td>Polymer Characterization</td>
<td>4 s.h.</td>
</tr>
</tbody>
</table>

#### Approved Materials Electives from outside Chemical Engineering

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEE08.301</td>
<td>Civil Engineering Materials</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>ME10.422</td>
<td>Introduction to Computational Fluid Dynamics</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>CHEM05.430</td>
<td>Approved Advanced Topics in Chemistry,</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>CHEM07.405</td>
<td>Introduction to Polymer Chemistry</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>CHEM07.475</td>
<td>Polymer Synthesis</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>CHEM07.478</td>
<td>Polymer Characterization</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>INTR01.486</td>
<td>Interdisciplinary Materials Science</td>
<td>3 s.h.</td>
</tr>
</tbody>
</table>

Faculty in chemical engineering and throughout the College routinely manage Junior/Senior Engineering Clinic projects in materials.

The following is a list of Junior/Senior Clinic projects that would be acceptable for this specialization:

- ME-01 Plastics Ignition Experiment Development
- ME-06 Development and Testing of Component Packaging for an Optical Filter
- ME-07 Magneto-Rheological Rubber Development and Testing
- ECE-01 Nano-Imprint Lithography
The Certificate of Undergraduate Study in Materials Engineering seeks to provide recognition for students’ completion of 12 credits in materials science and engineering-related courses. Proficiency in this area is a valuable credential, as graduating science and engineering students with materials expertise are in demand for jobs in academia, industry, government labs, and the non-profit arenas.

Certificate of Undergraduate Study in Materials Engineering

The requirements include the following five courses:

- CHE06.381: Chemical Engineering Materials (2 s.h.)
- Jr/Sr Clinic Materials-related project (semester 1) (2 s.h.)
- Jr/Sr Clinic Materials-related project (semester 2) (2 s.h.)
- Chemical Engineering or Chemistry elective (2 s.h.)
- Out of discipline elective (3 s.h.)

Total: 12 s.h.

Determination of which clinic projects count towards the CUGS in Materials Engineering is up to the discretion of the CUGS program advisor. Approval is granted based on an individual basis, following consultation with the clinic project manager. Clinic projects that involve components related to the discovery, design, or characterization of materials, with an emphasis on solids, will qualify for CUGS credit.

The two electives for the CUGS are chosen from an approved list. Available electives depend on the semester offering with Engineering and the Department of Chemistry and Biochemistry. Approval is up to the discretion of the CUGS program advisor and is determined based on the relevance of the course content. The following is a list of possible courses for the chemical engineering, chemistry, or out of discipline elective.

- Chemical Engineering: Polymer Processing
- Chemical & Biochemical: Organic Spectroscopy Analysis
- Chemical & Biochemical: Survey of Molecular Mod. and Methods
- Chemical & Biochemical: Intro to Polymer Chemistry
- Mechanical Engineering: Mat Science and Manufacturing

This specialization provides a mechanism to give students credit for their focused study in bioengineering. Extending this opportunity to students is valuable to them because of growing industrial interest in these areas of chemical engineering. In 1992, NIH defined “biomolecular engineering” as: “Research at the interface of chemical engineering and biology with an emphasis at the molecular level.”

Recent trends in chemical engineering research, the decisions of government agencies, and the opinions of leading academics were taken as the platform for the development of the bio-related specialization.

Modern biology has emerged as an underlying fundamental science in chemical engineering. Advances in biology are prompting new discoveries in the biotechnology, pharmaceutical, medical technology, and chemical industries. Developing commercial-scale processes based on these advances requires that new chemical engineers clearly understand the biochemical principles behind the technology, in addition to developing a firm grasp of chemical engineering principles. Many jobs in the “Fast Company 25 Top Jobs for 2005” list are bio-related. Finally, New Jersey is a global and national leader in the biotechnology and pharmaceutical industries.
Instead of working at the "macro" scale, as traditional biochemical engineers have, there is a need for students to be able to work across scales - from the molecular level to the microscopic to the macroscopic. Traditional biochemical engineering focused on bioreactor design, agitation, and microbial cultures as a whole - macroscopic processes. Current and future applications will require students to be familiar with the molecular details of the product of interest, which help determine how to design and operate microscopic and macroscopic operations for production and purification. This specialization is a cohesive set of courses that focus on a biological engineering within chemical engineering and requires at least 12 semester hours of credit. The requirements to earn a specialization in biological engineering are as follows:

**Course Credits**

<table>
<thead>
<tr>
<th>Course Credits</th>
<th>12 s.h.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology for Chemical Engineers (BIOL01.211)</td>
<td></td>
</tr>
<tr>
<td>Jr/Sr Clinic Bio-related project (ENGR01.301, 302, 401 and 402)</td>
<td></td>
</tr>
<tr>
<td>Electives - from approved list</td>
<td></td>
</tr>
</tbody>
</table>

The Biological Systems and Applications course is a required course in chemical engineering that was added as a response to the growing national interest in biochemical engineering. This course is prerequisite for all subsequent work towards a biological engineering specialization.

Junior/Senior Engineering Clinic is a required 2-credit course for students in all engineering disciplines. This course is a hallmark of the Rowan College of Engineering and provides undergraduate students with hands-on experience on practical engineering research and design problems, frequently in collaboration with local industrial sponsors. All engineering students are required to take four semesters (8 credits) of Junior/Senior Clinic. Students who wish to earn a specialization in biological engineering must select an approved Junior/Senior Clinic project for at least one of their four semesters. Note that students can also fulfill the project requirement through independent study on bio-related projects (Independent Study in Engineering ENGR01.391).

Because the department wishes to maintain a "depth and breadth" approach to the biological engineering specialization, a student will not be allowed to apply more than 4 credits worth of Junior/Senior Clinic to their specialization. Students must earn the balance of the 12 credits by taking any combination courses from the following list:

### Approved list of electives - Chemical Engineering

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE06.462</td>
<td>Bioprocess Engineering</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>CHE06.472</td>
<td>Principles of Biomedical Processes</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>CHE06.476</td>
<td>Principles of Bioseparation Processes</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>CHE06.482</td>
<td>Principles of Food Engineering</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>CHE06.483</td>
<td>Principles of Engineering Exercise Physiology</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>CHE06.484</td>
<td>Fundamentals of Controlled Release</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>CHE06.486</td>
<td>Membrane Processes</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>CHE06.490</td>
<td>Approved Special Topics Course</td>
<td>3 s.h.</td>
</tr>
</tbody>
</table>

### Approved list of electives - Other engineering disciplines

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEE08.412</td>
<td>Environmental Treatment Process Principles</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ECE09.404</td>
<td>Principles of Biomedical Systems and Devices</td>
<td>3 s.h.</td>
</tr>
</tbody>
</table>

### Approved list of electives with bio focus

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL01.430</td>
<td>Cell Biology</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>BIOL01.435</td>
<td>Cell Culture Technology</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>BIOL01.440</td>
<td>Special Topics in Biological Sciences</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>BIOL11.405</td>
<td>Environmental Microbiology</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>BIOL14.440</td>
<td>Intro to Biochemistry</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>BIOL22.410</td>
<td>Concepts in Human Genetics</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>BIOL22.450</td>
<td>Molecular Genetics</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>CHEM07.348</td>
<td>Biochemistry</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>CHEM07.410</td>
<td>Medicinal Chemistry</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>CHEM08.305</td>
<td>Biophysical Chemistry</td>
<td>4 s.h.</td>
</tr>
</tbody>
</table>

The current chemical engineering curriculum requires students to take two advanced chemical engineering electives and one advanced chemistry elective. Consequently, the biological engineering specialization is readily attainable under the current chemical engineering curriculum: it requires a focused selection of project work and electives but no "additional" courses.

**Department of Civil and Environmental Engineering**

*Beena Sukumaran*

**Department Head**

**Henry M. Rowan Hall**

**856.256.5324**

**sukamaran@rowan.edu**

Civil Engineering includes all aspects of the planning, design, evaluation, construction, and maintenance of the infrastructure of modern life. This includes buildings, bridges, highways and airports, water and waste treatment facilities, dams and flood control, off-shore structures, rocket launch pads, space stations, communication towers and many other engineering works. The curriculum is designed to prepare students to enter this broad field with a strong understanding of green and sustainable practices.
The Civil Engineering Program strives to prepare students for professional careers by providing a broad-based civil engineering education through a rigorous curriculum including hands-on laboratory and design experiences integrated throughout. The program is committed to the integration of teaching, research, scholarly, and service activities within a collaborative educational environment as part of its students’ preparation for both engineering practice and graduate school. The program endeavors to produce graduates ready to communicate their ideas in a diverse and multidisciplinary workplace.

Rowan Civil Engineering graduates will be:

- Knowledgeable engineers, versed in multiple areas of the civil engineering profession, who remain current during their professional careers
- Problem-solvers, who can collect and utilize needed information to reach creative and realistic solutions to engineering problems
- Well rounded engineers who understand their professional, ethical, and global/social responsibilities and are able to work in multidisciplinary and diverse groups
- Communicators, who are able to disseminate information to professional and lay audiences

BACHELOR OF SCIENCE IN CIVIL ENGINEERING
Douglas Cleary
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General Education
All students must complete the University General Education requirements as described on page 33

Rowan Experience
All students must complete the Rowan Experience requirements as described on page 35

Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH01.130</td>
<td>Calculus I</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>MATH01.131</td>
<td>Calculus II</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>MATH01.230</td>
<td>Calculus III</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>MATH01.235</td>
<td>Math for Engineering Analysis I</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>CHEM06.100</td>
<td>College Chemistry I</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>ECON04.102</td>
<td>Microeconomics</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>PHYS00.220</td>
<td>Introductory Mechanics</td>
<td>4 s.h.</td>
</tr>
</tbody>
</table>

Computer Programming Elective (choose one):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS01.104</td>
<td>Introduction to Scientific Programming</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>or CS04.103</td>
<td>Computer Science and Programming</td>
<td>4 s.h.</td>
</tr>
</tbody>
</table>

Science Elective (choose one):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM06.101</td>
<td>College Chemistry II</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>or PHYS00.222</td>
<td>Introduction to Electricity and Magnetism</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>or PHYS00.221</td>
<td>Introduction to Thermodynamics, Fluids, Waves, and Optics</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>ENGR01.101</td>
<td>Freshman Engineering Clinic I</td>
<td>2 s.h.</td>
</tr>
</tbody>
</table>

This course also fulfills the Rowan Seminar requirement.

ENGR01.102  Freshman Engineering Clinic II 2 s.h.
ENGR01.201  Sophomore Engineering Clinic I 4 s.h.

This course also fulfills the General education requirement College Composition II.

ENGR01.301  Junior Engineering Clinic I 2 s.h.
ENGR01.302  Junior Engineering Clinic II 2 s.h.
ENGR01.401  Senior Engineering Clinic I 2 s.h.
ENGR01.402  Senior Engineering Clinic II 2 s.h.

This course also fulfills the Rowan Experience Public Speaking requirement.

ENGR01.271  Statics 2 s.h.
ENGR01.272  Solid Mechanics 2 s.h.
ENGR01.281  Material Science 2 s.h.
ENGR01.291  Dynamics 2 s.h.
ENGR01.341  Fluid Mechanics I 2 s.h.
CEE08.382  Structural Analysis 3 s.h.
CEE08.383  Analysis and Design of Steel Frames 3 s.h.
CEE08.311  Environmental Engineering I 3 s.h.
CEE08.312  Sustainable Civil & Environmental Engineering 3 s.h.
The Rowan Electrical and Computer Engineering (ECE) curriculum combines both electrical engineering topics such as electronics, control systems, digital signal processing, telecommunications, and energy as well as computer engineering topics such as computer hardware & software design, microprocessors and embedded systems. Electrical and Computer engineers have made some remarkable contributions to our world; they have pioneered the invention of smart phones, computers, digital cameras, MP3-players, GPS systems, medical imaging devices, and computer games, just to name a few among seemingly countless technological innovations. ECEs also play a crucial and indispensable role in the design of cars, airplanes, space-craft and extraterrestrial vehicles, home-appliances, life-saving medical equipment and so many other technologies that we have come to rely on.

Core courses taken by all ECE students include such topics as circuits, electronics, electromagnetics, digital design, microprocessors, control systems, communication systems, digital signal processing, data structures, computer architecture and very large scale integration (microelectronics). Advanced senior-level electives provide opportunities to specialize in areas such as nanotechnology, bio-engineering, sustainable design, wireless communications, artificial and computational intelligence, digital image processing, bioinformatics, advanced visualization, embedded systems, etc. All ECE courses have integrated laboratory components. Eight semesters of Engineering Clinic provide students with a team-oriented, multidisciplinary design and research experience, which is a unique opportunity to integrate the students' theoretical background into the solution of practical real-world engineering problems.

Rowan ECE Program Goals
Rowan's Electrical and Computer Engineering program is designed to produce effective engineers who can excel in a broad spectrum of environments and challenges, and sustain productivity throughout their career. We prepare our graduates to:

1. Perform as agile problem solvers
2. Become articulate, capable and effective communicators
3. Possess an entrepreneurial spirit
4. Facilitate trans-disciplinary discourse
5. Be sensitized to contemporary issues, and
6. Be competent in essential engineering and ECE knowledge

Rowan ECE Program Educational Objectives
Program educational objectives are broad and long term career accomplishments our students are expected to achieve within a few years of graduation.

Through a rigorous program of study featuring continuous and increasingly challenging subject matter complemented with project-based learning, supervision, and mentoring, Rowan's ECE program prepares its students to be successful and productive members of the engineering profession. Therefore, within a few years of graduation, graduates of the Rowan's ECE program will have demonstrated that they are:

1. Proficient technologists, successful in solving current and evolving engineering needs and challenges of their chosen field of work, as evidenced by their continuous and gainful employment, career advancement to positions that come with increased professional responsibilities, or through their entrepreneurial activities;
2. Continuing to learn, evidenced by development of their professional knowledge and skills by pursuing advanced degrees or through other continuing education opportunities in engineering or other professional areas;
3. **Responsible professionals**, actively serving their profession as evidenced by their active participation in professional societies, and/or their recognition of service to the profession or society.

**Rowan ECE Program Student Outcomes**

Student outcomes are technical and professional skills our students are expected to attain by the time of graduation. At the time of graduation, graduates of the Rowan ECE program will have attained the following skills as required for an engineering program accredited by ABET (Accreditation Board for Engineering and Technology)

a. an ability to apply knowledge of mathematics, science, and engineering;

b. an ability to design and conduct experiments, as well as to analyze and interpret data;

c. an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability;

d. an ability to function on multidisciplinary teams;

e. an ability to identify, formulate, and solve engineering problems;

f. an understanding of professional and ethical responsibility;

g. an ability to communicate effectively;

h. the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context;

i. a recognition of the need for, and an ability to engage in life-long learning;

j. a knowledge of contemporary issues;

k. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

**BACHELOR OF SCIENCE IN ELECTRICAL AND COMPUTER ENGINEERING**

Robi Polikar  
Department Head

Henry M. Rowan Hall  
856.256.5372  
polikar@rowan.edu

**General Education**  
All students must complete the University General Education requirements as described on page 33

**Rowan Experience**  
All students must complete the Rowan Experience requirements as described on page 35

**Required Courses**

- MATH01.130 Calculus I 4 s.h.
- MATH01.131 Calculus II 4 s.h.
- MATH01.230 Calculus III 4 s.h.
- MATH01.235 Math for Engineering Analysis 4 s.h.
- ECON04.102 Intro to Microeconomics 3 s.h.

(This also counts as a Social and Behavioral Sciences General Education course)

- PHYS00.220 Introductory Mechanics 4 s.h.
- PHYS00.222 Introductory Electricity & Magnetism 4 s.h.
- CS04.103 Computer Science and Programming 4 s.h.
- CS04.225 Principals of Data Structures 3 s.h.
- ENGR01.101 Freshman Engineering Clinic I 2 s.h.
- ENGR01.102 Freshman Engineering Clinic II 2 s.h.
- ENGR01.201 Sophomore Engineering Clinic I 4 s.h.
- ENGR01.202 Sophomore Engineering Clinic II 4 s.h.
- ENGR01.301 Junior Engineering Clinic I 2 s.h.
- ENGR01.302 Junior Engineering Clinic II 2 s.h.
- ENGR01.401 Senior Engineering Clinic I 2 s.h.
- ENGR01.402 Senior Engineering Clinic II 2 s.h.
- ME10.320 Principles of Mechanical Engineering for ECE Majors 3 s.h.
- ECE09.203 Principles of Electric Circuit Analysis 4 s.h.
- ECE09.241 Introduction to Digital Systems 3 s.h.
- ECE09.243 Computer Architecture 3 s.h.
- ECE09.303 Engineering Electromagnetics 3 s.h.
- ECE09.311 Electronics I 3 s.h.
- ECE09.412 Very Large Scale Integration Design 3 s.h.
- ECE09.321 Systems and Control I 3 s.h.
One of the following science electives:

- **CHEM06.100** College Chemistry I
- **or BIOL01.113** General Biology: Human Focus
- **or BIOL10.210** Human Anatomy and Physiology
- **or PHYS00.221** Intro Thermo, Fluids, Waves & Optics
- **or PHYS00.300** Modern Physics

### Required Electives

Five approved Technical Electives

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE09.241</td>
<td>Introduction to Digital Systems</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ECE09.311</td>
<td>Electronics</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ECE09.341</td>
<td>Signals and Systems</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>ECE09.342</td>
<td>Introduction to Embedded Systems</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ECE09.351</td>
<td>Digital Signal Processing</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ECE09.363</td>
<td>Modules in Electrical and Computer Engineering</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ECE09.433</td>
<td>Electrical Communications Systems</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ECE09.460</td>
<td>Clinic Consultant: I</td>
<td>1 s.h.</td>
</tr>
<tr>
<td>ECE09.462</td>
<td>Clinic Consultant: II</td>
<td>1 s.h.</td>
</tr>
<tr>
<td>ECE09.498</td>
<td>Seminar: Engineering Frontiers</td>
<td>1 s.h.</td>
</tr>
</tbody>
</table>

**Required Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE09.203</td>
<td>Principles of Electric Circuit Analysis</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>ECE09.241</td>
<td>Introduction to Digital Systems</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ECE09.311</td>
<td>Electronics</td>
<td>3 s.h.</td>
</tr>
</tbody>
</table>

**Elective Courses:** Choose any three of the following*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE09.341</td>
<td>Signals and Systems</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>ECE09.321</td>
<td>Systems and Control I (or Systems Dynamics and Control I)</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ECE09.351</td>
<td>Digital Signal Processing</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ECE09.433</td>
<td>Electrical Communications</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ECE09.462</td>
<td>Computer Architecture</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ECE09.463</td>
<td>Introduction to Embedded Systems</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ECE09.412</td>
<td>Very Large Scale Integration Design</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ECE09.403</td>
<td>Engineering Electromagnetics</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ENGR01.401, ENGR01.402</td>
<td>Senior Engineering Clinic I or Senior Engineering Clinic II</td>
<td>2 s.h.</td>
</tr>
</tbody>
</table>

*Students must ensure that they have the appropriate prerequisites for any of the classes. Prerequisites for each class can be found in the Banner Course Catalog. Find the catalog entry for the course that you are interested in taking, scroll to the bottom of the page.

### BIOMEDICAL ENGINEERING SPECIALIZATION

**Robi Polikar**

Advisor  
Henry M. Rowan Hall  
856.256.5372  
polikar@rowan.edu

The ECE department's biomedical engineering (BME) concentration is designed to be as flexible as possible while ensuring a meaningful depth and breadth in biomedical engineering.

1. All ECE students are required to take two core science classes (from an approved list of science classes) outside of Engineering. The list currently includes the following courses. Therefore, students who wish to concentrate on BME are
advised to take one of these courses towards their regular science requirements:

- **BIOL01.210** Biological Systems and Applications
- **BIOL01.100** Biology I

2. Students need a minimum of 8 credits from an approved list of Biological Science Electives. The approved list of electives will be reviewed on a yearly basis depending on the courses offered on campus. In general, these courses are from the Anatomy/Physiology bank or from the Cellular, Molecular Biology bank of the Biology program, or from the Chemistry / Biochemistry program. The students are responsible for either obtaining the prerequisites, or making the necessary arrangements with the professor. The courses listed in (i) do count towards this requirement. In general, students need to satisfy this requirement during their sophomore or junior year.

3. No fewer than 4, no more than 8 credits of Junior / Senior clinic must come from BME related projects. Note that each Ju/Se clinic in ECE is 2 credits. Therefore, 2 - 4 semesters of clinic experience must come from BME related projects. Every semester, there are a number of projects that are BME related. Those projects that qualify for this category will be announced every semester.

4. Minimum of 3 credits (one course) from an approved list of Bio-related ECE electives. The list currently includes:

   - **ECE09.404** Principles of Biomedical Systems and Devices

   Additional courses will be added to this bank. Note that every semester the ECE department offers electives under the title "Special Topics in ECE" (0909.403.xx). Some of these classes are BME related and will count towards this requirement. Special Topics courses that qualify for BME concentration will be announced every semester. This course will be taken during the senior year.

5. Minimum of 3 credits from an approved list of Bio-related non-ECE engineering electives. Any course that is on the approved list of other engineering departments' BME bank will count towards this requirement. This course will also be taken during the senior year. Students are encouraged to discuss their intention to specialize in biomedical engineering as early as possible with the BME advisor in the ECE department. The advisor will be able to guide students on the correct sequence of required courses.

**Department of Mechanical Engineering**

Jennifer Kadlowec  
Department Head  
Henry M. Rowan Hall  
856.256.5340  
kadlowec@rowan.edu

Mechanical Engineering involves the design and building of machines and devices. This includes the conversion of energy from one form to another, the dynamics of mechanical devices, and the control systems for operation of machines. Design of thermal and mechanical systems are integrated into the curriculum.

The Rowan Mechanical Engineering Program develops effective engineers who are well prepared for the next phase of their career, whether in industry or government or in graduate school.

Our educational objectives are as follows:

1. ME graduates are well-rounded engineers who can apply knowledge and skills in their careers.
2. ME graduates consider the context and broader impacts of engineering solutions in professional practice.
3. ME graduates effectively communicate to a broad spectrum of audiences and have the teamwork and leadership skills to excel professionally.
4. ME graduates are flexible to adapt to changing technology and recognize the need for continuous improvement, self-study or further education.
5. ME graduates are innovative and creative thinkers with an understanding of entrepreneurship.

**BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING**

Jennifer A Kadlowec  
Advisor  
Henry M. Rowan Hall  
856.256.5340  
kadlowec@rowan.edu

**General Education**

All students must complete the University General Education requirements as described on page 33

**Rowan Experience**

All students must complete the Rowan Experience requirements as described on page 35

**Required Courses**

- **MATH01.130** Calculus I  
  4 s.h.
CONCENTRATION IN BIOENGINEERING

To earn a concentration in bioengineering for mechanical engineering, a minimum of 18 cr. is needed as follows:

- Junior/Senior Engineering Clinic – (4 s.h.) bioengineering related project/s in jr. and/or sr. yr.
- Minimum of 6 credits of bioengineering related electives, which may include courses required towards the major
- Minimum of 7 credits (or 2 courses) of Science, Math or Engineering bio-related electives that may not include courses taken required towards the major

See advisor for approvals of courses.
College of Performing Arts

John Pastin
Dean
Wilson Hall
856.256.4551
pastin@rowan.edu

Melanie Stewart
Associate Dean
Wilson Hall
856.256.4548
stewartm@rowan.edu

History
The College of Performing Arts (formerly, the School of Fine and Performing Arts at Glassboro State College) was founded in 1971. In 1997, during the transition from Glassboro State College to Rowan University, the School became the College of Fine and Performing Arts. The College was renamed the College of Performing Arts in 2012. Today, the College is comprised of the departments of Music (including the Maynard Ferguson Institute of Jazz Studies) and Theatre & Dance. The College offers baccalaureate degrees in the fields of Dance, Music, Music Industry, Theatre, and graduate degrees in Music and Theatre: Arts Administration.

In addition to more than 250 performances on campus each year, the faculty, staff and students collaborate in scholarly and artistic activities at the international, national and regional levels.

The College is dedicated to fostering artistic and creative experiences for the campus and the surrounding community. Specifically, the College of Performing Arts provides professional training for performance majors and aesthetic experiences for all Rowan University students, enhancing the educational programs of the institution.

Mission
The College of Performing Arts at Rowan University is dedicated to developing future leaders in the performing arts and arts education. The college provides students with rigorous professional preparation through close mentorship by a world-class faculty of artist scholars. Our exemplary undergraduate and graduate curricula are complimented by a challenging liberal arts education. The college serves as a cultural center for the campus and the South Jersey region by providing a wide range of classical and contemporary arts programming.

Accreditation
Specialized, national arts accreditation has been granted by the following organizations:

- The National Association of Schools of Music
- The National Association of Schools of Theatre

Programs Offered
The College offers rigorous professional degree programs that develop technical and creative abilities to the highest level, as well as provide a comprehensive socio-historical awareness for the Arts practitioner.

Elective courses in the arts allow all students to partake of the unique, intellectual and emotional experiences that the arts provide. Performing/creating experiences are open to all and are designed to foster the artistic discipline that is expected in such activities. Further, they provide social and collegial experiences desirable in a college education. Through participation in musical ensembles, dance ensembles, and theatre productions artistic expression becomes an integral part of the educational experience.

In the Liberal Arts area, arts curricula provide extensive study of the performing arts through Minor programs and general education offerings. These Bachelor of Arts programs, focus on one particular segment of the arts to allow the student to share the diversity of our cultural base and also to gain the perspective, if not the expertise, of the professional artist.

A program of study in the College can lead to:

- A professional career in the arts
- A teaching career in the arts
- Graduate study in the arts
- Other career options not tied fully to the arts, but which draw on the knowledge and rigor inherent in them

Central to a productive environment for the study of the arts is a vital community of arts professionals, including faculty and student artists, scholars, educators and performers whose careers are dedicated to the creative pursuit and advancement of the arts, in terms of their own individual creation and, also, in edification of the audience. The performing arts faculty at Rowan consists of some of the finest arts professionals in the nation, all dedicated to fostering a creative, productive atmosphere in which all of the arts can flourish.
Program Major and Minors
Major programs consist of a Bachelor of Arts in Dance, Music and Theatre Arts; and a Bachelor of Music, Bachelor of Music Education and a Bachelor of Science in Music Industry. Minor and Concentration programs are available in Dance, Music and Theatre.

Dual Majors in Teaching
Music majors can apply for a dual major in Education. Students must complete the general education and other requirements specified by the appropriate departments within the College of Education. Theatre majors interested in teaching can apply to the graduate MST in Subject Matter Education: Theatre Education upon successful completion of the BA in Theatre.

Requirements
At Rowan, we recognize and embrace the importance of the general education curriculum in all academic programs. Obtaining the Bachelor of Arts degree in an arts area broadens the background of the student, establishing a foundation for further study in many diverse areas. Of the 120-135 semester hours to be completed for the BA, at least 45 shall be at the 300 or 400 level and at least 90 shall be in courses using the A-F grading system. Core Foundation Courses in each major are specified within each department.

Departments
The College Performing Arts consists of two departments: Music, and Theatre/Dance.

Department of Music
Rick Dammers
Chair
Wilson Hall
856.256.4557
dammers@rowan.edu

Mission
The Department of Music at Rowan University is a vibrant, creative community of performers, scholars, and educators that prepares students to be leaders in the music profession. Rowan's music programs enrich the lives of all students by offering courses and performances designed to inform, enlighten and elevate their creative sensibilities which, additionally, serve the broader community through performances, scholarship, and artistic offerings that inspire and touch the souls of its citizens.

Degrees
The undergraduate study of music can lead to a career as a performing musician, a career as music educator, graduate study in music, as well as a broader cultural knowledge appropriate for many other career options. The Department of Music offers a Bachelor of Music degree with program options in Composition, Jazz Studies, and Performance, designed to provide the initial preparation for careers as performers, composers, scholars and college teachers. The Bachelor of Music - Education specialization, taken as a dual major with the Bachelor of Arts in Education – Subject Matter Education, is designed to prepare students for a career in teaching music in the public schools and leads to a K-12 Music Teaching Certificate in the State of New Jersey. Students choose a specialization in instrumental, jazz, or vocal music education. The Bachelor of Arts in Music is a liberal arts program with a focus in music, designed for students who want to combine a broad academic background with sufficient musical training for further study in fields such as musicology, music criticism or music therapy. This program is for those who want a career outside of music performance or teaching. The Bachelor of Science in Music Industry program is designed to prepare students for careers in the commercial music industry. This program has two specializations: technology and music business. The Minor in Music is a flexible sequence of music courses, taken with a separate major outside music.

General Information
The Department of Music offers for music majors and minors, applied instruction in composition, brass (trumpet, horn, trombone, euphonium, tuba), guitar, jazz improvisation, keyboard (piano, organ, accordion), percussion, woodwinds (flute, clarinet, oboe, bassoon, saxophone), and voice. For admission to any of the Bachelor of Music, Bachelor of Arts, or the music minor degrees, an applicant must demonstrate, by audition, a high level of proficiency in some area of music performance. For admission to the Bachelor of Science in Music Industry, an applicant submits an essay, including links to relevant works or projects. A performance audition is not required for the Bachelor of Science in Music Industry program. Each semester, participation in ensembles and attendance at master classes and departmental recitals is required of all BA/BM music students. All Bachelor of Music students present a senior recital. Requirements for the Bachelor of Music in Performance and Jazz Studies include a junior recital as well. Students in other disciplines are invited and encouraged to take part in ensembles and other activities within the Department of Music. The Department of Music is a fully accredited member of the National Association of Schools of Music and sponsors chapters of Grammy U, the National Association for Music Education (NAfME), Pi Kappa Lambda, Phi Mu Alpha Sinfonia, and Sigma Alpha Iota.
BACHELOR OF ARTS IN MUSIC
Larry DePasquale
Advisor
Wilson Hall
856.256.4896
depasquale@rowan.edu

General Education
All students must complete the University General Education requirements as described on page 33

Rowan Experience
All students must complete the Rowan Experience requirements as described on page 35

Major Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>MUS01.103</td>
<td>Major Applied Instrument 1</td>
</tr>
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<td>MUS01.104</td>
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<td>MUS01.203</td>
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<td>MUS01.303</td>
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<tr>
<td>MUS01.304</td>
<td>Major Applied Instrument 6</td>
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or

<table>
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<tr>
<th>Course Code</th>
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<td>Major Applied Voice 1</td>
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<td>Major Applied Voice 2</td>
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<tr>
<td>MUS01.109</td>
<td>Major Applied Voice 3</td>
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<td>MUS01.210</td>
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<td>MUS01.309</td>
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<td>MUS97.100</td>
<td>Piano Class I</td>
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<td>Piano Class II</td>
</tr>
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<td>MUS04.130</td>
<td>Music Theory I - Written</td>
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<tr>
<td>MUS04.131</td>
<td>Music Theory II - Written</td>
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<tr>
<td>MUS04.132</td>
<td>Music Theory I - Aural</td>
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<td>MUS04.133</td>
<td>Music Theory II - Aural</td>
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<tr>
<td>MUSG06.102</td>
<td>General Music History</td>
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<tr>
<td>MUSG06.447</td>
<td>Music in World Cultures</td>
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or

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<td>MUSG06.115</td>
<td>Growth and Development of Jazz</td>
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<tr>
<td>MUS01.050-MUS01.057</td>
<td>Student Recitals</td>
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<td>Ensembles (as assigned by audition)</td>
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Choose two (2)

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<tr>
<td>MUSG06.214</td>
<td>Development of Musical Styles I</td>
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<tr>
<td>MUSG06.215</td>
<td>Development of Musical Styles II</td>
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<tr>
<td>MUSG06.335</td>
<td>Development of Musical Styles II</td>
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Choose five (5) credits:

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<td>MUS04.110</td>
<td>Sight Singing and Ear Training</td>
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<tr>
<td>MUS04.118</td>
<td>Music Fundamentals</td>
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<tr>
<td>MUS04.240</td>
<td>Music Theory III - Written</td>
</tr>
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<td>MUS04.241</td>
<td>Music Theory IV - Written</td>
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<tr>
<td>MUS04.242</td>
<td>Music Theory III - Aural</td>
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<td>MUS04.243</td>
<td>Music Theory IV - Aural</td>
</tr>
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<td>MUS97.200</td>
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<td>MUS97.201</td>
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<tr>
<td>MUS04.350</td>
<td>Computer Technology and Music I</td>
</tr>
<tr>
<td>MUS04.351</td>
<td>Computer Technology and Music II</td>
</tr>
</tbody>
</table>

Total Program 120 s.h.

BACHELOR OF MUSIC - MUSIC EDUCATION
Larry DePasquale
Advisor
Wilson Hall
856.256.4896
depasquale@rowan.edu

Cristine Mason
Advisor
**Teacher Certification K-12 with specializations: Instrumental, Vocal, Jazz**

### General Education

All students must complete the University General Education requirements as described on page 33.

### Rowan Experience

All students must complete the Rowan Experience requirements as described on page 35.

### Major Requirements

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<tr>
<th>Course Code</th>
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<td>SPED08.130</td>
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<td>FNDS21.230</td>
<td>Characteristics of Knowledge Acquisition</td>
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<td>FNDS21.150</td>
<td>History of American Education</td>
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<td>READ30.319</td>
<td>Teaching Reading and Writing in the Content Area</td>
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<tr>
<td>SMED01.120</td>
<td>Foundations of Music Education</td>
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<tr>
<td>SECD03.350</td>
<td>Teaching Students of Ling. &amp; Cult. Diversity</td>
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<td>EDUC01.270</td>
<td>Teaching in Learning Community I</td>
</tr>
<tr>
<td>EDUC01.284</td>
<td>Teaching in the Learning Community II (music)</td>
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<tr>
<td>SMED32.412</td>
<td>Clinical Practice Seminar in Music</td>
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<td>SMED32.413</td>
<td>Clinical Practice: Elementary Music</td>
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<tr>
<td>SMED32.414</td>
<td>Clinical Practice: Secondary Music</td>
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<tr>
<td>SMED32.329</td>
<td>Teaching/Learning Music A: Elem. General Music</td>
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<td>SMED32.330</td>
<td>Teaching/Learning Music B: Vocal Methods and Tech(Vocal only)</td>
</tr>
<tr>
<td>SMED32.331</td>
<td>Teaching/Learning Music B: Inst. Methods and Tech(Jazz/Inst. only)</td>
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<tr>
<td>SMED31.420</td>
<td>Educational Technology</td>
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<tr>
<td>MUSG06.214</td>
<td>Development of Musical Styles I (Instrumental and Vocal only)</td>
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<td>Development of Musical Styles II</td>
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or

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<td>MUS01.409</td>
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<td>Jazz Education Seminar (Jazz)</td>
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<td>Piano Class III</td>
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<td>MUS97.201</td>
<td>Piano Class IV</td>
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<td>MUS97.400</td>
<td>Voice Class (except Vocal)</td>
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<td>MUS97.212</td>
<td>Instrumental Conducting I (Instrumental and Jazz)</td>
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<tr>
<td>MUS97.312</td>
<td>Instrumental Conducting II (Instrumental and Jazz)</td>
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<tr>
<td>MUS97.213</td>
<td>Choral Conducting I (Vocal)</td>
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<td>Choral Conducting II (Vocal)</td>
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<td></td>
<td>Ensemble I-VIII (determined by audition)</td>
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</table>

64-75 s.h.
### Bachelor of Music - Performance

**Advisor**
Larry DePasquale

Wilson Hall
856.256.4896
depasquale@rowan.edu

Keyboard, Instrumental, or Vocal

136 or 137 s.h.

**General Education**
All students must complete the University General Education requirements as described on page 33

**Rowan Experience**
All students must complete the Rowan Experience requirements as described on page 35

**Major Requirements**
93-94 s.h.

<table>
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<td>MUSG06.335</td>
<td>Development of Musical Styles III</td>
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<td>Music Theory IV - Written</td>
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<td>MUS01.201</td>
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<td>MUS01.402</td>
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<td>or</td>
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<td>MUS01.107</td>
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<tr>
<td>MUS01.108</td>
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<td>MUS01.207</td>
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<td>MUS01.208</td>
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<td>MUS01.107</td>
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<td>MUS01.308</td>
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<td>MUS01.407</td>
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<td>MUS01.408</td>
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<td>MUS97.100</td>
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<tr>
<td>MUS97.212</td>
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<td>MUS97.312</td>
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<td>or</td>
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<td>MUSG06.447</td>
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<td>MUS04.450</td>
<td>Form and Analysis (except Vocal Majors)</td>
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<tr>
<td>MUS01.050 - MUS01.057</td>
<td>Student Recitals</td>
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**Ensembles**

*Two ensembles per semester, as assigned by audition*

**Vocal Specialization Only**

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<tr>
<td>MUS97.114</td>
<td>Secondary Applied Instrument I (Piano)</td>
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<td>MUS97.115</td>
<td>Secondary Applied Instrument II (Piano)</td>
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<td>MUS04.202</td>
<td>Language Through Vocal Repertory (Italian)</td>
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<td>MUS04.203</td>
<td>Language Through Vocal Repertory (French)</td>
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<tr>
<td>MUS04.204</td>
<td>Language Through Vocal Repertory (German)</td>
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<td>MUSJ2.218</td>
<td>Vocal Pedagogy</td>
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<tr>
<td>MUS04.403</td>
<td>Choral Arranging</td>
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<tr>
<td>MUS02.218</td>
<td>Vocal Literature</td>
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**Keyboard Specialization Only**

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<tr>
<td>MUSG06.120</td>
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</tr>
<tr>
<td>MUS02.219</td>
<td>Piano Pedagogy and Accompanying</td>
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</tbody>
</table>

**BACHELOR OF MUSIC - JAZZ STUDIES**

Larry DePasquale  
Advisor  
Wilson Hall  
856.256.4896  
depasquale@rowan.edu

**Jazz Studies Curriculum**

140 s.h.

**General Education**

All students must complete the University General Education requirements as described on page 33

**Rowan Experience**

All students must complete the Rowan Experience requirements as described on page 35

**Major Requirements**

101 s.h.

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<tr>
<th>Course Code</th>
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<td>MUS04.430</td>
<td>Secondary Applied Piano II (Jazz)</td>
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</table>
Ensembles (by audition)

- MUS01.050 - MUS01.057 Student Recitals
- MUS04.350 Computer Technology and Music I
- MUS04.344 Audio Recording
- MUS04.411 Project Audio Recording
- MUS32.335 The Business of Music
- MUS04.333 Stage Band Rehearsal Techniques
- MUSG06.215 Development of Musical Styles II
- MUSG06.335 Development of Musical Styles III
- MUS04.361 Writing in Traditional and Contemporary Styles
- MUS04.361 Arranging for Large/Small Jazz Ensembles

**BACHELOR OF MUSIC - COMPOSITION**
Larry DePasquale
Advisor
Wilson Hall
856.256.4896
depasquale@rowan.edu

Music Composition 137 s.h.

**General Education**
All students must complete the University General Education requirements as described on page 33

**Rowan Experience**
All students must complete the Rowan Experience requirements as described on page 35

**Major Requirements** 90 s.h.

- MUSG06.214 Development of Musical Styles I
- MUSG06.215 Development of Musical Styles II
- MUSG06.335 Development of Musical Styles III
- MUS04.125 Music Composition I
- MUS04.225 Music Composition III
- MUS04.226 Music Composition IV
- MUS04.325 Music Composition V
- MUS04.326 Music Composition VI
- MUS04.425 Music Composition VII
- MUS04.426 Music Composition VIII
- MUS04.130 Music Theory I - Written
- MUS04.131 Music Theory II - Written
- MUS04.132 Music Theory I - Aural
- MUS04.133 Music Theory II - Aural
- MUS04.240 Music Theory III - Written
- MUS04.242 Music Theory III - Aural
- MUS04.241 Music Theory IV - Written
- MUS04.243 Music Theory IV - Aural
- MUS08.156 - MUS08.163 Contemporary Music Ensemble
- MUS97.100 Piano Class I
- MUS97.101 Piano Class II
- MUS97.200 Piano Class III
- MUS97.201 Piano Class IV
- MUS01.105 Secondary Applied Instrument I
- MUS01.106 Secondary Applied Instrument II
- MUS01.205 Secondary Applied Instrument III
- MUS01.206 Secondary Applied Instrument IV
- MUS01.305 Secondary Applied Instrument V
- MUS01.306 Secondary Applied Instrument VI
- MUS01.405 Secondary Applied Instrument VII
- MUS01.406 Secondary Applied Instrument VIII
- MUS97.212 Conducting - Instrumental I
- MUS97.213 Conducting - Choral I
- MUS04.450 Form and Analysis
- MUS04.404 Orchestration
- MUS04.350 Computer Technology and Music I
- MUS04.455 Counterpoint
- MUS04.403 Choral Arranging
BACHELOR OF SCIENCE IN MUSIC INDUSTRY
Larry DePasquale
Advisor
Wilson Hall
856.256.4896
depasquale@rowan.edu

General Education
All students must complete the University General Education requirements as described on page 33

Communications Bank

COMP01.111 College Composition I 3 s.h.
COMP01.112 College Composition II 3 s.h.

Science/Math Bank
Choice from Approved General Education Courses (3 s.h.)
Suggested Lab Science:
PHYS00.175 Physics of Sound and Music 4 s.h.

Social and Behavioral Science Bank
Choice from Approved General Education Courses (3 s.h.)
ENT06.240 Entrepreneurship & Innovation 3 s.h.

History/Humanities
Choice from Approved General Education Courses (6 s.h.)

Non-Program Courses
Choice from Approved General Education Courses (8 s.h.)

JRN02.210 Journalistic Writing for Non-majors 3 s.h.

Rowan Experience
All students must complete the Rowan Experience requirements as described on page 35

CMS04.205 Public Speaking 3 s.h.

Artistic/Creative Experience
Choice from Approved General Education Courses (3 s.h.)

Major Requirements 47 s.h.

MUS40.111 Business of Music I
MUS40.121 Audio Recording I
MUS40.122 Computer Technology And Music I
MUS40.223 Survey of Record Production
MUS40.413 Business of Music II
MUS40.211 Music Industry Internship I
MUS40.311 Music Industry Internship II
MUS40.212 Capstone Project in Music Industry I
MUS40.413 Capstone Project in Music Industry II
MUS40.212 Piano I For Non-Music Majors
or MUS97.229 Guitar Class I
MUS40.110 Sight Singing and Ear Training
MUS40.130 Music Theory I Written
MUS40.132 Music Theory I Aural
MUS40.201 History of Popular Music
MUS40.202 Introduction to Music Performance
ACCO3.405 Foundations of Accounting
MKTO9.200 Principles of Marketing
MGT98.242 Legal Environment of Business

Music Business Specialization 15 s.h.

MUS40.212 Music Publishing
Touring and Concert Promotion
Entrepreneurship in the Music Industry
Artist Services I
Artist Services II
Artist Services III

or

Music Technology Specialization
Audio Recording II
Computer Technology And Music II
Audio for Video
Sound Reinforcement I
Producing the Record

and

Free Electives Bank
Choose 6 credits

Suggested Free Electives:
Game Audio
Mixing and Mastering
Sound Synthesis and Remixing
Recording Studio Design and Maintenance
Public Relations in the Music Industry
Songwriting
Music Industry Contracts and Copyrights
New Venture Development
Internet Marketing
Management of Advertising and Promotion
Signals, Systems And Music

Any course from the Music Business or Music Technology specialization

Program Electives / Music Bank
Choose 10 credits from:
General Music History
Songwriting
Music Composition I
Music Composition II
Growth & Development of Jazz
The Singing Music of African-Americans
Music in World Cultures: Asia & Oceania
Music in World Cultures: Africa, India, Near & Middle East
Acoustics of Music
Music and the Theater
Piano II For Non-Music Majors
Guitar Class II
Music Theory II - Written
Music Theory II - Aural
Music Fundamentals
Development Of Musical Styles And Form I
Development Of Musical Styles And Form II
Music Fundamentals
Chamber Music I
Chamber Music II
Chamber Music III
Chamber Music IV
Contemporary Music Ensemble
Wind Ensemble
String Ensemble
College Band
Jazz Band
Orchestra
Lab Band
Concert Choir
College of Performing Arts

MUS04.154  Women’s Chorus
MUS04.155  Men’s Chorus

Total Program  120 s.h.

MINOR IN MUSIC
Larry DePasquale, Advisor
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856.256.4896
depasquale@rowan.edu

Music Minor (for Non-Music Majors)  34-35 s.h.
Requirements  25-26 s.h.

MUS01.105  Secondary Applied Instrument 1
MUS01.106  Secondary Applied Instrument 2
MUS01.205  Secondary Applied Instrument 3
MUS01.206  Secondary Applied Instrument 4
MUS01.305  Secondary Applied Instrument 5
MUS01.306  Secondary Applied Instrument 6

or

MUS01.111  Secondary Applied Voice 1
MUS01.112  Secondary Applied Voice 2
MUS01.211  Secondary Applied Voice 3
MUS01.212  Secondary Applied Voice 4
MUS01.311  Secondary Applied Voice 5
MUS01.312  Secondary Applied Voice 6

Choice I:

MUS04.118  Music Fundamentals
MUS04.110  Sight Singing
MUS04.130  Music Theory I-Written
MUS04.132  Music Theory I-Aural

or

Choice II:

MUS04.130  Music Theory I-Written
MUS04.132  Music Theory I-Aural
MUS04.131  Music Theory II-Written
MUS04.133  Music Theory I-Aural
MUS97.100  Piano Class I (except Piano SAI) and
MUS97.101  Piano Class II (except Piano SAI)
MUSG06.102  General Music History
MUS04.050  Student Recitals (six semesters)

Ensemble I-VI (by audition, see Advisor)

Electives  Choose 9 s.h. from the following:

Ensemble Choice

MUS04.240  Music Theory III - Written
MUS04.242  Music Theory III - Aural
MUS04.241  Music Theory IV - Written
MUS04.243  Music Theory IV - Aural
MUSG06.214  Development of Musical Styles I
MUSG06.215  Development of Musical Styles II
MUSG06.335  Development of Musical Styles III
MUS04.450  Form and Analysis
MUS97.212  Conducting-Instrumental I
MUS97.312  Conducting-Instrumental II
MUS97.213  Conducting-Choral I
MUS97.313  Conducting-Choral II
MUS04.404  Orchestration
MUS04.403  Vocal Arranging
MUSG06.100  Signals, Systems and Music
MUSG06.447  Music in World Cultures: Asia & Oceania
MUSG06.448  Music in World Cultures: Africa India, Near & Middle East
MUS04.350  Computer Technology Music I
MUSG06.115  Growth and Development of Jazz
The Department of Theatre and Dance educates students in the contemporary practice of theatre and dance through a liberal arts curriculum. Our programs offer a path to intellectual and artistic growth and development by providing a broad-based, rigorous, and innovative education in theatre and/or dance. We offer a diverse selection of productions each year in our annual 4 show mainstage season and regularly highlight new or devised work created in collaboration with world-class professional artists. Undergraduate students from other majors may also participate in our interdisciplinary activities by choosing to minor, or concentrate, in theatre or dance. Entrance into the BA programs requires an audition.

A Bachelor of Arts in Theatre consists of 39 credits in our major, 51 related general elective credits, and 30 credits of free electives. This flexible, dynamic, movement-driven program is accredited by the National Association of Schools of Theatre. The BA in Theatre offers four tracks (Acting, Musical Theatre, Pre-Teaching, and Design/Technical) that share core theatre arts courses while allowing students specialized study in their chosen field of interest. The free elective hours allow students to double-major, select a related minor, or take additional advanced classes within the major.

A full range of theatre and dance production opportunities supplements coursework and allows students to develop performance and production skills by creating live theatre. All students may participate in the department’s annual faculty directed mainstage and/or student productions. These projects provide students with practical experience as performers, directors, designers and technicians, and allow them to creatively apply methods and skills learned in the classroom.

The Bachelor of Arts in Dance consists of 39 credits in our major, 51 related general elective credits, and 30 credits of free electives. The Bachelor of Arts in Dance is a professionally oriented performance degree that integrates the study of dance within a liberal arts curriculum. The program provides students with the means to develop their technical and creative potential while learning to express themselves as diverse and informed artists. Our theoretical and practical approach to the art form strives to stimulate physical, emotional, intellectual, and spiritual growth; thus preparing students for professional careers in dance. The program is grounded in modern practice and offers courses in dance technique, creative studies, theory and performance practicums. The free elective hours can be used to complete a minor in a related field. All students may participate in one or more of the department’s performances that provide students with practical experience as and allow them to creatively apply the methods and skills learned in the classroom.

The Department of Theatre and Dance is currently housed in several campus buildings including Wilson Hall, Bunce Hall, and Memorial Hall. Bunce Hall contains the historic 375-seat Tohill Theatre, a well-equipped costume and scene shop, prop and costume storage, a computer-equipped design studio, and acting studios. Memorial Hall houses our two dance studios. Departmental offices and mainstage performances are in Wilson Hall, which contains a 900-seat proscenium theatre, smart classrooms and an acting studio.

Admission to the department requires an on-campus interview and audition or portfolio review. Students applying for the BA in Dance must take a master class and be interviewed by faculty. Students auditioning for the Acting Track, and Pre-Teaching Track must present two contrasting one-minute monologues. Students auditioning for the Musical Theatre Track must present 16 bars from two contrasting musicals and a monologue. Students seeking admission to the Design/Technical Track must present a portfolio or complete an interview demonstrating their experience and ability. For specific information on the interview or audition requirements, visit www.rowan.edu/theatredance, or call or email the Department of Theatre and Dance. In order to gain the maximum benefit from the academic flexibility of these degree tracks, students must arrange for regular and careful academic advisement with department faculty.

The Minor in Theatre consists of 19 semester hours of study: 10 semester hours of required courses, plus 9 hours of electives and provides students study in the practical and scholarly aspects of theatrical art. Students in any program are eligible for the Minor in Theatre and must formally apply and be advised before completing the course requirements.

The Minor in Dance provides a flexible program of study that combines technique with theory courses. The minor consists of 18-24 hours of study: the core course, Elements of Dance, plus 6-12 hours of technique and 6-12 hours of theory.

The Dance Concentration is designed for students in the related arts and humanities disciplines interested in pursuing dance as a supplement to another major. The courses provide a solid framework for students with selected interests in performance, history, research and education.

The Theatre Design Concentration provides non-majors with sufficient coursework to obtain positions as a set, lighting designer and/or general theatrical technician.

The Master of Science in Teaching Theatre Education is a program in the College of Education that offers K-12 teaching certification and can be taken as a fifth year option.
The MA in Theatre: Arts Administration is an online program that provides students the administrative, business and marketing skills needed to start their own company or secure positions in regional and national arts organizations. Contact our department for advisement.

**BACHELOR OF ARTS IN THEATRE**

**Elisabeth Hostetter, Ph.D.**

Advisor
209, Wilson Hall
856.256.4034
hostetter@rowan.edu

The Rowan Bachelor of Arts in Theatre features four distinct tracks in Acting, Musical Theatre, Theatre Education/Pre-Teaching, and Design/Technical Theatre, which prepare students to work in the professional field or to pursue graduate study.

**General Education**

**Total General Education Credits** 51 s.h.

All students must complete the University General Education requirements as described on page 33

**Rowan Experience**

All students must complete the Rowan Experience requirements as described on page 35

**Major sequence of required courses** 39 s.h.

**Core Courses all tracks** 24 s.h.

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<td>Colloquium I</td>
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<td>Colloquium VI</td>
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<td>Introduction to Theatre and Dance</td>
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<td>THD07.230</td>
<td>Stagecraft Fundamentals</td>
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<td>THD07.203</td>
<td>Costuming I</td>
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<td>THD07.105</td>
<td>Introduction to Performance</td>
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<td>THD07.460</td>
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Any three (3) of the following courses:

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<tbody>
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<td>THD07.339</td>
<td>History of the Theatre to 1700</td>
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<tr>
<td>THD07.340</td>
<td>History of the Theatre from 1700 to 1956</td>
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<td>THD07.440</td>
<td>Contemporary World Theatre (WI)(Lit)</td>
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<td>THD08.436</td>
<td>Dance History</td>
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**Acting Track** 15 s.h.

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<td>Dance Improvisation I</td>
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<td>THD08.141</td>
<td>Dance Improvisation II</td>
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<td>THD07.103</td>
<td>Voice for the Stage</td>
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<tr>
<td>THD08.126</td>
<td>Movement for the Actor</td>
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<tr>
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**Musical Theatre Track** 15 s.h.

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<tr>
<td>THD07.235</td>
<td>Acting I</td>
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<tr>
<td>THD07.360</td>
<td>Musical Theatre</td>
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<td>THD07.363</td>
<td>Singing for the Actor</td>
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<td>THD08.222</td>
<td>Dance for the Musical Theatre</td>
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**Pre-Teaching Track** 15 s.h.

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<td>THD07.430</td>
<td>Directing I</td>
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</tbody>
</table>

**Design/Tech Track** 15 s.h.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>THD07.232</td>
<td>Stagecraft III</td>
</tr>
<tr>
<td>THD07.233</td>
<td>Stagecraft IV</td>
</tr>
</tbody>
</table>
Select 3 s.h. from the following electives:

- THD07.350 Scenic Design
- THD07.353 Lighting Design
- THD07.356 Costume Design
- THD07.231 Stagecraft II
- THD07.436 Stagecraft VII
- THD07.437 Stagecraft VIII

Total Credits in BA Degree in Theatre: 120 s.h.

MINOR IN THEATRE

Anthony Hostetter, Ph.D.
Advisor
Wilson Hall
856.256.3394
hostettera@rowan.edu

The Minor in Theatre provides students practical and scholarly courses in Theatrical Arts. Students in any program can interview for a Minor in Theatre and should formally apply and be advised before completing the requirements.

The Minor in Theatre Arts consists of 19 semester hours of study: 10 semester hours of required courses, plus 9 hours of electives.

Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>THD07.111</td>
<td>Colloquium I</td>
</tr>
<tr>
<td>THD07.112</td>
<td>Colloquium II</td>
</tr>
<tr>
<td>THD07.130</td>
<td>The Living Theatre</td>
</tr>
<tr>
<td>THD07.215</td>
<td>Experiencing Acting</td>
</tr>
<tr>
<td>or THD07.203</td>
<td>Costuming I</td>
</tr>
<tr>
<td>and THD07.205</td>
<td>Costuming II</td>
</tr>
</tbody>
</table>

Electives: Choose two (2) of the following:

- THD07.250 Children's Theatre
- THD07.360 Musical Theatre
- THD07.350 Scene Design Studio
- THD07.353 Stage Lighting
- THD07.103 Voice for the Stage
- THD07.235 Acting I
- THD07.430 Directing I
- THD07.365 Theatre Management
- THD07.356 Costume Design
- THD07.310 Foundations of Design
- THD07.435 Creative Dramatics
- THD08.135 Elements of Dance
- THD07.105 Introduction to Performance (based on permission of the instructor)
- THD08.126 Movement for the Actor
- THD07.405 Seminar in Theatre
- THD07.103 Voice for the Stage
- THD07.231 Stagecraft II
- THD07.232 Stagecraft III (1.5)
- THD07.233 Stagecraft IV (1.5)

History/Literature Elective: Choose one (1) of the following:

- THD07.339 History of the Theatre to 1700
- THD07.340 History of the Theatre 1700 to 1956
- THD07.440 Contemporary World Theatre (WI)

THEATRE DESIGN CONCENTRATION

Marketa Fantova
Advisor
237 Wilson Hall
856.256.4232
fantova@rowan.edu
This concentration provides art majors with sufficient coursework in theatre design to seek a position as a set and/or lighting designer or general theatrical technician.

**Program Requirements**

Students may follow any BA in Art degree program, but some courses in Puppetry are recommended. In place of free electives, the following courses are required:

**Concentration Courses** 18 s.h.  
Required 12 s.h.  

- THD07.310 Foundations of Theatrical Design (3 s.h.)  
- THD07.230 Stagecraft Fundamentals (3 s.h.)  
- THD07.205 Costuming I (1.5 s.h.)  
- THD07.204 Costuming II (1.5 s.h.)  
- THD07.232 Stagecraft III (1.5 s.h.)  
- THD07.233 Stagecraft IV (1.5 s.h.)

**Elect** 3 s.h. of the following graphics electives:  
- THD07.300 Drawing & Rendering (3.s.h.)  
- THD07.305 Drafting & Model Making (3 s.h.)

**Elect** 3 s.h. of the following design electives:  
- THD07.350 Scene Design (3 s.h.)  
- THD07.353 Lighting Design (3 s.h.)  
- THD07.356 Costume Design (3 s.h.)

The courses, THD07.130 The Living Theatre or THD07.201 Introduction to Theatre and Dance are recommended in order to give the student a broad introduction and background in the art of theatre.

**BACHELOR OF ARTS IN DANCE**

Leslie Elkins, Ph.D.  
Advisor  
Memorial Hall  
856.256.4231  
elkins@rowan.edu

The Bachelor of Arts in Dance is a professionally oriented performance degree that integrates the study of dance within a liberal arts curriculum. The program provides students with the means to develop their technical and creative potential while learning to express themselves as diverse and informed artists. Our theoretical and practical approach to the art form strives to stimulate physical, emotional, intellectual, and spiritual growth; thus preparing the student for professional careers in dance.

**General Education 51 s.h.**

All students must complete the University General Education requirements as described on page 33

**Rowan Experience**

All students must complete the Rowan Experience requirements as described on page 35

**Major sequence of required courses** 39 s.h.

**Dance Technique** - 12 s.h.  
- THD08.237 Modern II (3.0)  
- THD08.377 Modern III (3.0)  
- THD08.378 Modern IV (3.0)  
- THD08.410 Advanced Styles (3.0)

**Creative Studies** - 12 s.h.  
- THD08.140 Improvisation I (1.5)  
- THD08.140 Improvisation II (1.5)  
- THD08.225 Dance Composition (3.0)  
- THD08.337 Choreography (3.0)  
- THD07.450 Dance Theater Workshop (3.0)

**Theory** - 9 s.h.  
- THD08.436 Dance History (3.0)  
- THD08.465 Dynamics of Human Movement (3.0)

*Select one of the following:  
THD07.230 Stagecraft Fundamentals (3.0)  
or THD07.203 Costuming I (1.5)  
and THD07.204 Costuming II (1.5)*

**Performance and Capstone** - 6 s.h.  
- THD07.724 Practicum Production (0.5)  
- THD07.724 Practicum Production (0.5)
The Minor in Dance provides a flexible program of study that combines technique with theory. The Minor in Dance consists of 18-24 hours of study: the core course Elements of Dance, plus 6-12 hours of dance technique and 6-12 hours of dance theory.

**Required**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>THD08.135</td>
<td>Elements of Dance</td>
</tr>
</tbody>
</table>

**Electives — Technique**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>THD08.146</td>
<td>World Dance Forms</td>
</tr>
<tr>
<td>THD08.202</td>
<td>Fundamentals of Tap</td>
</tr>
<tr>
<td>THD08.203</td>
<td>Advanced Tap Dance</td>
</tr>
<tr>
<td>THD08.236</td>
<td>Modern Dance I</td>
</tr>
<tr>
<td>THD08.237</td>
<td>Modern Dance II</td>
</tr>
<tr>
<td>THD08.377</td>
<td>Modern Dance III</td>
</tr>
<tr>
<td>THD08.246</td>
<td>Fundamentals of Ballet Dance</td>
</tr>
<tr>
<td>THD08.247</td>
<td>Advanced Ballet</td>
</tr>
<tr>
<td>THD08.256</td>
<td>Fundamentals of Jazz Dance</td>
</tr>
<tr>
<td>THD08.257</td>
<td>Advanced Jazz Dance</td>
</tr>
<tr>
<td>THD08.222</td>
<td>Dance for the Musical Stage</td>
</tr>
<tr>
<td>THD08.142</td>
<td>Contact Improvisation</td>
</tr>
</tbody>
</table>

**Electives — Theory**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>THD08.225</td>
<td>Dance Composition I</td>
</tr>
<tr>
<td>THD08.337</td>
<td>Choreography</td>
</tr>
<tr>
<td>THD08.436</td>
<td>Dance History</td>
</tr>
<tr>
<td>THD08.315</td>
<td>Creative Dance for Children</td>
</tr>
<tr>
<td>THD08.465</td>
<td>Dynamics of Human Movement</td>
</tr>
<tr>
<td>THD08.126</td>
<td>Movement for the Actor</td>
</tr>
<tr>
<td>THD07.338</td>
<td>Touring the Theatre Production</td>
</tr>
<tr>
<td>THD08.270</td>
<td>Lecture/Dem. Production</td>
</tr>
</tbody>
</table>

The Dance Concentration is a required 24 s.h. course sequence designed expressly for students interested in pursuing dance in addition to another career. The courses provide a solid framework through which students may pursue selected interests in the areas of performance, history, research and education.

**Dance Concentration Sequence**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>THD08.135</td>
<td>Elements of Dance</td>
</tr>
<tr>
<td>THD08.236</td>
<td>Modern Dance I</td>
</tr>
<tr>
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<tr>
<td>THD08.246</td>
<td>Fundamentals of Ballet Dance</td>
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<tr>
<td>THD08.247</td>
<td>Advanced Ballet</td>
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<tr>
<td>THD08.225</td>
<td>Dance Composition I</td>
</tr>
<tr>
<td>THD08.337</td>
<td>Choreography</td>
</tr>
<tr>
<td>THD08.436</td>
<td>Dance History</td>
</tr>
</tbody>
</table>
College of Humanities and Social Sciences

Nawal Ammar
Dean
Bunce Hall 257
856.256.5840
ammar@rowan.edu

Larry Butler
Associate Dean
Bunce Hall 257
856.256.5842
butlerl@rowan.edu

Stephen Fleming
Assistant Dean
Bunce Hall 257
856.256.5844
flemings@rowan.edu

Mission
The College of Humanities and Social Sciences affirms the humanities and social sciences as the core of liberal arts education and the foundation of professional preparation. The College is committed to excellence in instruction, research, and scholarship. Its disciplines promote extensive interaction between faculty and students, attention to individual development of critical and creative thinking, the building of interdisciplinary communities through partnerships both internal and external, and the development of new knowledge through research and creative activities. The College plays an essential role in Rowan’s mission: to educate students who remain lifelong learners and ethically responsible citizens, sensitive to cultural and ethnic diversity and engaged in advancing our global society.

Departments
The departments in the College are: English, Foreign Languages and Literatures, History, Law and Justice Studies, Philosophy and Religion Studies, Political Science and Economics, and Sociology and Anthropology.

Services
Liberal Arts and Sciences Institute for Research and Community Service
The College operates the Liberal Arts and Sciences Institute for Research and Community Service, which offers a variety of seminars and workshops, as well as research support and community assistance.

CHSS Match Internship Program
In partnership with the Career Management Center, the College of Humanities and Social Sciences coordinates an internship program through which students can earn up to 12 credits through approved internship experiences.

Programs Offered
The College provides General Education courses in the humanities and the social sciences. These courses give our students a breadth of knowledge while developing skills in oral and written communication, critical thinking, and research. Our students go on to acquire a depth of knowledge in one of the major programs in the College. Expert faculty who have distinguished themselves in their disciplines through research, scholarship, and other professional activities help our students learn both in the classroom, through engaging lectures and interactive pedagogical approaches, and outside of the classroom, through research projects. Our faculty care genuinely about the success of our students and make themselves available for advising, mentoring, and academic discussion. Students interested in pursuing a law degree may work with the College’s pre-law advisor and become involved with the Pre-Law Society to prepare for application to law school. The College also houses the Exploratory Studies program for students who have not yet declared a major.

The College offers the following degree and non-degree programs:

Bachelor of Arts (B.A.)
Africana Studies
American Studies
Disaster Preparedness & Emergency Management
Economics
  * Specialization in Public Policy
English
History
- Specialization in European/Ancient History
- Specialization in Global History
- Specialization in United States History

Human Services
- Specialization in Administration
- Specialization in Criminal Justice
- Specialization in Direct Services

International Studies
- Specialization in Asian Studies
- Specialization in European & Russian Studies
- Specialization in Global & Comparative Perspectives
- Specialization in International Business & Economics
- Specialization in Latin American & Iberian Studies
- Specialization in Middle East & African Studies

Law & Justice Studies

Liberal Studies: Humanities/Social Science

Modern Languages & Linguistics

Philosophy & Religion Studies
- Specialization in Philosophy
- Specialization in Religion Studies

Political Science
- Specialization in Politics of Race, Class & Gender
- Specialization in Public Policy

Sociology
- Specialization in Anthropology
- Specialization in Applied Sociology

Spanish

Bachelor of General Studies (B.G.S.)

Minors
Economics
English
French
German Studies
History
Law & Justice Studies
Philosophy
Philosophy & Religion Studies
Political Science
Romance Languages
Sociology
Spanish

Concentrations
African-American Studies
Anthropology
Asian Studies
Ethics
International Studies
Jewish Studies
Medical Social Science
Women’s & Gender Studies

Certificates of Undergraduate Studies (CUGS)
Applied Spanish
Chinese
Forensic Studies
French
German
Italian
Japanese
Middle East Studies
Peninsular Spanish Literature & Culture
Public History
Social Justice & Social Change
Spanish
Spanish American Literature & Culture

Exploratory Studies
Office of Academic Transition & Support Programs
Sean Hendricks
Coordinator
856.256.5655
hendrickss@rowan.edu

Exploratory Studies provides an academic home for students with less than 60 credits who have not yet selected a major. Students in the Exploratory Studies Program are housed within the College of Humanities and Social Sciences. Exploratory Studies students receive professional academic advising from the University Advising Center, and support from the Office of Academic Transition & Support Programs and many other offices on campus. First-year students in the Exploratory Studies Program, including those in the Rowan Select Program, will be enrolled in the Exploratory Studies Workshop in their first semester to familiarize them with Rowan’s many resources and to begin the process of exploring majors, careers, and their own strengths and interests. Students may remain in Exploratory Studies until they have completed 60 credits (including all transfer credits). Students who have not selected a major at that time will be placed in the Liberal Studies/Humanities and Social Science major. However, most students select a major well before 60 credits. For more information, see www.rowan.edu or email exploratorystudies@rowan.edu

Department of English
Joseph Coulombe
Chair
345 Bunce Hall
856.256.4832
coulombe@rowan.edu

The BA in English focuses on literature and writing about literature. The curriculum helps students develop analytic and communication skills by studying both canonical and non-canonical texts in the US, British, and world literary traditions. Students are introduced to a range of critical methodologies and literary theories. The English major prepares students to succeed as thoughtful and flexible professionals in careers such as teaching, publishing, journalism, law, library sciences, business, etc.

BACHELOR OF ARTS IN ENGLISH

General Education
All students must complete the University General Education Requirements as described on page 33

Rowan Requirements
All students must complete the Rowan Experience requirements as described on page 35

Major Requirements

Required

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL02.101</td>
<td>Literary Studies for English Majors</td>
</tr>
<tr>
<td>ENGL02.309</td>
<td>British Literature I</td>
</tr>
<tr>
<td>ENGL02.311</td>
<td>British Literature II</td>
</tr>
</tbody>
</table>
Of the remaining courses needed to fill the major requirements, at least two must be at the 300- or 400-level.

**Electives**

**Total Credits in Program** 120 s.h.

**MINOR IN ENGLISH**

The Minor in English is a modification of the major, reducing the requirements from 36 hours to 24, but providing a balanced, comprehensive cluster of courses.

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
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<tbody>
<tr>
<td>ENGL02.101</td>
<td>Literary Studies for English Majors</td>
</tr>
<tr>
<td>ENGL02.345</td>
<td>Seminar I</td>
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<tr>
<td>ENGL02.393</td>
<td>200-level elective</td>
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<tr>
<td></td>
<td>300/400-level elective</td>
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<tr>
<td></td>
<td>3-course survey sequence (Option A or Option B, below)</td>
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</tbody>
</table>

**Option A**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
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<tbody>
<tr>
<td>ENGL02.309</td>
<td>British Literature I</td>
</tr>
<tr>
<td>ENGL02.311</td>
<td>British Literature II</td>
</tr>
<tr>
<td>ENGL02.113</td>
<td>Readings in US Literature</td>
</tr>
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</table>

**Option B**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>ENGL02.313</td>
<td>US Literature I</td>
</tr>
<tr>
<td>ENGL02.315</td>
<td>US Literature II</td>
</tr>
<tr>
<td>ENGL02.110</td>
<td>Readings in British Literature</td>
</tr>
</tbody>
</table>

**Department of Foreign Languages and Literatures**

Marilyn S. Manley  
Chair  
Edgar F. Bunce Hall 312  
856.256.4500 X3466  
manley@rowan.edu

The Department offers a major in Spanish, a Coordinate Education major in Spanish, and an interdisciplinary major in Modern Languages and Linguistics. Within the Spanish Major, three Concentrations are available in: (1) Applied Spanish, (2) Peninsular Spanish Literature and Culture, and (3) Spanish American Literature and Culture. The Department also offers the Applied Spanish Program Sequence A for the Bachelor of Arts in Liberal Studies: Humanities / Social Sciences and participates in the interdisciplinary major in International Studies. Minors are offered by the Department in Spanish, French, and German Studies (interdisciplinary), and Romance Languages (Spanish, French and Italian). French courses are offered beyond the 18 s.h. minor, providing students with the opportunity to accumulate credits toward a second certification. The Department participates in both the interdisciplinary International Studies Concentration and the interdisciplinary Asian Studies Concentration. Additionally, the Department offers Certificates of Undergraduate Study (CUGS), of 12 s.h. each, in Spanish, French, German, Italian, Japanese, Chinese, Applied Spanish, Peninsular Spanish Literature and Culture, and Spanish American Literature and Culture. Visit [www.rowan.edu/foreignlanguage](http://www.rowan.edu/foreignlanguage) for the latest details.

**BACHELOR OF ARTS IN SPANISH**

Marilyn S. Manley, Laurie Kaplis-Hohwald and Sonia B. Spencer  
Advisors  
Edgar F. Bunce Hall 312  
856.256.4500 X3466  
manley@rowan.edu

The Spanish Major, which may be declared either in the Foreign Languages and Literatures Department in Bunce Hall, Suite 305, or with Christine Larsen-Britt (larsen-britt@rowan.edu) of the College of Humanities and Social Sciences Dean's Office, Bunce Hall, Suite 272, offers a flexible curriculum that makes it possible to develop an intensive study of the Spanish language, its civilization, cultures and literatures. It also provides a general background for future professional studies and advanced degrees in Spanish as well as careers in a variety of fields, such as social, administrative, and governmental work, and international business. Literature courses in English translation cannot be counted for credit toward the major nor any course to be transferred in that did not have Spanish as the language of instruction.

Within the Spanish Major, three Concentrations are available in: (1) Applied Spanish, (2) Peninsular Spanish Literature and Culture, and (3) Spanish American Literature and Culture. Each of these Concentrations seeks to provide recognition for students' completion of 12 s.h. in the respective subject area.
Literature courses in English translation cannot be counted for credit toward the major nor any course to be transferred in that did not have Spanish as the language of instruction. All incoming Spanish majors (Freshmen, Internal Transfers and Transfer Students) are required to take the "STAMP 4S" Spanish Placement Examination for initial placement, prior to registration; contact Esther Mas Serna (mas@rowan.edu), Spanish Placement Coordinator, for details. Students of Appreciation of Hispanic Literature (SPAN05.301) are required to take the STAMP 4S Placement Exam a second time for assessment and advisement purposes in the major. All courses must be passed with a letter grade of "C-" or better and no courses may be taken P/NC. Students may transfer credits into the Spanish Major, including from Study Abroad. Students planning to Study Abroad must meet with their Spanish Advisor in order to determine course equivalents.

**General Education**
All students must complete the University General Education requirements as described on page 33

**Rowan Experience**
All students must complete the Rowan Experience requirements as described on page 35

**Major Requirements**
39 s.h.

6 s.h. of a Foreign Language other than Spanish are required. Both courses must be in the same language.

Take all of the following courses:
- SPAN05.212 Spanish Reading and Composition
- SPAN05.301 Appreciation of Hispanic Literature
- SPAN05.320 Spanish Civilization and Culture
- SPAN05.324 Spanish American Civilization and Culture-M/G
- SPAN05.410 Advanced Spanish Grammar and Composition
  or SPAN05.409 Advanced Spanish Grammar and Composition-WI
- SPAN05.411 Advanced Spanish Conversation

**Group A: Applied Spanish Electives**
Choose one of the following:
- SPAN05.300 Spanish Phonetics
- SPAN05.302 Introduction to Hispanic Linguistics
- SPAN05.305 Oral Spanish
- SPAN05.312 Spanish for Business A
- SPAN05.313 Spanish for Medical Personnel
- SPAN05.314 Spanish for Business B
- SPAN05.340 Introduction to Spanish Translation
- SPAN05.440 Special Topics

**Group B: Peninsular Electives**
Choose one of the following:
- SPAN05.325 Readings in Contemporary Spanish Literature
- SPAN05.326 Spanish Novel
- SPAN05.381 Contemporary Spanish Theatre
- SPAN05.440 Special Topics
- SPAN05.481 Generation of '98
- SPAN05.482 Contemporary Spanish Novel

**Group C: Spanish American Electives**
Choose one of the following:
- SPAN05.327 Spanish American Poetry
- SPAN05.328 Spanish American Theatre
- SPAN05.383 Spanish American Short Story
- SPAN05.426 Spanish American Novel
- SPAN05.440 Special Topics

**Group D: Two additional electives from Group A, B, or C above.**

**Free Electives**

**Total Credits in Program**
120 s.h.

*College of Education K-12 Subject Matter Dual Degree Majors are required to take either Introduction to Hispanic Linguistics (SPAN05.302) or Introduction to Spanish Translation (SPAN05.340).*

**Spanish Major Concentration in Applied Spanish**
Within the Spanish Major, students may choose to earn a Concentration in Applied Spanish, representing the completion of 12 s.h. in Applied Spanish courses at the 200, 300 and 400 levels. The Concentration may be declared either in the Foreign Languages and Literatures Department in Bunce Hall, Suite 305, or with Christine Larsen-Britt (larsen-britt@rowan.edu) of the College of Humanities and Social Sciences Dean's Office, Bunce Hall, Suite 257. This Concentration in Applied Spanish will enhance the profile of all job applicants across all fields of study, as it represents the ability to apply one's knowledge of Spanish to a variety of career fields, including, for example, business, medicine,
translation, and education. The Concentration includes the following:

**Required Course**
- SPAN05.212 Spanish Reading and Composition

**Elective Courses**
Choose three of the following
- SPAN05.300 Spanish Phonetics
- SPAN05.302 Introduction to Hispanic Linguistics
- SPAN05.305 Oral Spanish
- SPAN05.312 Spanish for Business A
- SPAN05.313 Spanish for Medical Personnel
- SPAN05.314 Spanish for Business B
- SPAN05.320 Spanish Civilization and Culture
- SPAN05.324 Spanish American Civilization and Culture-M/G
- SPAN05.340 Introduction to Spanish Translation
- SPAN05.410 Advanced Spanish Grammar and Composition
  or SPAN05.409 Advanced Spanish Grammar and Composition-WI
- SPAN05.411 Advanced Spanish Conversation

**Spanish Major Concentration in Peninsular Spanish Literature and Culture**
Within the Spanish Major, students may choose to earn a Concentration in Peninsular Spanish Literature and Culture, representing the completion of 12 s.h. in related coursework at the 300 and 400 levels. The Concentration may be declared either in the Foreign Languages and Literatures Department in Bunce Hall, Suite 305, or with Christine Larsen-Britt (larsen-britt@rowan.edu) of the College of Humanities and Social Sciences Dean's Office, Bunce Hall, Suite 257. This Concentration in Peninsular Spanish Literature and Culture enhances the profile of all job applicants across all fields of study, as it represents Advanced-level proficiency and the ability to access the culture of Spain through its literature, with a view to giving students an in-depth, sophisticated level of knowledge that will serve them in their professional life in many fields, including, for example, diplomacy, translation, education and politics. The Concentration includes the following:

**Required Course**
- SPAN05.301 Appreciation of Hispanic Literature

**Elective Courses**
Choose three of the following
- SPAN05.320 Spanish Civilization and Culture
- SPAN05.325 Readings in Contemporary Spanish Literature
- SPAN05.326 Spanish Novel
- SPAN05.381 Contemporary Spanish Theatre
- SPAN05.440 Special Topics (Peninsular)
- SPAN05.481 Generation of ‘98
- SPAN05.482 Contemporary Spanish Novel

**Spanish Major Concentration in Spanish American Literature and Culture**
Within the Spanish Major, students may choose to earn a Concentration in Spanish American Literature and Culture, representing the completion of 12 s.h. in related coursework at the 300 and 400 levels. The Concentration may be declared either in the Foreign Languages and Literatures Department in Bunce Hall, Suite 305, or with Christine Larsen-Britt (larsen-britt@rowan.edu) of the College of Humanities and Social Sciences Dean's Office, Bunce Hall, Suite 257. This Concentration in Spanish American Literature and Culture enhances the profile of all job applicants across all fields of study, as it represents Advanced-level proficiency and the ability to access the culture of Latin America through literature, with a view to giving students the in-depth knowledge that will serve them in their professional life in many fields, including, for example, diplomacy, translation, education and politics. The Concentration includes the following:

**Required Course**
- SPAN05.301 Appreciation of Hispanic Literature

**Elective Courses**
Choose three of the following
- SPAN05.324 Spanish American Civilization and Culture-M/G
- SPAN05.327 Spanish American Poetry
- SPAN05.328 Spanish American Theatre
- SPAN05.383 Spanish American Short Story
- SPAN05.426 Spanish American Novel
- SPAN05.440 Special Topics (Spanish American)
BACHELOR OF ARTS IN MODERN LANGUAGES AND LINGUISTICS
Marilyn S. Manley
Coordinator
Edgar F. Bunce Hall 312
856.256.4500 X3466
manley@rowan.edu

The Major in Modern Languages and Linguistics, which may be declared either in the Foreign Languages and Literatures Department in Bunce Hall, Suite 305, or with Christine Larsen-Britt (larsen-britt@rowan.edu) of the College of Humanities and Social Sciences Dean's Office, Bunce Hall, Suite 257, offers an innovative, flexible, interdisciplinary curriculum that combines the study of modern languages, linguistics and communication. In order to play a meaningful role in world discourse, in order to protect our national security and in order to compete with our international counterparts in every field of study imaginable, the knowledge of modern languages is now a fundamental and indispensable part of every student’s education. As citizens of today’s world, students will benefit greatly from the study of modern languages, thus equipping them with the ability to communicate and interact with large populations of speakers coming from different cultural and ideological backgrounds. Additionally, through the completion of a core course in linguistics or anthropological linguistics and the option of completing additional electives in linguistics and communication, students will be able to put their specific language and culture studies into a broader context.

While the Rowan University Department of Foreign Languages and Literatures regularly offers coursework in Spanish, French, German, Italian, Japanese, Chinese, Arabic, and Russian, all students pursuing the Modern Languages and Linguistics Major will be permitted to transfer in courses in fulfillment of program requirements; furthermore, students who have studied abroad or received credit through an Advanced Placement Examination or CLEP Exam may transfer in credits as well. Rowan University’s Testing Center (testingservices@rowan.edu), located in the Academic Success Center, Savitz Hall, Suite 304, offers the CLEP Exam in Spanish, French and German; students may earn up to a maximum of 6 s.h. in each of these languages through the CLEP Exam.

Students with previous experience in Spanish who wish to study Spanish as one of their chosen languages for the Major in Modern Languages & Linguistics will be required to take the Spanish Placement Exam (STAMP 4S of Avant Assessment) for initial course placement. Contact Esther Mas Serna (mas@rowan.edu) for more information. All students with existing proficiency in other languages who are interested in continuing their study of those languages within the program will be required to meet with the primary faculty member(s) responsible for teaching those languages to determine initial course placement. Contact the Department Chair, Dr. Marilyn S. Manley (manley@rowan.edu), for more information. As an exit requirement, all students will be required to take Avant Assessment’s STAMP 4S or STAMP as a final measure of language proficiency in the Advanced-level language chosen for the major.

General Education
All students must complete the University General Education requirements as described on page 33

Rowan Experience
All students must complete the Rowan Experience requirements as described on page 35

Major Requirements
The basic structure of this 39 s.h. major is as follows; all courses must be passed with a letter grade of "C-" or better and no courses may be taken P/NC:

I. Core Course Requirement (3 s.h.): Take either of the following 3 s.h. courses: “Introduction to Anthropological Linguistics” (ANTH 02.250/SPAN 05.250) or “Linguistics” (CMS 04.325).

II. Advanced Language (18 s.h.): Take a minimum of 3 s.h. at the 200-level, 12 s.h. at the 300-level, and 3 s.h. at the 400-level.

III. Intermediate Language (12 s.h.): Take a minimum of 3 s.h. at the 200-level, 12 s.h. at the 300-level, and 3 s.h. at the 400-level.

IV. Choose option A, B or C below (6 s.h.):

Option A:
Novice Language (6 s.h.): Take a minimum of 6 s.h. at the 100-level and 6 s.h. at the 200-level

Option B:
Linguistics/Communication Electives (6 s.h.): Take two electives from the following list:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH02.250/SPAN05.250</td>
<td>Introduction to Anthropological Linguistics (if not Core course)</td>
</tr>
<tr>
<td>CMS04.325</td>
<td>Linguistics (if not already taken as the Core course)</td>
</tr>
<tr>
<td>SPAN05.302</td>
<td>Introduction to Hispanic Linguistics</td>
</tr>
<tr>
<td>CMS04.220</td>
<td>Interpersonal Communication</td>
</tr>
<tr>
<td>CMS04.255</td>
<td>Nonverbal Communication</td>
</tr>
<tr>
<td>CMS04.360</td>
<td>Intercultural Communication</td>
</tr>
<tr>
<td>SMED51.330</td>
<td>Teaching and Learning A: Foreign Languages</td>
</tr>
<tr>
<td>CMS04.225</td>
<td>Semantics</td>
</tr>
</tbody>
</table>
Option C:
Novice Language and Linguistics/Communication Elective (6 s.h.): Take a minimum of 3 s.h. at the 100 level in the Novice Language and one 3 s.h. Linguistics/Communication elective from the above list.

The following language courses are regularly offered by the Department of Foreign Languages and Literatures:

### Spanish language course options (100-400 level):

- **SPAN05.101** Spanish I
- **SPAN05.102** Spanish II
- **SPAN05.201** Spanish III
- **SPAN05.211** Spanish Reading and Conversation
- **SPAN05.212** Spanish Reading and Composition
- **SPAN05.300** Spanish Phonetics
- **SPAN05.301** Appreciation of Hispanic Literature
- **SPAN05.302** Introduction to Hispanic Linguistics
- **SPAN05.305** Oral Spanish
- **SPAN05.312** Spanish for Business
- **SPAN05.313** Spanish for Medical Personnel
- **SPAN05.320** Spanish Civilization and Culture
- **SPAN05.324** Spanish American Civilization and Culture (M/G)
- **SPAN05.325** Readings in Contemporary Spanish Literature
- **SPAN05.326** Spanish Novel
- **SPAN05.327** Spanish American Poetry
- **SPAN05.328** Spanish American Theatre
- **SPAN05.340** Introduction to Spanish Translation
- **SPAN05.381** Contemporary Spanish Theatre
- **SPAN05.383** Spanish American Short Story
- **SPAN05.400** History of the Spanish Language
- **SPAN05.409** Advanced Spanish Grammar and Composition (WI)
- **SPAN05.410** Advanced Spanish Grammar
- **SPAN05.411** Advanced Spanish Conversation
- **SPAN05.426** Spanish American Novel
- **SPAN05.435** Spanish Individual Study
- **SPAN05.440** Special Topics in Foreign Languages and Literatures
- **SPAN05.440** Special Topics in Foreign Languages and Literatures
- **SPAN05.481** The Generation of 1898
- **SPAN05.482** Contemporary Spanish Novel
- **SPAN05.499** Study Abroad

### French language course options (100-400 level):

- **FREN02.101** Elementary French I
- **FREN02.102** Elementary French II
- **FREN02.201** Intermediate French I
- **FREN02.211** Intermediate French II
- **FREN02.205** Oral French
- **FREN02.212** French Reading and Composition
- **FREN02.300** French Phonetics
- **FREN02.311** Advanced French Conversation
- **FREN02.315** Introduction to French Literature
- **FREN02.320** French Civilization and Culture
- **FREN02.324** Appreciation of French Literature
- **FREN02.325** Readings in Contemporary French Literature
- **FREN02.326** The French Novel
- **FREN02.400** History of the French Language
- **FREN02.410** Advanced French Composition
- **FREN02.420** Evolution of French Civilization
- **FREN02.421** The French Short Story
- **FREN02.435** French Individual Study
- **FREN02.440** Special Topics in Foreign Languages and Literatures
- **FREN02.499** Study Abroad
German language course options (100-400 level):

- GERM03.101 Elementary German I
- GERM03.102 Elementary German II
- GERM03.201 Intermediate German I
- GERM03.211 Intermediate German II
- GERM03.212 German Reading and Composition
- GERM03.311 Advanced German Conversation
- GERM03.320 German Civilization and Culture
- GERM03.435 Independent Study in German
- GERM03.440 Special Topics in Foreign Languages and Literatures
- GERM03.499 Study Abroad

Japanese language course options (100-200 level):

- JAPA08.101 Elementary Japanese I
- JAPA08.102 Elementary Japanese II
- JAPA08.201 Intermediate Japanese I
- JAPA08.211 Intermediate Japanese II
- JAPA08.212 Intermediate Japanese III

Italian language course options (100-200 level):

- ITAL04.101 Elementary Italian I
- ITAL04.102 Elementary Italian II
- ITAL04.201 Intermediate Italian I
- ITAL04.211 Intermediate Italian II

Chinese language course options (100-200 level):

- CHIN07.101 Elementary Chinese I
- CHIN07.102 Elementary Chinese II
- CHIN07.201 Intermediate Chinese I
- CHIN07.211 Intermediate Chinese II

Arabic language course options (100-200 level):

- ARAB12.101 Elementary Arabic I
- ARAB12.102 Elementary Arabic II
- ARAB12.201 Intermediate Arabic I
- ARAB12.211 Intermediate Arabic II

Russian language course options (100-200 level):

- RUSS06.101 Elementary Russian I
- RUSS06.102 Elementary Russian II
- RUSS06.201 Intermediate Russian I
- RUSS06.211 Intermediate Russian II

Free Electives minimum 32 s.h.
Total Credits in Program 120 s.h.

**MINOR IN SPANISH**

Christine Larsen-Britt  
Advisor  
Edgar F. Bunce Hall 257  
856.256.4068  
larsen-britt@rowan.edu

Roberto Madero  
Advisor  
Edgar F. Bunce Hall 308  
856.256.4500 x3469  
madero@rowan.edu

The Spanish Minor, which may be declared either in the Foreign Languages and Literatures Department in Bunce Hall, Suite 305, or with Christine Larsen-Britt (larsen-britt@rowan.edu) of the College of Humanities and Social Sciences Dean’s Office, Bunce Hall, Suite 257, offers a flexible curriculum with many opportunities for selection of courses in the Spanish language and in Spanish and Spanish American civilization, culture, literature and linguistics. It provides a general background for future professional studies and advanced degrees in Spanish and work in a wide variety of fields, such as social, administrative and governmental work, as well as international business.

This 18 s.h. minor is open to all students. A placement exam is strongly recommended so that students may begin the minor at the appropriate level. For placement exam information, please contact Esther Mas Serna at mas@rowan.edu. All courses must be passed with a letter grade of "C-" or better and no courses may be taken P/NC. Students may transfer credits into
the Spanish Minor, including from Study Abroad and up to 6 s.h. from the CLEP Exam in Spanish (equivalent to Spanish I and II – contact the Testing Center, testingservices@rowan.edu, in the Academic Success Center, Savitz Hall, Suite 304, for more information). Students planning to Study Abroad must meet with their Spanish Advisor in order to determine course equivalents.

**Spanish Minor**
18 s.h.

Any 18 s.h. of Spanish (with the exception of courses taught in English translation) can fulfill the requirements for the minor, however, prerequisites are strictly enforced. A basic course sequence beginning with Spanish I for beginners is as follows though many variants exist. For more information, visit our webpage, http://www.rowan.edu/foreignlanguage or contact the Department for the latest details.

- SPAN05.101 Spanish I
- SPAN05.102 Spanish II
- SPAN05.201 Spanish III
- SPAN05.211 Spanish Reading and Conversation
- SPAN05.212 Spanish Reading and Composition

Any additional upper level course offered in Spanish

**MINOR IN FRENCH**
Sonia B. Spencer
Advisor
Edgar F. Bunce Hall 307
856.256.4044
spencers@rowan.edu

The French Minor, which may be declared either in the Foreign Languages and Literatures Department in Bunce Hall, Suite 305, or with Christine Larsen-Britt (larsen-britt@rowan.edu) of the College of Humanities and Social Sciences Dean's Office, Bunce Hall, Suite 257, offers a flexible curriculum with many opportunities for selection of courses in French language, civilization, culture, and literature. It provides a general background for future professional studies and advanced degrees in French and work in a wide variety of fields, such as social, administrative and governmental work, as well as international business.

This 18 s.h. minor is open to all students. A placement interview is strongly recommended for students with previous knowledge of French so that students may begin the minor at the appropriate level. For placement interview information, please contact Dr. Sonia B. Spencer at spencers@rowan.edu. All courses must be passed with a letter grade of "C-" or better and no courses may be taken P/NC. Students may transfer credits into the French Minor, including from Study Abroad and up to 6 s.h. from the CLEP Exam in French (equivalent to Elementary French I and II – contact the Testing Center, testingservices@rowan.edu, in the Academic Success Center, Savitz Hall, Suite 304, for more information). Students planning to Study Abroad must meet with their French Advisor in order to determine course equivalents.

**French Minor**
18 s.h.

Any 18 s.h. of French (with the exception of courses taught in English translation) can fulfill the requirements for the minor; prerequisites are strictly enforced. Though many variants exist, a basic course sequence beginning with Elementary French I for beginners follows. For more information, visit our webpage, http://www.rowan.edu/foreignlanguage or contact the Department for the latest details.

- FREN02.101 Elementary French I
- FREN02.102 Elementary French II
- FREN02.201 Intermediate French I
- FREN02.211 Intermediate French II
- FREN02.205 Oral French
- FREN02.212 French Reading and Composition

**MINOR IN GERMAN STUDIES**
Edward C. Smith III
Advisor
Edgar F. Bunce Hall 306
856.256.4500 x 3472
smithc@rowan.edu

The German Studies Minor, which may be declared either in the Foreign Languages and Literatures Department in Bunce Hall, Suite 305, or with Christine Larsen-Britt (larsen-britt@rowan.edu) of the College of Humanities and Social Sciences Dean's Office, Bunce Hall, Suite 257, is an intensive program of study which offers courses in German language in addition to German civilization and culture and various interdisciplinary electives taught in English. It provides a general background for future professional studies and advanced degrees in German and work in a wide variety of fields, such as social, administrative and governmental work, as well as international business.

This 18 s.h. minor is open to all students. A placement interview is strongly recommended for students with previous knowledge of German so that they may begin their German language study at the appropriate level. For placement interview
information, please contact Dr. Edward Smith at smithe@rowan.edu. All courses must be passed with a letter grade of "C-" or better and no courses may be taken P/NC. Students may transfer credits into the German Studies Minor, including from Study Abroad and up to 6 s.h. from the CLEP Exam in German (equivalent to Elementary German I and II – contact the Testing Center, testingservices@rowan.edu, in the Academic Success Center, Savitz Hall, Suite 304, for more information). Students planning to Study Abroad must meet with their German Advisor in order to determine course equivalents.

**German Studies Minor**

The Minor consists of 6 courses (18 credits). Students are required to take at least 3 and a maximum of 5 courses within the language component of the program (or receive CLEP Exam credits). Elective courses in other departments can be used toward the Minor:

**Courses taught in German**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GERM03.101</td>
<td>Elementary German I</td>
</tr>
<tr>
<td>GERM03.102</td>
<td>Elementary German II</td>
</tr>
<tr>
<td>GERM03.201</td>
<td>Intermediate German I</td>
</tr>
<tr>
<td>GERM03.211</td>
<td>Intermediate German II</td>
</tr>
<tr>
<td>GERM03.212</td>
<td>German Reading &amp; Composition</td>
</tr>
<tr>
<td>GERM03.435</td>
<td>Independent Study in German</td>
</tr>
<tr>
<td>GERM03.320</td>
<td>German Civilization &amp; Culture</td>
</tr>
<tr>
<td>GERM03.440</td>
<td>Special Topics in Foreign Languages &amp; Literatures</td>
</tr>
</tbody>
</table>

**Courses Taught in English (The following electives can be taken concurrently with language courses):**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GERM03.100</td>
<td>Masterpieces of German Literature in English Translation (LIT)</td>
</tr>
<tr>
<td>GEOG16.342</td>
<td>Geography of Europe</td>
</tr>
<tr>
<td>HIST05.315</td>
<td>Twentieth Century Europe I</td>
</tr>
<tr>
<td>HIST05.406</td>
<td>Jewish Holocaust 1933-1945</td>
</tr>
<tr>
<td>SOC08.399</td>
<td>Sociology of the Holocaust</td>
</tr>
<tr>
<td>PHIL09.372</td>
<td>German Philosophy (Topics in the History of Philosophy)</td>
</tr>
<tr>
<td>RTF01.402</td>
<td>German Cinema (Special Topics in Radio/TV/Film)</td>
</tr>
</tbody>
</table>

**MINOR IN ROMANCE LANGUAGES**

Edward C. Smith III  
Advisor  
Edgar F. Bunce Hall 306  
856.256.4500 ext. 3472  
smithe@rowan.edu

The Minor in Romance Languages which may be declared either in the Foreign Languages and Literatures Department in Bunce Hall, Suite 305, or with Christine Larsen-Britt (larsen-britt@rowan.edu) of the College of Humanities and Social Sciences Dean’s Office, Bunce Hall, Suite 257, offers a flexible curriculum with many opportunities for selection of courses in French, Italian and Spanish. This multi-disciplinary program promotes students’ understanding of other cultures, develops students’ ability to communicate with people from other cultures, and develops an awareness of crossing borders in a linguistic and cultural sense. Students also acquire a basic linguistic competence in French, Italian and Spanish. The Department strongly urges potential Romance Language Minors to consult with Dr. Edward C. Smith III (smithe@rowan.edu), in the event the student already has existing proficiency in Spanish, French and/or Italian and wishes to start at a higher level. Either a placement interview or exam may be necessary. In order to satisfy the requirements for this minor, students must take 21 s.h. credits in a combination of French, Italian and Spanish. These 21 s.h. may be completed through:

- Taking the courses listed below, each of which is 3 s.h. (All courses must be passed with a letter grade of "C-" or better and no courses may be taken P/NC.)
- Transferring in credits, including from Study Abroad, AP credits, as well as credits earned through the CLEP Exam in both French and Spanish (equivalent to Spanish I & II, up to 6 s.h., and Elementary French I and II, up to 6 s.h.). Contact the Testing Center (testingservices@rowan.edu) in the Academic Success Center, Savitz Hall, Suite 304 for more information. There is no CLEP Exam for Italian. Students planning to Study Abroad must meet with the Minor in Romance Languages Advisor in order to determine course equivalents.
- Students are required to study 3 semesters in one Romance language and 2 semesters in each of the other two Romance languages. A student pursuing either a major or minor in one of these languages can only apply two of these program courses toward the Minor in Romance Languages. (For example, a Spanish major or minor can only use 2 Spanish courses towards this minor; a French minor can only use 2 French courses towards this minor.)

**Basic Romance Language Minor Model**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>FREN02.101</td>
<td>Elementary French I</td>
</tr>
<tr>
<td>FREN02.102</td>
<td>Elementary French II</td>
</tr>
<tr>
<td>SPAN05.101</td>
<td>Spanish I</td>
</tr>
<tr>
<td>SPAN05.102</td>
<td>Spanish II</td>
</tr>
<tr>
<td>ITAL04.101</td>
<td>Elementary Italian I</td>
</tr>
</tbody>
</table>
ITAL04.102  Elementary Italian II
And one third semester course of Spanish, French or Italian: SPAN05.201, FREN02.201 or ITAL04.201.

CERTIFICATE OF UNDERGRADUATE STUDY IN SPANISH
Esther Mas Serna  
Advisor  
Edgar F. Bunce Hall 311  
856.256.4500 X3467  
mas@rowan.edu

The Certificate of Undergraduate Study (CUGS) in Spanish, which may be declared either in the Foreign Languages and Literatures Department in Bunce Hall, Suite 305, or with Christine Larsen-Britt (larsen-britt@rowan.edu) of the College of Humanities and Social Sciences Dean’s Office, Bunce Hall, Suite 257, recognizes students’ completion of 12 s.h. in Spanish, which corresponds to Intermediate-level proficiency in the language. Intermediate-level proficiency in a foreign language is a valuable credential, as it represents the ability to live independently in a foreign country with a substantial degree of success. In general, according to the American Council on the Teaching of Foreign Languages (ACTFL), Intermediate-level speakers are able to create with the language, combining and recombining learned material to provide personal information, speak in sentences on a variety of familiar topics, ask questions, and initiate, sustain and conclude a simple social or transactional task.

Certificate of Undergraduate Study in Spanish  
12 s.h.

The requirements include the following four, 3 s.h. courses:

- SPAN05.101  Spanish I
- SPAN05.102  Spanish II
- SPAN05.201  Spanish III
- SPAN05.211  Spanish Reading and Conversation

Students may satisfy program requirements through coursework completed at Rowan University, transfer credits obtained from coursework at other institutions, study abroad, credits obtained through the College-Level Examination Program (CLEP) (up to 6 s.h. are accepted at Rowan in place of “Spanish I” and “Spanish II” - contact the Testing Center, testingservices@rowan.edu, in the Academic Success Center, Savitz Hall, Suite 304, for more information), credits obtained through Advanced Placement (up to 9 s.h. are accepted at Rowan in place of “Spanish I”, “Spanish II” and “Spanish III”), and by substituting other 200-400 level Spanish courses.

A placement exam is strongly recommended for students with existing proficiency in Spanish. For placement exam information, please contact Esther Mas Serna at mas@rowan.edu. All courses must be passed with a letter grade of “C-” or better and no courses may be taken P/NC. Students planning to Study Abroad must meet with the Advisor in order to determine course equivalents.

CERTIFICATE OF UNDERGRADUATE STUDY IN FRENCH
Sonia B. Spencer  
Advisor  
Edgar F. Bunce Hall 307  
856.256.4044  
spencers@rowan.edu

The Certificate of Undergraduate Study (CUGS) in French, which may be declared either in the Foreign Languages and Literatures Department in Bunce Hall, Suite 305, or with Christine Larsen-Britt (larsen-britt@rowan.edu) of the College of Humanities and Social Sciences Dean’s Office, Bunce Hall, Suite 257, recognizes students’ completion of 12 s.h. in French, which corresponds to Intermediate-level proficiency in the language. Intermediate-level proficiency in a foreign language is a valuable credential, as it represents the ability to live independently in a foreign country with a substantial degree of success. In general, according to the American Council on the Teaching of Foreign Languages (ACTFL), Intermediate-level speakers are able to create with the language, combining and recombining learned material to provide personal information, speak in sentences on a variety of familiar topics, ask questions, and initiate, sustain and conclude a simple social or transactional task.

Certificate of Undergraduate Study in French  
12 s.h.

The requirements include the following four, 3 s.h. courses:

- FREN02.101  Elementary French I
- FREN02.102  Elementary French II
- FREN02.201  Intermediate French I
- FREN02.211  Intermediate French II

Students may satisfy program requirements through coursework completed at Rowan University, transfer credits obtained from coursework at other institutions, study abroad, credits obtained through the College-Level Examination Program (CLEP) (up to 6 s.h. are accepted at Rowan in place of “Elementary French I” and “Elementary French II” - contact the Testing Center, testingservices@rowan.edu, in the Academic Success Center, Savitz Hall, Suite 304, for more information), credits obtained through Advanced Placement (up to 9 s.h. are accepted at Rowan in place of “Elementary French I”,...
“Elementary French II” and “Intermediate French I”), and by substituting other 200-400 level French courses.
A placement interview is strongly recommended for students with existing proficiency in French. For placement interview information, please contact Dr. Sonia B. Spencer at spencers@rowan.edu. All courses must be passed with a letter grade of "C-" or better and no courses may be taken P/NC. Students planning to Study Abroad must meet with the Advisor in order to determine course equivalents.

CERTIFICATE OF UNDERGRADUATE STUDY IN GERMAN
Edward C. Smith III
Advisor
Edgar F. Bunce Hall 306
856.256.4500 ext. 3472
smithe@rowan.edu

The Certificate of Undergraduate Study (CUGS) in German, which may be declared either in the Foreign Languages and Literatures Department in Bunce Hall, Suite 305, or with Christine Larsen-Britt (larsen-britt@rowan.edu) of the College of Humanities and Social Sciences Dean's Office, Bunce Hall, Suite 257, recognizes students' completion of 12 s.h. in German, which corresponds to Intermediate-level proficiency in the language. Intermediate-level proficiency in a foreign language is a valuable credential, as it represents the ability to live independently in a foreign country with a substantial degree of success. In general, according to the American Council on the Teaching of Foreign Languages (ACTFL), Intermediate-level speakers are able to create with the language, combining and recombining learned material to provide personal information, speak in sentences on a variety of familiar topics, ask questions, and initiate, sustain and conclude a simple social or transactional task.

Certificate of Undergraduate Study in German
12 s.h.
The requirements include the following four, 3 s.h. courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GERM03.101</td>
<td>Elementary German I</td>
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<tr>
<td>GERM03.102</td>
<td>Elementary German II</td>
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<tr>
<td>GERM03.201</td>
<td>Intermediate German I</td>
</tr>
<tr>
<td>GERM03.211</td>
<td>Intermediate German II</td>
</tr>
</tbody>
</table>

Students may satisfy program requirements through coursework completed at Rowan University, transfer credits obtained from coursework at other institutions, study abroad, credits obtained through the College-Level Examination Program (CLEP) (up to 6 s.h. are accepted at Rowan in place of "Elementary German I" and "Elementary German II" - contact the Testing Center, testingservices@rowan.edu, in the Academic Success Center, Savitz Hall, Suite 304, for more information), credits obtained through Advanced Placement (up to 9 s.h. are accepted at Rowan in place of "Elementary German I", "Elementary German II" and "Intermediate German I"), and by substituting other 200-400 level German courses.
A placement interview is strongly recommended for students with existing proficiency in German. For placement interview information, please contact Dr. Edward Smith at smithe@rowan.edu. All courses must be passed with a letter grade of "C-" or better and no courses may be taken P/NC. Students planning to Study Abroad must meet with the Advisor in order to determine course equivalents.

CERTIFICATE OF UNDERGRADUATE STUDY IN ITALIAN
Annalisa Russo
Advisor
Edgar F. Bunce Hall 145
856.256.4500 ext. 3232
russo@rowan.edu

The Certificate of Undergraduate Study (CUGS) in Italian, which may be declared either in the Foreign Languages and Literatures Department in Bunce Hall, Suite 305, or with Christine Larsen-Britt (larsen-britt@rowan.edu) of the College of Humanities and Social Sciences Dean's Office, Bunce Hall, Suite 257, recognizes students' completion of 12 s.h. in Italian, which corresponds to Intermediate-level proficiency in the language. Intermediate-level proficiency in a foreign language is a valuable credential, as it represents the ability to live independently in a foreign country with a substantial degree of success. In general, according to the American Council on the Teaching of Foreign Languages (ACTFL), Intermediate-level speakers are able to create with the language, combining and recombining learned material to provide personal information, speak in sentences on a variety of familiar topics, ask questions, and initiate, sustain and conclude a simple social or transactional task.

Certificate of Undergraduate Study in Italian
12 s.h.
The requirements include the following four, 3 s.h. courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITAL04.101</td>
<td>Elementary Italian I</td>
</tr>
<tr>
<td>ITAL04.102</td>
<td>Elementary Italian II</td>
</tr>
<tr>
<td>ITAL04.201</td>
<td>Intermediate Italian I</td>
</tr>
<tr>
<td>ITAL04.211</td>
<td>Intermediate Italian II</td>
</tr>
</tbody>
</table>
Students may satisfy program requirements through coursework completed at Rowan University, transfer credits obtained from coursework at other institutions, and study abroad. Credits obtained from higher level coursework in Italian may also be transferred in to substitute for any of the four courses listed above. A placement interview is strongly recommended for students with existing proficiency in Italian. For placement interview information, please contact Annalisa Russo at russo@rowan.edu. All courses must be passed with a letter grade of "C-" or better and no courses may be taken P/NC. Students planning to Study Abroad must meet with the Advisor in order to determine course equivalents.

CERTIFICATE OF UNDERGRADUATE STUDY IN JAPANESE
Chie Matsumura Dusk
Advisor
Edgar F. Bunce Hall 145
856.256.4500 ext. 3235
dusk@rowan.edu

The Certificate of Undergraduate Study (CUGS) in Japanese, which may be declared either in the Foreign Languages and Literatures Department in Bunce Hall, Suite 305, or with Christine Larsen-Britt (larsen-britt@rowan.edu) of the College of Humanities and Social Sciences Dean’s Office, Bunce Hall, Suite 257, recognizes students’ completion of 12 s.h. in Japanese, which corresponds to Intermediate-level proficiency in the language. Intermediate-level proficiency in a foreign language is a valuable credential, as it represents the ability to live independently in a foreign country with a substantial degree of success. In general, according to the American Council on the Teaching of Foreign Languages (ACTFL), Intermediate-level speakers are able to create with the language, combining and recombining learned material to provide personal information, speak in sentences on a variety of familiar topics, ask questions, and initiate, sustain and conclude a simple social or transactional task.

Certificate of Undergraduate Study in Japanese
12 s.h.

The requirements include the following four, 3 s.h. courses:

- **JAPA08.101** Elementary Japanese I
- **JAPA08.102** Elementary Japanese II
- **JAPA08.201** Intermediate Japanese I
- **JAPA08.211** Intermediate Japanese II

Students may satisfy program requirements through coursework completed at Rowan University, transfer credits obtained from coursework at other institutions, study abroad, and credits obtained through Advanced Placement (up to 6 s.h. are accepted at Rowan in place of “Elementary Japanese I” and “Elementary Japanese II”). Credits obtained from higher level coursework in Japanese may also be transferred in to substitute for any of the four courses listed above. A placement interview is strongly recommended for students with existing proficiency in Japanese. For placement interview information, please contact Chie Matsumura Dusk at dusk@rowan.edu. All courses must be passed with a letter grade of "C-" or better and no courses may be taken P/NC. Students planning to Study Abroad must meet with the Advisor in order to determine course equivalents.

CERTIFICATE OF UNDERGRADUATE STUDY IN CHINESE
Sonia B. Spencer
Advisor
Edgar F. Bunce Hall 307
856.256.4044
spencers@rowan.edu

The Certificate of Undergraduate Study (CUGS) in Chinese, which may be declared either in the Foreign Languages and Literatures Department in Bunce Hall, Suite 305, or with Christine Larsen-Britt (larsen-britt@rowan.edu) of the College of Humanities and Social Sciences Dean’s Office, Bunce Hall, Suite 257, recognizes students’ completion of 12 s.h. in Chinese, which corresponds to Intermediate-level proficiency in the language. Intermediate-level proficiency in a foreign language is a valuable credential, as it represents the ability to live independently in a foreign country with a substantial degree of success. In general, according to the American Council on the Teaching of Foreign Languages (ACTFL), Intermediate-level speakers are able to create with the language, combining and recombining learned material to provide personal information, speak in sentences on a variety of familiar topics, ask questions, and initiate, sustain and conclude a simple social or transactional task.

Certificate of Undergraduate Study in Chinese
12 s.h.

The requirements include the following four, 3 s.h. courses:

- **CHIN07.101** Elementary Chinese I
- **CHIN07.102** Elementary Chinese II
- **CHIN07.201** Intermediate Chinese I
- **CHIN07.211** Intermediate Chinese II

Students may satisfy program requirements through coursework completed at Rowan University, transfer credits obtained from coursework at other institutions, and study abroad. Credits obtained from higher level coursework in Chinese may also
be transferred in to substitute for any of the four courses listed above. A placement interview is strongly recommended for students with existing proficiency in Chinese. For placement interview information, please contact Dr. Ai Guo Han at han@rowan.edu. All courses must be passed with a letter grade of “C-” or better and no courses may be taken P/NC. Students planning to Study Abroad must meet with the Advisor in order to determine course equivalents.

CERTIFICATE OF UNDERGRADUATE STUDY IN APPLIED SPANISH
Marilyn S. Manley
Advisor
Edgar F. Bunce Hall 312
856.256.4500 x3466
manley@rowan.edu

The Certificate of Undergraduate Study (CUGS) in Applied Spanish, which may be declared either in the Foreign Languages and Literatures Department in Bunce Hall, Suite 305, or with Christine Larsen-Britt (larsen-britt@rowan.edu) of the College of Humanities and Social Sciences Dean’s Office, Bunce Hall, Suite 257, recognizes students’ completion of 12 s.h. in Applied Spanish courses at the 200, 300 and 400 levels. This Certificate will enhance the profile of all job applicants across all fields of study, as it represents the ability to apply one’s knowledge of Spanish to a variety of career fields, including, for example, business, medicine, translation, and education. The Certificate includes the following:

Required Course

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN05.212</td>
<td>Spanish Reading and Composition</td>
</tr>
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</table>

Elective Courses
Choose three of the following

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN05.300</td>
<td>Spanish Phonetics</td>
</tr>
<tr>
<td>SPAN05.302</td>
<td>Introduction to Hispanic Linguistics</td>
</tr>
<tr>
<td>SPAN05.305</td>
<td>Oral Spanish</td>
</tr>
<tr>
<td>SPAN05.312</td>
<td>Spanish for Business A</td>
</tr>
<tr>
<td>SPAN05.313</td>
<td>Spanish for Medical Personnel</td>
</tr>
<tr>
<td>SPAN05.314</td>
<td>Spanish for Business B</td>
</tr>
<tr>
<td>SPAN05.320</td>
<td>Spanish Civilization and Culture</td>
</tr>
<tr>
<td>SPAN05.324</td>
<td>Spanish American Civilization and Culture-M/G</td>
</tr>
<tr>
<td>SPAN05.340</td>
<td>Introduction to Spanish Translation</td>
</tr>
<tr>
<td>SPAN05.410</td>
<td>Advanced Spanish Grammar and Composition</td>
</tr>
<tr>
<td>or SPAN05.409</td>
<td>Advanced Spanish Grammar and Composition-WI</td>
</tr>
<tr>
<td>SPAN05.411</td>
<td>Advanced Spanish Conversation</td>
</tr>
</tbody>
</table>

Students may satisfy program requirements through coursework completed at Rowan University, transfer credits obtained from coursework at other institutions, and study abroad.

CERTIFICATE OF UNDERGRADUATE STUDY IN PENINSULAR SPANISH LITERATURE AND CULTURE
Laurie Kaplis-Hohwald
Advisor
Edgar F. Bunce Hall 309
856.256.4500 x3470
hohwald@rowan.edu

The Certificate of Undergraduate Study (CUGS) in Peninsular Spanish Literature and Culture, which may be declared either in the Foreign Languages and Literatures Department in Bunce Hall, Suite 305, or with Christine Larsen-Britt (larsen-britt@rowan.edu) of the College of Humanities and Social Sciences Dean’s Office, Bunce Hall, Suite 257, recognizes students’ completion of 12 s.h. in related coursework at the 300 and 400 levels. This Certificate in Peninsular Spanish Literature and Culture enhances the profile of all job applicants across all fields of study, as it represents Advanced-level proficiency and the ability to access the culture of Spain through its literature, with a view to giving students an in-depth, sophisticated level of knowledge that will serve them in their professional life in many fields, including, for example, diplomacy, translation, education and politics. The Certificate includes the following:

Required Course

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN05.301</td>
<td>Appreciation of Hispanic Literature</td>
</tr>
</tbody>
</table>

Elective Courses
Choose three of the following

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN05.320</td>
<td>Spanish Civilization and Culture</td>
</tr>
<tr>
<td>SPAN05.324</td>
<td>Readings in Contemporary Spanish Literature</td>
</tr>
<tr>
<td>SPAN05.326</td>
<td>Spanish Novel</td>
</tr>
<tr>
<td>SPAN05.381</td>
<td>Contemporary Spanish Theatre</td>
</tr>
<tr>
<td>SPAN05.440</td>
<td>Special Topics (Peninsular)</td>
</tr>
<tr>
<td>SPAN05.481</td>
<td>Generation of ’98</td>
</tr>
</tbody>
</table>
CERTIFICATE OF UNDERGRADUATE STUDY IN SPANISH AMERICAN LITERATURE AND CULTURE

Roberto Madero
Advisor
Edgar F. Bunce Hall 308
856.256.4500 x3469
madero@rowan.edu

The Certificate of Undergraduate Study (CUGS) in Spanish American Literature and Culture, which may be declared either in the Foreign Languages and Literatures Department in Bunce Hall, Suite 305, or with Christine Larsen-Britt (larsen-britt@rowan.edu) of the College of Humanities and Social Sciences Dean’s Office, Bunce Hall, Suite 257, recognizes students’ completion of 12 s.h. in related coursework at the 300 and 400 levels. This Certificate in Spanish American Literature and Culture enhances the profile of all job applicants across all fields of study, as it represents Advanced-level proficiency and the ability to access the culture of Latin America through literature, with a view to giving students the in-depth knowledge that will serve them in their professional life in many fields, including, for example, diplomacy, translation, education and politics. The Certificate includes the following:

**Required Course**

SPAN05.301  
Appreciation of Hispanic Literature

**Elective Courses**

Choose three of the following

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN05.324</td>
<td>Spanish American Civilization and Culture-M/G</td>
</tr>
<tr>
<td>SPAN05.327</td>
<td>Spanish American Poetry</td>
</tr>
<tr>
<td>SPAN05.328</td>
<td>Spanish American Theatre</td>
</tr>
<tr>
<td>SPAN05.383</td>
<td>Spanish American Short Story</td>
</tr>
<tr>
<td>SPAN05.426</td>
<td>Spanish American Novel</td>
</tr>
<tr>
<td>SPAN05.440</td>
<td>Special Topics (Spanish American)</td>
</tr>
</tbody>
</table>

Students may satisfy program requirements through coursework completed at Rowan University, transfer credits obtained from coursework at other institutions, and study abroad.

**Department of History**

William D. Carrigan
Chair
Robinson Hall
856.256.4819
carrigan@rowan.edu

With faculty specialties ranging from ancient to modern history, covering U.S, Europe, Latin America, East Asia, Africa, Russia, and the Middle East, the History Department offers students the opportunity both to develop an understanding of broad currents in history and to specialize in a particular area. Students learn how to do historical research, analyze and synthesize information, and present their ideas orally and in writing. Majors are also required to take six semester hours of a foreign language.

Students considering a major in history are urged to consult a history advisor early in their academic program in order to build a logical program leading to their goal, be it graduate school, professional school, or post-baccalaureate employment. In addition, students are encouraged to earn up to 15 credits in a semester abroad program sponsored by the University. For further clarifications regarding the program, they may consult the department chairperson.

History majors must have a minimum 2.0 overall G.P.A. to qualify for graduation. Students must earn at least a C- in all 300-400 level History courses.

Portfolio (not for credit): All history majors must submit a portfolio on a DVD that includes their Historical Methods and Seminar paper plus four of the fourteen items listed below. A completed portfolio, which is submitted at the end of Senior Seminar, should have a total of six items. For more information about the portfolio requirements, visit the following History Department Website, www.rowan.edu/history.

Students should submit any four of the following assignments with their portfolio

1. Historical Essay
2. Research Proposal
3. Research Paper
4. Abstract of Book or Article
5. Critical Book Review

ROWAN UNIVERSITY UNDERGRADUATE CATALOG 2016-2017 152
6. Peer Assessment
7. Film Review
8. Historiographical Essay
9. Periodical Literature
10. Historical Fiction
11. Document Analysis
12. Data Analysis
13. Image Analysis
14. Website Review

General Education
All History majors must complete the University General Education requirements as described on page 33

Rowan Experience
All History majors must complete the Rowan Experience requirements as described on page 35

BACHELOR OF ARTS IN HISTORY
Joy Wiltenburg
Associate Chair and Advisor
Robinson Hall 216D
wiltenburg@rowan.edu
856.256.4500, x3992

Program Requirements
Foundational Courses
(These courses also count as Social & Behavioral Sciences General Education courses)
• Any Economics course from the Social & Behavioral bank
• Any Political Science course from the Social & Behavioral bank
• Any General Education Multicultural/Global (M/G) Geography or Anthropology course
(These courses also count as Humanities General Education courses)
• ENGL02.116 Readings in Non-Western Literatures
• Foreign Language I
• Foreign Language II (Foreign Language I and II must be in the same language)

Core Courses
HIST05.100 Western Civilization to 1660
HIST05.101 Western Civilization Since 1660
or HIST05.120 World History Since 1500
Any Level History Elective*
or HIST05.150 United States to 1865
or HIST05.151 United States Since 1865
HIST05.306 Historical Methods (WI) (required before taking upper level electives)

* We recommend that history students take additional 100-level courses as free electives to fill prerequisites for some upper level history courses.

Upper Level History Electives
• Five Upper Level (300/400) History Courses
(Two of the five courses must be in global history: Africa, Asia, Latin America, the Middle East, and/or Russia; Topics in History courses count as upper level histories)

Capstone Requirement
HIST05.492 Seminar (Seniors only)

History Department Required Courses
General Education, Rowan Experience, and Free Electives

Total Credits

The Bachelors of History/Masters of History (or 4+1 History) Program
This unique program allows a student to earn both a Bachelor's degree and a Master's degree in history in only five years. Students in the program will be allowed to register for up to 12 graduate credits during their senior year, to pay the undergraduate rate for those credits, and to double-count those credits toward both degrees. Such a program offers great financial, educational and marketability advantages to students. Admission into the program is selective and competitive.
Stage One of the Program. Students at this stage are considered "4+1" students by the Department of History but retain their undergraduate status with the Registrar's Office.

To be advanced to Stage Two of the program, students in Stage One will need to maintain a 3.3 GPA in history courses. If they do this, they will be automatically admitted to Stage Two in the Spring semester of their junior year. Please note that students in their junior year may apply directly into Stage Two if they have the requisite GPA, a grade of at least B- in Methods, and a faculty recommendation.

Stage Two is completed during a candidate’s fourth year, a time during which they have a new designation with the Registrar's Office and will take at least two and up to four graduate courses at the undergraduate rate. At the end of the fourth year, students will move on to Stage Three, where they will now be considered graduate students by the University. The Master's program requires completion of ten courses, including Readings and Research I and Readings and Research II. Students may choose to complete a two-semester thesis in their fifth year. The thesis counts as two of the ten required courses.

The 4+1 coordinator, William Carrigan, will assist with academic issues throughout the program, including course selection, program requirements, departmental policies, or awarded credit. Applications are reviewed on a rolling basis but ideally should be received no later than February 1 of the candidate's junior year.

More information can be found at: www.rowan.edu/history.

BACHELOR OF ARTS IN HISTORY WITH SPECIALIZATION IN UNITED STATES HISTORY

The specialization in United States History offers a structured program of study for history majors interested in gaining an in-depth understanding of the United States within the discipline of history. Students who fulfill the requirements of this program will earn a B.A. in History with a Specialization in United States History. The specialization provides a coherent plan of study that prepares motivated students for graduate study or professional work in their chosen area and recognizes their efforts on their transcript.

Program Requirements

Foundational Courses (These courses also count as Social and Behavioral Sciences General Education courses)

- Any Economics course from the Social and Behavioral Sciences Bank
- Any Political Science course from the Social and Behavioral Sciences Bank (Recommended: POSC07.110: American Government)
- Any General Education Multicultural/Global (M/G) course in Geography or Anthropology

Core Courses

HIST05.100 Western Civilization to 1660
HIST05.101 Western Civilization Since 1660
or
HIST05.120 World History Since 1500
HIST05.150 United States to 1865
HIST05.151 United States Since 1865
HIST05.306 Historical Methods (WI) (required before taking upper level electives)

Upper Level History Electives

1. At least two of the following 300/400 level History electives:

HIST05.328 Colonial North America
HIST05.339 History of the Revolution and Early Republic
HIST05.321 United States History, 1820-1861
HIST05.322 Civil War and Reconstruction
HIST05.329 Gilded Age
HIST05.328 America War to War
HIST05.375 America after 1945

2. Any two additional 300/400 level History electives in United States History. Students may satisfy this requirement by taking any of the courses listed below, for example, and/or by taking any other upper level history course or Topics in History (HIST 05.429) related to United States History.

HIST05.376 African American History to 1865
HIST05.377 African American History Since 1865
HIST05.475 History of New Jersey
HIST05.470 Issues in American History
HIST05.435 Women in American History
HIST05.334 Urban History of U.S.
HIST05.472 Cultural History of U.S.
HIST05.436 U.S. Home front, 1940-1945
BACHELOR OF ARTS IN HISTORY WITH SPECIALIZATION IN EUROPEAN/ANCIENT HISTORY

The specialization in European/Ancient History offers a structured program of study for history majors interested in gaining an in-depth understanding of Europe or the Ancient World within the discipline of history. Students who fulfill the requirements of this program will earn a B.A. in History with a Specialization in European/Ancient History. The specialization provides a coherent plan of study that prepares motivated students for graduate study or professional work in their chosen area and recognizes their efforts on their transcript.

Students are encouraged to specialize in a particular area or period related to Europe/Ancient world in their choice of upper level History courses, language study, and non-program and free electives.

Study Abroad
Students pursuing a specialization in European/Ancient History are strongly encouraged to spend at least one semester studying abroad.

Program Requirements

Foundational Courses

(These courses also count as Social and Behavioral Sciences General Education courses)

- Any Economics course from the Social and Behavioral Sciences Bank
- Any Political Science course from the Social and Behavioral Sciences Bank (Recommended: POSC07.230 Comparative Political Systems)
- Any General Education Multicultural/Global (M/G) course in Geography or Anthropology

(These courses also count as Humanities General Education courses)

- ENGL02.116 Readings in Non-Western Literatures
- Four semesters of foreign language, preferably in the same language, but in no more than two languages. (Recommended for Ancient Focus: Latin. Recommended for Modern Focus: French, German, Italian, Spanish.)

Core Courses

HIST05.100 Western Civilization to 1660
HIST05.101 Western Civilization Since 1660
HIST05.120 World History Since 1500
HIST05.150 United States to 1865
or HIST05.151 United States Since 1865
HIST05.306 Historical Methods (W/I) (required before taking upper level electives)

Upper Level History Electives

1. Any four 300/400 level History electives in European and/or Ancient history and/or related global history. Students may satisfy this requirement by taking any of the courses listed below and/or by taking any other upper level history course or...
Topics in History (HIST05.429) or Global Topics in History (HIST 05.443) related to European or Ancient history.

- HIST05.307 Ancient Mediterranean World
- HIST05.310 Medieval Europe
- HIST05.311 Renaissance and Reformation
- HIST05.312 Age of Enlightenment
- HIST05.313 Age of Revolution
- HIST05.315 20th Century Europe I
- HIST05.316 20th Century Europe II
- HIST05.319 Ancient Greece
- HIST05.443 Imperialism and Colonialism
- HIST05.314 Europe 1871-1914
- HIST05.379 Ancient Egypt
- HIST05.418 Women in Europe to 1700
- HIST05.419 Women in Modern Europe
- HIST05.410 European Intellectual History
- HIST05.312 Victorian England

2. Any two 300/400 level History electives in Global History (History of Africa, Asia, Latin America, Middle East, and Russia).

3. Any additional 300/400 level History elective in Global, European, and/or United States History.

Capstone Course
- HIST05.492 Seminar (Seniors only) 3 s.h.

Students are encouraged to focus some of their non-program and free electives on courses related to European and or Ancient studies.

Recommended
- GEOG16.342 Geography of Europe
- ANTH02.350 Comparative Cultures
- ANTH02.202 Cultural Anthropology
- ANTH02.202 Introduction to Archeology
- CMS04.290 Rhetorical Theory
- ENGL02.309 British Literature I
- ENGL02.311 British Literature II
- ENGL02.330 Classical Literature in Translation
- ENGL02.430 Anglo-Saxon and Medieval Literature
- ENGL02.440 Chaucer
- GEOG16.347 Geography of the Middle East
- POSC07.346 Politics and Society of Great Britain
- POSC07.420 International Law
- REL10.240 Introduction to the Bible
- REL10.320 Introduction to Christianity
- REL10.328 Development of Western Religious Thought
- SOCo8.399 Sociology of the Holocaust

Required Courses 63 s.h.
General Education, Rowan Experience, and Free Electives 57 s.h.
Total Credits 120 s.h.

BACHELOR OF ARTS IN HISTORY WITH SPECIALIZATION IN GLOBAL HISTORY

The specialization in Global History offers a structured program of study for history majors interested in gaining an in depth understanding of global history or one region of the world—Africa, East Asia, Latin America, Middle East, or Russia—within the discipline of history. Students who fulfill the requirements of this program will earn a B.A. in History with a Specialization in Global History. The specialization provides a coherent plan of study that prepares motivated students for graduate study or professional work in their chosen area and recognizes their efforts on their transcript.

Students are encouraged to specialize in a particular area of the world—Africa, East Asia, Latin America, the Middle East, or Russia in their choice of History courses, language study, and non-program and free electives.

Study Abroad

Students pursuing a specialization in Global History are strongly encouraged to spend at least one semester studying abroad in a non-English speaking country.

Program Requirements

Foundational Courses 24 s.h.

(These courses also count as Social and Behavioral Sciences General Education Courses)

- Economics course from the Social and Behavioral Sciences Bank
College of Humanities and Social Sciences

- Any Political Science course from the Social and Behavioral Sciences Bank (Recommended: POSC07.230 Comparative Political Systems)
- Any General Education Multicultural/Global (M/G) course in Geography or Anthropology (Recommended: GEOG16.140 World Regional Geography)

(These courses also count as Humanities General Education courses)
- ENGL02.116 Readings in Non-Western Literatures
- Four semesters of foreign language, preferably in the same language, but in no more than two languages.

### Core Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST05.100</td>
<td>Western Civilization to 1660</td>
</tr>
<tr>
<td>HIST05.101</td>
<td>Western Civilization Since 1660</td>
</tr>
<tr>
<td>HIST05.120</td>
<td>World History Since 1500</td>
</tr>
<tr>
<td>HIST05.150</td>
<td>United States to 1865</td>
</tr>
<tr>
<td>or HIST05.151</td>
<td>United States Since 1865</td>
</tr>
<tr>
<td>HIST05.306</td>
<td>Historical Methods (W/I) (required before taking upper level electives)</td>
</tr>
</tbody>
</table>

### Upper Level History Electives

1. Any four 300/400 level History electives in global history. Students may satisfy this requirement by taking any of the courses listed below, for example, and/or by taking any other upper level global history course or Global Topics in History (HIST 05.443).

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>HIST05.394</td>
<td>Sub-Saharan African to 1800</td>
</tr>
<tr>
<td>HIST05.397</td>
<td>Sub-Saharan Africa since 1800</td>
</tr>
<tr>
<td>HIST05.437</td>
<td>20th Century African Nationalism</td>
</tr>
<tr>
<td>HIST05.413</td>
<td>Comparative Race Relations</td>
</tr>
<tr>
<td>HIST05.351</td>
<td>Modern Japan</td>
</tr>
<tr>
<td>HIST05.355</td>
<td>Modern China</td>
</tr>
<tr>
<td>HIST05.356</td>
<td>Late Imperial China</td>
</tr>
<tr>
<td>HIST05.408</td>
<td>Chinese Cultural History</td>
</tr>
<tr>
<td>HIST05.446</td>
<td>Race, Identity, and History in East Asia</td>
</tr>
<tr>
<td>HIST05.347</td>
<td>Traditional Latin America</td>
</tr>
<tr>
<td>HIST05.350</td>
<td>Modern Latin America</td>
</tr>
<tr>
<td>HIST05.409</td>
<td>Latin American Revolutions/Reform</td>
</tr>
<tr>
<td>HIST05.362</td>
<td>History of Mexico &amp; Caribbean</td>
</tr>
<tr>
<td>HIST05.431</td>
<td>Topic in Latin America</td>
</tr>
<tr>
<td>HIST05.383</td>
<td>Islamic Civilizations</td>
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<tr>
<td>HIST05.308</td>
<td>Modern Middle East</td>
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<tr>
<td>HIST05.404</td>
<td>Arab-Israeli Conflict</td>
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<tr>
<td>HIST05.417</td>
<td>Women in Islam</td>
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<td>HIST05.439</td>
<td>Ottoman Empire</td>
</tr>
<tr>
<td>HIST05.444</td>
<td>Islamist Movements</td>
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<td>HIST05.445</td>
<td>Cold War</td>
</tr>
<tr>
<td>HIST05.343</td>
<td>Russia to 1914</td>
</tr>
<tr>
<td>HIST05.344</td>
<td>Russia Since 1914</td>
</tr>
</tbody>
</table>

2. Any three additional 300/400 level History electives, in Global, European, and/or United States History.

### Capstone Course

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST05.492</td>
<td>Seminar (Seniors only)</td>
</tr>
</tbody>
</table>

Students are encouraged to focus some of their non-program and free electives on courses related to international studies and their area of specialization.

### Recommended

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH02.350</td>
<td>Comparative Cultures</td>
</tr>
<tr>
<td>ANTH02.202</td>
<td>Cultural Anthropology</td>
</tr>
<tr>
<td>ANTH02.371</td>
<td>Anthropological Approaches to Culture Change</td>
</tr>
<tr>
<td>ECON04.303</td>
<td>Principles of Economics: Global Perspective</td>
</tr>
<tr>
<td>GEOG16.110</td>
<td>Cultural Geography</td>
</tr>
<tr>
<td>LAWJ05.330</td>
<td>Problems in World Justice</td>
</tr>
<tr>
<td>PHIL09.211</td>
<td>World Philosophy I</td>
</tr>
<tr>
<td>POSC07.321</td>
<td>Contemporary World Problems</td>
</tr>
<tr>
<td>POSC07.420</td>
<td>International Law</td>
</tr>
<tr>
<td>POSC07.421</td>
<td>International Organizations</td>
</tr>
<tr>
<td>RELI01.200</td>
<td>Religions of the World</td>
</tr>
</tbody>
</table>

Students should also consider courses that focus on a particular area, especially their area of specialization.

### History Department Required Courses

#### General Education, Rowan Experience, and Free Electives

<table>
<thead>
<tr>
<th>Course Credit</th>
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<tbody>
<tr>
<td>120 s.h.</td>
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<table>
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<tr>
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<table>
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<tr>
<th>Course Credit</th>
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<tbody>
<tr>
<td>157</td>
</tr>
</tbody>
</table>

ROWAN UNIVERSITY UNDERGRADUATE CATALOG 2016-2017
MINOR IN HISTORY
The Minor in History is designed to address the needs of students in other fields who wish to gain a broad base in the humanities and social sciences by incorporating historical perspectives into their majors and thus enhance their ability to reach higher levels of achievement in their own professional specialization.

The curriculum consists of 18 credits in History, including:

1. At least one course, at either the introductory or advanced level, must be taken in each of the following areas of concentration: American, European and Global
2. At least three courses at the 300 or 400 level
3. Minors must earn at least a C- in all 300 to 400 level History courses.
4. Minors are encouraged to take HIST05.306, Historical Methods (WI)

Students pursuing the minor should plan their courses in collaboration with a Department of History advisor in addition to an advisor from their major.

More information can be found at: www.rowan.edu/history.

Certificate of Undergraduate Study (CUGS) in Public History
Public History is usually defined as history beyond the walls of a traditional classroom. Public Historians work as preservationists, in archives and research libraries, and as museum professionals. They may be curators, museum educators, exhibit producers, oral historians, and even community activists. The CUGS in Public History will interest students who hope to work in historical, natural history, or anthropological museums, historical societies, federal, state and local government, archival management, etc. The Certificate requires 15 s.h. of courses related to public history, including three core courses and two electives.

Core Courses:
- ANTH02.290 Museum Studies
- HIST05.480 Public History*
- HIST05.495 Internship in History
- or INTR20.399 Internship in Applied Liberal Arts (at a site approved by the coordinator)

* Note: Historical Methods (HIST05.306) is a prerequisite, but students pursuing this CUGS who have completed Museum Studies (ANTH02.290) and College Composition II (COMP01.112) will be given a prerequisite waiver

Electives:
Any TWO of the following courses:
- HIST05.495 Internship in History (if not taken as a core course)
- INTR20.399 Internship in Applied Liberal Arts (Another 3 s.h. at a site approved by the coordinator)
- HIST05.475 History of New Jersey – (Historical Methods (HIST05.306) is a prerequisite)
- ANTH02.203 Introduction to Archaeology
- ANTH02.270 New World Archeology
- ANTH02.280 Old World Archeology
- ANTH02.310 Indians of North America
- ART09.301 Digital Media & Techniques
- WA01.400 Writing for the Workplace (75 s.h. is a prerequisite)
- RTF03.295 Introduction to New Media (College Composition II (COMP01.112) is a prerequisite)
- MKT09.200 Principles of Marketing (College Composition I (COMP01.111) and 12 s.h. is a prerequisite)
- PR06.350 Introduction to Public Relations (all students may take an online section; students who are not Public Relations majors may be signed into a regular section)
- ADV04.330 Introduction to Advertising (All students may take an online section; students who are not Advertising majors need to be signed in a regular section)

Department of Law and Justice Studies
Dr. Michael S. Weiss
Chair
Campbell Library, 5th Floor
856.256.4840
weissm@rowan.edu
The Law and Justice Studies program represents an interdisciplinary approach to the study of crime and the functioning of criminal law and the criminal justice system. It prepares students for professional careers in four major areas: law enforcement and security services, court services, corrections, and human services. Since many of the students who enter the program express an interest in preparation for graduate study and professional schools, the program also offers majors the rigorous preparation necessary to achieve such goals.

The program admits high school graduates at the freshman level and transfer students from community and four-year colleges. Upon notification of acceptance by Rowan University, students should contact the department secretary for assignment to an advisor. The advisor develops with the student an individualized program of study. A departmental advisor is available throughout the student's departmental program. An internship in an appropriate criminal justice or related agency is required in order to provide students with experience, making their classwork more meaningful.

**BACHELOR OF ARTS IN LAW AND JUSTICE STUDIES**

Students are required to earn a C- or better in all Law and Justice Studies major courses. A maximum of 90 s.h. can be transferred from other accredited colleges and universities into the Law and Justice major. Rowan students majoring in fields other than Law and Justice Studies may elect to take courses in the department either as part of their general education requirements, as recommended requirements, as free electives, or as a minor in Law and Justice Studies.

**General Education**

All students must complete the University General Education Requirements as described on page 33

**The Rowan Experience**

All students must complete the University Rowan Experience Requirements as described on page 35

**Other Required Courses**

18 s.h.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>SOCo8.221</td>
<td>Social Problems</td>
</tr>
<tr>
<td>POSCo7.110</td>
<td>American Government</td>
</tr>
<tr>
<td>or POSCo7.100</td>
<td>Introduction to Government and Politics</td>
</tr>
<tr>
<td>PHI09.110</td>
<td>The Logic of Everyday Reasoning</td>
</tr>
<tr>
<td>or PHI09.241</td>
<td>Philosophy and Society</td>
</tr>
<tr>
<td>PSYo1.107</td>
<td>Essentials of Psychology</td>
</tr>
<tr>
<td>STATO2.100</td>
<td>Elementary Statistics</td>
</tr>
</tbody>
</table>

**Outside Free Electives**

23 s.h.

*Note: It is strongly recommended that the student consult an advisor for assistance in making these choices.*

**Major Requirements**

36 s.h.

Students must take a minimum of 36 semester hours, including 24 semester hours of core course requirements and 12 semester hours of electives within the major.

**Required Core Courses**

24 s.h.

One of the following:

- LAWJ05.202 American Police
- LAWJ05.201 Introduction to Courts
- LAWJ05.200 Introduction to Corrections

All of the following:

- LAWJ05.175 Survey of Criminal Justice
- LAWJ05.255 Criminal Law
- LAWJ05.356 Criminal Justice Internship I
- LAWJ05.369 Theories of Crime & Criminality
- LAWJ05.380 Criminal Justice Research
- LAWJ05.401 Law and Human Rights
- LAWJ05.469 Seminar WI

*Note: Criminal Justice Internship - LAWJ05.356: Under special and unusual circumstances, this course may be waived as a required course by the departmental academic advisor, and other coursework may be substituted, where appropriate.*
Law & Justice Elective Offerings

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>LAWJ05.120</td>
<td>Intro to Security</td>
</tr>
<tr>
<td>LAWJ05.205</td>
<td>Minorities, Crime, and Criminal Justice</td>
</tr>
<tr>
<td>LAWJ05.210</td>
<td>Restorative Justice</td>
</tr>
<tr>
<td>LAWJ05.220</td>
<td>Victimology</td>
</tr>
<tr>
<td>LAWJ05.274</td>
<td>Criminal Justice and Community Relations</td>
</tr>
<tr>
<td>LAWJ05.276</td>
<td>Parole, Probation and Community Corrections</td>
</tr>
<tr>
<td>LAWJ05.285</td>
<td>Criminal Investigation</td>
</tr>
<tr>
<td>LAWJ05.290</td>
<td>Forensic Law</td>
</tr>
<tr>
<td>LAWJ05.305</td>
<td>Law and Evidence</td>
</tr>
<tr>
<td>LAWJ05.310</td>
<td>Criminal Jurisprudence</td>
</tr>
<tr>
<td>LAWJ05.312</td>
<td>Criminal Procedure II</td>
</tr>
<tr>
<td>LAWJ05.315</td>
<td>Criminal Justice and Social Conflict</td>
</tr>
<tr>
<td>LAWJ05.320</td>
<td>Civil Aspects of Law Enforcement</td>
</tr>
<tr>
<td>LAWJ05.322</td>
<td>Drugs and Crime in America</td>
</tr>
<tr>
<td>LAWJ05.323</td>
<td>Maritime Crime and Criminality</td>
</tr>
<tr>
<td>LAWJ05.324</td>
<td>Sentencing and the Rights of the Convicted</td>
</tr>
<tr>
<td>LAWJ05.325</td>
<td>Comparative Criminal Justice</td>
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<tr>
<td>LAWJ05.330</td>
<td>Problems of World Justice</td>
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<tr>
<td>LAWJ05.335</td>
<td>Criminal Procedure I</td>
</tr>
<tr>
<td>LAWJ05.337</td>
<td>Treatment of the Offender</td>
</tr>
<tr>
<td>LAWJ05.342</td>
<td>Counseling and Guidance of the Offender</td>
</tr>
<tr>
<td>LAWJ05.346</td>
<td>Women, Crime and Criminal Justice</td>
</tr>
<tr>
<td>LAWJ05.356</td>
<td>Criminal Justice Internship II</td>
</tr>
<tr>
<td>LAWJ05.361</td>
<td>Intro to Juvenile Justice</td>
</tr>
<tr>
<td>LAWJ05.379</td>
<td>Political Prisoner</td>
</tr>
<tr>
<td>LAWJ05.392</td>
<td>Criminal Justice Administration</td>
</tr>
<tr>
<td>LAWJ05.395</td>
<td>Incarceration Experience</td>
</tr>
<tr>
<td>LAWJ05.415</td>
<td>Selected Topics in Criminal Justice</td>
</tr>
</tbody>
</table>

Total semester hours in program 120 s.h.

**Law and Justice Studies 4 + 1 Program**

The Law and Justice Studies "4 + 1" Program allows students to earn a Bachelor of Arts in Law and Justice Studies and a Master of Arts in Criminal Justice in five years.

Twelve credits can be double-counted towards both the undergraduate and graduate degrees.

To apply to the program, a student must have:

- Successfully completed 60-75 credits of undergraduate course work
- A cumulative GPA of 3.5 within the major and an overall cumulative GPA of 3.2
- Successfully completed at least 15 credits within the major
- Successfully completed at least 3 courses within the Law and Justice Studies Department at Rowan University with a grade of B or higher
- Successfully completed at least 15 credits at Rowan University
- Completed or be enrolled in Theories of Crime and Criminality (LAWJ05.369) and Criminal Justice Research (LAWJ05.380)

An application must consist of:

- Two letters of recommendation, at least one of which must be from a Law and Justice Studies professor (in sealed envelopes with recommenders’ signatures across seal)
- A 300-500 word statement of purpose for attending the program with name, address, email, and phone number at the top
- A printout of the student’s Rowan Transcript

Completed application packets must be submitted to the Coordinator of the Master of Arts in Criminal Justice program by February 15th before a student’s senior year.

**MINOR IN LAW AND JUSTICE STUDIES**

A minor consisting of 21 s.h. in Law and Justice Studies is available to all students. Students minoring in Law and Justice Studies must take the following classes:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAWJ05.175</td>
<td>Survey of Criminal Justice</td>
</tr>
<tr>
<td>LAWJ05.369</td>
<td>Theories of Crime and Criminality</td>
</tr>
<tr>
<td>LAWJ05.255</td>
<td>Criminal Law</td>
</tr>
</tbody>
</table>

In addition, students must take any Four (4) additional Law and Justice Studies courses. Students must earn a C- or better in all courses for the minor. To declare the minor, go to the University Advising Center in room 323 Savitz Hall - (856) 256-4459.
Total semester hours for Minor program 21 s.h.

Department of Philosophy and Religion Studies
Ellen Miller
Department Chair
Edgar F. Bunce Hall, Suite 315
856.256.4835
millere@rowan.edu

The study of philosophy and religion acquaints students with some of the world's great intellectual, cultural and religious traditions, equips them with skills in critical thinking, and engages them in reflection on values, ideas and practices crucial to the modern world. Students graduating with a major in these disciplines are well prepared for a variety of careers, as well as for admission to graduate study in Philosophy or in Religion Studies. They also regularly score in the top percentiles on various graduate admission tests, including the Graduate Record Examination, the Law School Admission Test, and the Graduate Management Admission Test.

The department offers Bachelor of Arts in Philosophy and Religion Studies, with specializations in either Philosophy or Religion Studies. The department offers career tracks in pre-law, pre-business, pre-health, pre-government, and pre-social work. Other department programs include a minor in Philosophy, a minor in Philosophy and Religion Studies, and a concentration in Ethics. Additionally, the Department offers Certificates of Undergraduate Study (CUGS), of 12 s.h. each, in Philosophy, Religion Studies, Ethics, and Asian Philosophy. Visit our departmental webpage www.rowan.edu/philosophy for more details.

BACHELOR OF ARTS IN PHILOSOPHY AND RELIGION STUDIES

General Education
All students must complete the University General Education requirements as described on page 33

Rowan Experience
All students must complete the Rowan Experience requirements as described on page 35

SPECIALIZATION IN PHILOSOPHY
Ellen Miller
Department Chair
Edgar F. Bunce Hall, Suite 315
856.256.4835
millere@rowan.edu

Foundational requirements 24 s.h.

| HIST05.100 | Western Civilization to 1660 |
| HIST05.101 | Western Civilization since 1660 |
| HIST05.120 | World History since 1500 |

(Any of these courses also counts as a Humanities General Education course.)

| PHIL09.120 | Introduction to Philosophy |
| PHIL09.121 | Introduction to Philosophy - WI |
| REL10.200 | Religions of the World |
| PHIL09.110 | Logic of Everyday Reasoning |
| PHIL09.130 | Introduction to Symbolic Logic |
| PHIL09.150 | Introduction to Ethics |
| PHIL09.151 | Introduction to Ethics WI |
| PHIL09.211 | World Philosophy I |
| PHIL09.213 | World Philosophy II |
| PHIL09.370 | Epistemology |
| PHIL09.371 | Epistemology - WI |
| PHIL09.226 | Philosophy of Mind |
| PHIL09.227 | Philosophy of Mind - WI |

Mid-level requirements 15 s.h.

PHIL09.372 Topics in the History of Philosophy (may be taken more than once)

One 200+ Level and two 300+ level Philosophy (PHIL 09) electives 9 s.h.
One 200+ level interdisciplinary or PHRE course that fulfills the requirements for non-western philosophy and religion studies (e.g., Asian Thought, or Selected Topics in Philosophy and Religion Studies)(3 s.h.).

Capstone requirements 3 s.h.

PHRE11.490 Senior Seminar in Philosophy and Religion Studies

Portfolio (not for credit) In consultation with his or her advisor, the student prepares a portfolio of best work from his or her work in the department, together with reflections on his or her progress in the major.
SPECIALIZATION IN RELIGION STUDIES
Youru Wang
Advisor
Edgar F. Bunce Hall, Suite 315
856.256.4077
wang@rowan.edu

Foundational requirements

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>HIST105.100</td>
<td>Western Civilization to 1660</td>
</tr>
<tr>
<td>ENGL2.116</td>
<td>Readings in non-Western Literatures</td>
</tr>
<tr>
<td>PHIL9.120</td>
<td>Introduction to Philosophy - WI</td>
</tr>
<tr>
<td>or PHIL9.121</td>
<td>Introduction to Philosophy</td>
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<td>REL10.200</td>
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Mid-level requirements

<table>
<thead>
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<tbody>
<tr>
<td>REL10.214</td>
<td>Religions of the Western World</td>
</tr>
<tr>
<td>REL10.210</td>
<td>Religions of Asia</td>
</tr>
<tr>
<td>PHRE11.310</td>
<td>Introduction to Buddhism</td>
</tr>
<tr>
<td>PHIL9.330</td>
<td>Asian Thought</td>
</tr>
<tr>
<td>REL10.240</td>
<td>Introduction to the Bible</td>
</tr>
<tr>
<td>REL10.301</td>
<td>Introduction to Judaism</td>
</tr>
<tr>
<td>REL10.320</td>
<td>Introduction to Christianity</td>
</tr>
<tr>
<td>PHRE11.330</td>
<td>Introduction to Daoism</td>
</tr>
<tr>
<td>REL10.210</td>
<td>Religion in America</td>
</tr>
<tr>
<td>SOC08.120</td>
<td>Sociology of Religion</td>
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<tr>
<td>ANTH102.323</td>
<td>Magic and Religion</td>
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<tr>
<td>ANTH102.310</td>
<td>Indians of North America</td>
</tr>
<tr>
<td>ANTH102.310</td>
<td>Indians of South America</td>
</tr>
<tr>
<td>HIST105.307</td>
<td>Ancient Mediterranean World</td>
</tr>
<tr>
<td>HIST105.377</td>
<td>African American History Since 1865</td>
</tr>
<tr>
<td>HIST105.417</td>
<td>Women in Islam</td>
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<tr>
<td>HIST105.394</td>
<td>Sub-Saharan Africa to 1800</td>
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<tr>
<td>HIST105.397</td>
<td>Sub-Saharan Africa since 1800</td>
</tr>
<tr>
<td>PHRE11.300</td>
<td>Philosophy of Religion</td>
</tr>
<tr>
<td>REL10.340</td>
<td>Selected Topics in Religion Studies (repeatable)</td>
</tr>
<tr>
<td>PHRE11.340</td>
<td>Selected Topics in Philosophy and Religion Studies (repeatable)</td>
</tr>
<tr>
<td>PHIL9.392</td>
<td>Contemporary Moral Problems</td>
</tr>
<tr>
<td>or PHIL9.393</td>
<td>Contemporary Moral Problems WI</td>
</tr>
<tr>
<td>PHIL9.250</td>
<td>Introduction to Ethics</td>
</tr>
<tr>
<td>or PHIL9.251</td>
<td>Introduction to Ethics - WI</td>
</tr>
<tr>
<td>PHIL9.322</td>
<td>Business Ethics</td>
</tr>
<tr>
<td>PHIL9.341</td>
<td>Biomedical Ethics</td>
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<td>PHIL9.346</td>
<td>Feminist Ethics</td>
</tr>
<tr>
<td>PHIL9.323</td>
<td>Environmental Ethics</td>
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Capstone requirements

<table>
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<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>PHRE11.490</td>
<td>Senior Seminar in Philosophy and Religion Studies</td>
</tr>
</tbody>
</table>

Portfolio (not for credit) In consultation with his or her advisor, the student prepares a portfolio of best work from his or her work in the department (this would include the student's senior seminar paper and two other papers of the student's choice, together with reflections on his or her progress in the major.)
MINOR IN PHILOSOPHY
Ellen Miller
Department Chair
Edgar F. Bunce Hall, Suite 315
856.256.4835
millere@rowan.edu

Program Requirements: 21 s.h.

<table>
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<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>PHIL 09.120</td>
<td>Introduction to Philosophy</td>
</tr>
<tr>
<td>or PHIL 09.121</td>
<td>Introduction to Philosophy - WI</td>
</tr>
<tr>
<td>PHIL 09.110</td>
<td>Logic of Everyday Reasoning</td>
</tr>
<tr>
<td>or PHIL 09.130</td>
<td>Introduction to Symbolic Logic</td>
</tr>
<tr>
<td>PHIL 09.211</td>
<td>World Philosophy I</td>
</tr>
<tr>
<td>or PHIL 09.213</td>
<td>World Philosophy II</td>
</tr>
</tbody>
</table>

Three (3) philosophy electives 9 s.h

PHRE 11.490 Senior Seminar in Philosophy and Religion Studies

MINOR IN PHILOSOPHY AND RELIGION STUDIES
Ellen Miller
Department Chair
Edgar F. Bunce Hall, Suite 315
856.256.4835
millere@rowan.edu

Program Requirements: 21 s.h.

<table>
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<td>Introduction to Philosophy</td>
</tr>
<tr>
<td>or PHIL 09.121</td>
<td>Introduction to Philosophy - WI</td>
</tr>
<tr>
<td>REL 10.200</td>
<td>Religions of the World</td>
</tr>
</tbody>
</table>

Four (4) philosophy or Religion Studies electives (two must be 300 level or above) 12 s.h These may include interdisciplinary PHRE 11 courses.

PHRE 11.490 Senior Seminar in Philosophy and Religion Studies

Department of Political Science and Economics
Natalie Reaves
Chair
317 Robinson Hall
856.256.4061
reaves@rowan.edu

POLITICAL SCIENCE PROGRAM
Lawrence P. Markowitz
Coordinator
317 Robinson Hall
856.256.4889
markowitzl@rowan.edu

BACHELOR OF ARTS IN POLITICAL SCIENCE
The Political Science faculty offers a major program of 39 credits leading to a Bachelor of Arts degree, and a minor program consisting of 21 credits. These programs are open to all students who envision careers as government managers and administrators, public policy analysts, lawyers, journalists, intelligence officers, diplomatic service officers, teachers, lobbyists, public opinion analysts, legislative aides, campaign professionals, or any other career in government or business which requires a broad liberal arts background. The major program aims to provide both breadth of knowledge of the discipline and in-depth studies in areas of the student’s greatest interest. A grade of C- or better must be earned in all Political Science courses.

General Education
All students must complete the University General Education Requirements as described on page 33

Rowan Experience
All students must complete the Rowan Experience requirements as described on page 35

Required Courses

Political Science
Applied Politics
Majors must complete 6 s.h. in applied politics utilizing one of the following three options:

- EDPA02.490 Public Service Internship
- or EDPA02.320 Public Administration

and one of the following:
- POSC07.220 State & Local Government
- POSC07.415 In-depth Study of the Supreme Court
- POSC07.421 International Organizations
- or EDPA02.490 Public Service Internship

and any 3 s.h. Political Science elective listed below:

Political Science Electives
Distribution of electives: a minimum of 6 s.h. (two courses) in one of the three areas below and 3 s.h. (one course) in each of two other areas.

American Politics/Public Administration
(each course is 3 s.h.)
- POSC07.220 State and Local Government
- POSC07.303 Campaigns, Political Parties and Interest Groups
- POSC07.305 The Legislative Process
- POSC07.306 The Presidency
- POSC07.308 Current Problems in American Politics
- POSC07.311 Women and American Politics
- POSC07.323 Politics of Race, Poverty, and Welfare in the U.S.
- POSC07.324 Black American and American Politics
- POSC07.370 Special Topics in Political Science (according to topic)
- POSC07.380 American Politics on Film
- POSC07.385 Environmental Policy
- POSC07.400 American Political Thought
- POSC07.401 Contemporary Political Thought
- POSC07.491 Independent Study in Political Science (according to topic)
- EDPA02.320 Public Administration
- EDPA02.410 Public Policy

Multicultural/Global Studies and International and Comparative Politics
(each course is 3 s.h.)
- POSC07.321 Contemporary World Problems
- POSC07.330 Contemporary U.S. Foreign Policy
- POSC07.341 Russian, East European and Eurasian Politics
- POSC07.346 Politics and Society of Great Britain
- POSC07.347 Politics of the Middle East
- POSC07.350 Introduction to Asian Political Systems
- POSC07.370 Special Topics in Political Science (according to topic)
- POSC07.420 International Law
- POSC07.421 International Organizations
- POSC07.491 Independent Study in Political Science (according to topic)

Constitutional Law and the Legal Process
(each course is 3 s.h.)
- POSC07.312 Freedom of Expression
- POSC07.340 Civil Rights and Civil Liberties
- POSC07.370 Special Topics in Political Science (according to topic)
- POSC07.375 Politics and the Judicial Process
- POSC07.410 Selected Problems in Constitutional Law
- POSC07.415 In-depth Study of the Current Supreme Court
- POSC07.491 Independent Study in Political Science (according to topic)

Other Required Courses
MINOR IN POLITICAL SCIENCE

The minor program in political science supplements the curriculum of students majoring outside of political science; it helps students expand their career options into such fields as law, journalism, social studies teaching, business, government and intelligence. The minor requires 21 s.h. of political science courses. Twelve of those semester hours are in basic courses which are required of all who pursue a political science minor, while the other nine are political science electives which students can tailor to their particular career or intellectual interests.

Required Courses

- POSC07.110 American Government
- POSC07.200 Survey of Western Political Theory
- POSC07.230 Comparative Political Systems
- POSC07.320 International Relations

Political Science Electives

Any three courses (each is 3 s.h.) from the following list:

- POSC07.220 State and Local Government
- POSC07.303 Campaigns, Political Parties and Interest Groups
- POSC07.305 The Legislative Process
- POSC07.306 The Presidency
- POSC07.308 Current Problems in American Politics
- POSC07.310 American Constitutional Law
- POSC07.311 Women and American Politics
- POSC07.312 Freedom of Expression
- POSC07.321 Contemporary World Problems
- POSC07.323 Politics of Race, Poverty, and Welfare in the U.S.
- POSC07.324 Black American and American Politics
- POSC07.330 Contemporary U.S. Foreign Policy
- POSC07.340 Civil Rights and Civil Liberties
- POSC07.341 Russian, East European and Eurasian Politics
- POSC07.346 Politics and Society of Great Britain
- POSC07.347 Politics of the Middle East
- POSC07.350 Introduction to Asian Political Systems
- POSC07.360 Methodology and Statistics in Political Science Research
- POSC07.370 Special Topics in Political Science
- POSC07.375 Politics and the Judicial Process
- POSC07.380 American Politics on Film
- POSC07.385 Environmental Policy
- POSC07.400 American Political Thought
- POSC07.401 Contemporary Political Thought
- POSC07.410 Selected Problems in Constitutional Law
- POSC07.415 In-depth Study of the Current Supreme Court
- POSC07.420 International Law
- POSC07.421 International Organizations
- POSC07.491 Independent Study in Political Science
BACHELOR OF ARTS IN ECONOMICS

In Economics, students acquire skills for analyzing important and stimulating national and global problems. Various possible solutions are developed. Economics deals with many current issues facing our society, such as energy, inflation, unemployment, pollution, urban decay, as well as foreign trade and government budget deficits.

The study of Economics prepares students for graduate studies or careers in the private sector, government services, teaching or research. Graduates with the Bachelor of Arts degree find that employment opportunities are greatest in business and government.

There are two programs of study: (1) B.A. program requiring 36 hours in economics; and (2) a minor requiring 21 hours in economics.

Program Requirements

Students are required to earn a C- or better in all Economics required and elective courses applied towards the major and take (MATH03.125) Calculus T & A or (MATH03.130) Calculus I and earn a C- or better. Students must take at least 30 of the 120 credits required for graduation and 21 of their required 36 credits in the major at Rowan University.

General Education

All students must complete the University General Education Requirements as described on page 33.

Rowan Experience

All students must complete the Rowan Experience requirements as described on page 35.

Major in Economics

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>21 s.h.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON04.101</td>
<td>Introduction to Economics: Macroeconomics</td>
</tr>
<tr>
<td>ECON04.102</td>
<td>Introduction to Economics: Microeconomics</td>
</tr>
<tr>
<td>ECON04.200</td>
<td>History of Economic Ideas</td>
</tr>
<tr>
<td>ECON04.205</td>
<td>American Economic History</td>
</tr>
<tr>
<td>ECON04.210</td>
<td>Environmental Economics</td>
</tr>
<tr>
<td>ECON04.215</td>
<td>Current Economic Problems and Policies</td>
</tr>
<tr>
<td>ECON04.225</td>
<td>Women in the Economy</td>
</tr>
<tr>
<td>ECON04.240</td>
<td>Selected Topics in Economics</td>
</tr>
<tr>
<td>ECON04.303</td>
<td>Principles of Economics: A Survey (not for majors)</td>
</tr>
<tr>
<td>ECON04.305</td>
<td>Money and Banking</td>
</tr>
<tr>
<td>ECON04.307</td>
<td>Economic Development (MG)</td>
</tr>
<tr>
<td>ECON04.310</td>
<td>Global Economics (MG)</td>
</tr>
<tr>
<td>ECON04.315</td>
<td>Public Finance</td>
</tr>
<tr>
<td>ECON04.320</td>
<td>Contemporary Economic Systems (MG)</td>
</tr>
<tr>
<td>ECON04.345</td>
<td>Labor Economics</td>
</tr>
<tr>
<td>ECON04.350</td>
<td>Health Economics</td>
</tr>
<tr>
<td>ECON04.351</td>
<td>Urban Economics</td>
</tr>
<tr>
<td>ECON04.395</td>
<td>Economics of Personal Financial Planning</td>
</tr>
<tr>
<td>ECON04.410</td>
<td>Internship in Economics</td>
</tr>
<tr>
<td>ECON04.492</td>
<td>Seminar in Economics (WI)</td>
</tr>
</tbody>
</table>

Economic Electives 15 s.h.

One Multi-cultural/Global (MG) course is required:

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>6 s.h.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON04.101</td>
<td>Introduction to Economics: Macroeconomics</td>
</tr>
<tr>
<td>ECON04.102</td>
<td>Introduction to Economics: Macroeconomics</td>
</tr>
</tbody>
</table>

Free Electives 29 s.h.

Total Credits in Program 120 s.h.

MINOR IN ECONOMICS

Required Courses 6 s.h.

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>6 s.h.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON04.101</td>
<td>Introduction to Economics: Macroeconomics</td>
</tr>
<tr>
<td>ECON04.102</td>
<td>Introduction to Economics: Macroeconomics</td>
</tr>
</tbody>
</table>

Economics Electives 15 s.h.

The student, in consultation with his/her Economics Advisor, must select the remaining 15 s.h. from the courses offered by the Economics curriculum. No less than 6 s.h. must be at the junior/senior level. Principles of Economics: Global Perspective (ECON04.303) is not counted as a junior/senior level elective course. Both Intermediate Macroeconomics (ECON04.301) and Intermediate Microeconomics (ECON04.302) are strongly recommended.
Sociology
The major in Sociology consists of 120 semester hours. Upon completing all requirements in their program, students majoring in sociology receive a Bachelor of Arts degree in Sociology. The major program aims to develop students' competence in understanding and analyzing the effects of social factors across all levels of society. The BA in Sociology overall affords its majors a strong Liberal Arts undergraduate degree as well as a rich foundation for most graduate degree programs.

Students in the sociology major now have the option of taking the General Program or the Applied Specialization for the degree. The General Program (2208) allows students flexibility in choosing which lower and upper level electives will be part of their program. It consists of a total of 33 semester hours. The Specialization in Applied Sociology (2209) consists of 36 semester hours, with students taking fewer Free Electives than in the General Program. The specialization focuses specifically on the analysis and treatment of social problems, the assessment of community based needs and practices, and the development and evaluation of strategies for positive social change. It provides a sound foundation for pursuing careers in human and community service industries.

CORE courses for both the general program and the specialization are the same. The CORE consists of Introduction to Sociology, Classical Social Theory, Social Statistics, Sociological Research Methods and Senior Seminar. The specialization in addition requires that students take the Field Experience (6sh) course which acts as their internship experience, Sociological Practice (3sh), Social Problems (3sh) and four other 3-credit upper or lower level elective courses.

Admission to the sociology program is open to all those students who are in good academic standing. To graduate with a degree in sociology, students must have a minimum GPA of 2.0 and no grades lower than a C- in all required courses (This rule applies to Sociology and non-Sociology courses). Students must also have an overall GPA of 2.0. Of the 33 semester hours in the general program and 39 semester hours in the specialization, students must complete at least 15 hours at Rowan University and take at least 18 hours in 300 or 400 level sociology courses. Sociology majors must also have a total of 30 hours of upper level courses among the 120 semester hours of course work required for graduation. This minimum of 30 upper level hours--of which 18 upper level hours must be in sociology--can be divided between sociology and other areas of study. Credit by examination-CLEP, may be substituted for Introduction to Sociology (08 120).

BACHELOR OF ARTS IN SOCIOLOGY, GENERAL DEGREE PROGRAM

General Education
All students must complete the University General Education requirements as described on page 33

Rowan Experience
All students must complete the Rowan Experience requirements as described on page 35

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT02.100</td>
<td>Elementary Statistics</td>
</tr>
<tr>
<td>PSY01.107</td>
<td>Essentials of Psychology</td>
</tr>
<tr>
<td>ANTH02.202</td>
<td>Cultural Anthropology</td>
</tr>
</tbody>
</table>

History, Humanities and Languages Choice
Choose from among the general education Courses in each field. (6 s.h.)

Geography Choose one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG16.110</td>
<td>Cultural Geography</td>
</tr>
<tr>
<td>or GEOG16.140</td>
<td>World Regional Geography</td>
</tr>
</tbody>
</table>
Economics or Political Science
Choose one of the following:
- **ECON04.101** Intro to Macroeconomics
- **ECON04.102** Intro to Microeconomics
- **POSC07.100** Intro to Government and Politics
- **POSC07.110** American Government
- **POSC07.230** Comparative Political Systems
- **POSC07.321** Contemporary World Problems

**History Choice** from Approved General Education Courses (3 s.h.)

**Religion or Philosophy Choice** from Approved General Education Courses (3 s.h.)

*(The general education courses are the same for both the general program and the specialization. See above.)*

**Sociology Major Courses**

**Required Courses for the B.A. in Sociology, General Program**

- **SOC08.120** Introduction to Sociology 3 s.h.
- **SOC08.331** Classical Sociological Theory (upper level) 3 s.h.
- **SOC08.375** Sociological Research Methods (upper level) 3 s.h.
- **SOC08.376** Social Statistics (upper level) 3 s.h.
- **SOC08.425** Senior Seminar (upper level) 3 s.h.

**Social Institutions Bank**

- Social Institutions Bank (any level) 3 s.h.

**Social Processes Bank**

- Social Processes Bank (any level) 3 s.h.

**Sociology Choice**

- Sociology Choice (any level) 3 s.h.

**Total Credits:**

**120 s.h.**

**Required Courses for the B.A. in Sociology, Applied Specialization**

- **SOC08.120** Introduction to Sociology 3 s.h.
- **SOC08.221** Social Problems 3 s.h.
- **SOC08.331** Classical Sociological Theory 3 s.h.
- **SOC08.375** Sociological Research Methods 3 s.h.
- **SOC08.376** Social Statistics 3 s.h.
- **SOC08.425** Senior Seminar 3 s.h.
- **SOC08.494** Field Experience in Sociology 3 s.h.
- **SOC08.339** Sociological Practice 3 s.h.

**Sociology Choice**

- Sociology Choice (any level) 3 s.h.
- Sociology Choice (Practice Bank) 3 s.h.
- Sociology Choice (Applied Bank) 3 s.h.

**Sociology Choice**

- Sociology Choice (Specialization Bank) 3 s.h.

**Total Credits:**

**120 s.h.**

**Minor in Sociology**

The Minor in Sociology consists of 21 semester hours. A minimum of 12 of the semester hours must be taken in 300 or 400 level courses. Introduction to Sociology (SOC08.120) as well as Classical Sociological Theory (SOC08.331) are required courses. A minimum of 12 semester hours must be taken at Rowan University.

**ANTHROPOLOGY**

**Maria Rosado**

Advisor

Campbell Library, Room 539

856.256.4586

rosado@rowan.edu

**Minor in Anthropology**

The Minor in Anthropology consists of six 3-credit courses. The first three courses constitute a common core taken by all minors. These are:

- **ANTH02.202** Cultural Anthropology
- **ANTH02.221** Human Variation
- **ANTH02.203** Archaeology
Minors select the remaining three courses in consultation with their minor advisor (whom the student may choose at any point prior to taking the final three courses). Each student will be encouraged to concentrate in a particular subfield of anthropology (cultural, physical or archaeology). Those who have an interest in which no class is offered may elect an independent study or research course as a final course choice. Interested students may elect to take more courses than the minimum required by the minor. If graduate studies in anthropology are anticipated, the student is encouraged to take a minimum of 8 courses. Student is encouraged to take a minimum of 8 courses.

**BACHELOR OF ARTS IN DISASTER PREPAREDNESS AND EMERGENCY MANAGEMENT (B.A.)**

The Bachelor of Arts in Disaster Preparedness and Emergency Management is an interdisciplinary academic program, designed to provide rigorous academic preparation for students interested in seeking advanced professional education, homeland security education and training or a career in international, national, state, and local disaster preparedness, emergency management, and safety areas with an emphasis on urban environments. The current focus areas include biomedicine preparedness (in conjunction with the Cooper Medical School of Rowan University), public administration and civic leadership, and civil safety/justice administration, all of which lead to establishing core competencies in emergency preparedness. In addition to providing student with a broad understanding of safety and security issues, the Disaster Preparedness and Emergency Management degree program focuses on several vital components of the emergency management field:

- Critical Infrastructure Protection
- Disaster Preparedness and Response
- Intelligence Sharing and Analysis

Graduates will be prepared to work in a variety of settings and agencies that focus on emergency rescue and response, homeland security, hospitals, municipal emergency management, county emergency management, safety management, intelligence analysis, private security, airports, state and local law enforcement, Federal law enforcement, customs investigators, special agents, military service and border security and patrol.

**Program Requirements**

The Disaster Preparedness and Emergency Management program consists of 121 S.H. of coursework, including 30 S.H. of core major requirements coursework, and 9 S.H. of focus area courses. The 30 S.H. of core major requirements provide a common foundation for all majors with an emphasis on ethics to assist the student in developing complex thinking skills. As part of the 30 S.H. of core major courses, each student will complete a 3 S.H. internship experience designed to provide an experiential learning opportunity and to give the student a more practical view of the intended career path. In addition to the core requirements, general education requirements, and electives, each student will choose a focus area:

- **Focus Area 1:** Public Administration and Policy for Crisis Decision Leadership- 9 additional S.H of Political Science/Public Administration, Disaster Leadership or Risk Analysis coursework
- **Focus Area 2:** Justice, Safety and Homeland Security Administration- 9 additional S.H. of Law & Justice coursework with focus on Homeland Security or Risk Analysis
- **Focus Area 3:** Emergency Health Preparedness and Biomedical Safety- 9 additional S.H. of Biomedical/Population Health and Epidemiology or Risk Analysis coursework

**Required BA-DPEM Core Courses**

*(s.h.: semester hours/credit hours)*

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>S.H.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPEM 00101</td>
<td>Intro to Emergency Management and Homeland Security</td>
<td>3</td>
</tr>
<tr>
<td>DPEM 00310</td>
<td>Critical Infrastructure and Incident Command Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>LAWJ 05415</td>
<td>Homeland Security and Domestic Terrorism</td>
<td>3</td>
</tr>
<tr>
<td>SOC 08429</td>
<td>Organizational response to Disasters and Crisis</td>
<td>3</td>
</tr>
<tr>
<td>SOC 08328</td>
<td>Sociology of Disasters and Crisis</td>
<td>3</td>
</tr>
<tr>
<td>DPEM 00410</td>
<td>Public Leader in Crisis Management and Communication</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 06326</td>
<td>Geosciences of Natural Disasters</td>
<td>3</td>
</tr>
<tr>
<td>DPEM 00400</td>
<td>Disaster Planning, Mitigation and Recovery</td>
<td>3</td>
</tr>
</tbody>
</table>

**Research Methods**

Choice of 1 below (3 s.h.)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>S.H.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAWJ 05380</td>
<td>Criminal Justice Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>POSC 07360</td>
<td>Methodology and Statistics in Political Science research</td>
<td>3</td>
</tr>
<tr>
<td>SOC 08375</td>
<td>Sociological Research Methods</td>
<td>3</td>
</tr>
</tbody>
</table>

**Approved Internship/Field Experience**

* 3 S.H. are required, 6 S.H. are recommended

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>S.H.</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ROWAN UNIVERSITY UNDERGRADUATE CATALOG 2016-2017
Bachelor of Arts in Human Services (B.A.)

The Bachelor of Arts in Human Services is an academic program, unique to the Camden Campus that will prepare individuals to serve as human services providers, health educators, social service professionals and community service specialists. The curriculum is designed to combine theory and research with application in experiential learning settings in the urban community and social service agencies located in the City of Camden, New Jersey. The Human Services program is designed for students who are interested in studying and working with individuals of diverse populations in urban settings.

Program Requirements

The Human Services program consists of 120 S.H. of coursework, including 39 S.H. of core requirements, 9 S.H. of which involve direct field experience. In addition to the core requirements, general education requirements, and electives, students will choose one of the following three specializations, each consisting of a single required 3 S.H. course and 6 S.H. of electives relevant to each specialization:

- Clinical Services Specialization - 9 S.H.
- Administrative Specialization - 9 S.H.
- Criminal Justice Specialization - 9 S.H.

**Required Core Courses**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>S.H.</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSRV 01100</td>
<td>Introduction to Human Services</td>
<td>3</td>
</tr>
<tr>
<td>SOC 08120</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 01107</td>
<td>Essentials of Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 01205</td>
<td>Intake and Interviewing Skills</td>
<td>3</td>
</tr>
<tr>
<td>SOC 08223</td>
<td>Sociology of Social Welfare</td>
<td>3</td>
</tr>
<tr>
<td>SOC 08332</td>
<td>Contemporary Sociological Theory</td>
<td>3</td>
</tr>
<tr>
<td>HSRV 08310</td>
<td>Research Methods for Human Services</td>
<td>3</td>
</tr>
<tr>
<td>HSRV 01320</td>
<td>Applied Ethics in Human Services</td>
<td>3</td>
</tr>
<tr>
<td>HSRV 01351</td>
<td>Field Experience in Human Services</td>
<td>9</td>
</tr>
<tr>
<td>SOC 08430</td>
<td>Case Management Intervention in Sociological Practice</td>
<td>3</td>
</tr>
<tr>
<td>HSRV 01400</td>
<td>Senior Seminar: Human Services- W1</td>
<td>3</td>
</tr>
</tbody>
</table>

**Other Required Courses**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>S.H.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 02202</td>
<td>Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>POSC 07110</td>
<td>American Government</td>
<td>3</td>
</tr>
<tr>
<td>STAT 02100</td>
<td>Elementary Statistics</td>
<td>or</td>
</tr>
<tr>
<td></td>
<td>Statistics I</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Required Credits for the Program**

120 s.h. (39 Core)
Interdisciplinary Studies Bachelor of Arts Programs

AFRICANA STUDIES
James Coaxum
Coordinator
215G Robinson Hall
856.256.4793
c coaxum@rowan.edu

Rowan University's Africana Studies Program is a significant component of the Institution's commitment to multidisciplinary education and the inclusion of the study of the experiences of diverse peoples within its academic programs and services. The program offers a Bachelors Degree in Africana Studies and an undergraduate concentration in African American Studies, through cooperative arrangements with about 12 academic departments of the University.

BACHELOR OF ARTS IN AFRICANA STUDIES

Africana Studies is an interdisciplinary major designed to engage undergraduate students in a critical examination of past and contemporary challenges, experiences and contributions of people of African descent and their relations with other groups throughout history. Hence the program is both national and international in scope. The program emphasizes two major goals: (1) discovering, mastering and creating knowledge and (2) using those understandings and skills in service to institutions and communities.

In addition to the foundational or core requirements, students in the major will select a specialization in one of the following areas: African American Studies, African Studies, Afro-Latin American and Caribbean Studies, or Africana Comparative Studies. To maximize their career path options, students will be able to take the Africana Studies Major with a minor in one of the academic disciplines or as a double major.

Graduates with a Bachelors Degree in Africana Studies will have the intellectual, technical, and social competencies to be competitive as applicants for employment and graduate or professional study in the US or abroad in a broad range of fields including: Education, law and justice, business, international affairs, federal and state public services, politics, social work, public administration, library and museum services, health sciences and public health, theatre, psychology and the social sciences, economic development, non-profit management, writing, journalism, ethnic studies, and the arts.

The program promotes regular academic advising and consultation with the program coordinator or other faculty and staff to enable students to follow a clear sequence of courses both in general education and the major. This is especially essential for students pursuing a double major, who will need assistance in fulfilling the requirements of both majors by utilizing the flexibility provided in the current model of general education.

General Education
All students must complete the University General Education Requirements as described on page 33

Rowan Experience
All students must complete the University Rowan Experience as described on page 35

Program Requirements

Foundational or Core Requirements: 18 s.h.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFST11.104</td>
<td>Introduction to Africana Studies</td>
</tr>
<tr>
<td>HIST05.394</td>
<td>Sub-Saharan Africa to 1800</td>
</tr>
<tr>
<td>AFST11.304</td>
<td>Africana Social/Political Thought</td>
</tr>
<tr>
<td>AFST11.305</td>
<td>Research Methods in Africana Studies</td>
</tr>
<tr>
<td>AFST11.310</td>
<td>Service Learning Seminar in Africana Studies</td>
</tr>
<tr>
<td>AFST11.450</td>
<td>Senior Seminar in Africana Studies</td>
</tr>
</tbody>
</table>

Tracks for Specialization 12 s.h.
Each Africana Studies Major will develop a specialization by selecting a minimum of 12 credit hours of courses in one of the four thematic areas below.
### African Studies

- **ZULU16.101** Elementary Zulu I
- **ZULU16.102** Elementary Zulu II
- **ANTH02.311** Peoples & Cultures of Africa
- **ARAB12.101** Elementary Arabic I
- **ARAB12.102** Elementary Arabic II
- **GEOG16.345** Geography of Africa
- **HIST05.397** Sub-Saharan Africa Since 1800
- **HIST05.437** 20th Century African Nationalism
- **HIST05.429** Proseminar in History: Women in African History
- **POSC07.441** Contemporary Problems of Modern Africa
- **SWHL17.101** Elementary Swahili I
- **SWHL17.102** Elementary Swahili II
- **Special Topics on Africa**

### African American Studies

- **ECON04.225** Women in the Economy
- **ECON04.360** Urban Economics
- **ENGL02.216** African American Literature I
- **ENGL02.316** African American Literature II
- **HIST05.322** Civil War & Reconstruction
- **HIST05.376** African American History to 1865
- **HIST05.377** African American History Since 1865
- **HIST05.422** Women in American History
- **LAWJ05.205** Minorities, Crime, & Justice
- **LAWJ05.346** Women, Crime & Criminal Justice
- **MUSG06.220** The Music of African Americans
- **MUSG06.115** Growth & Development of Jazz
- **POSC07.324** Black Americans & American Politics
- **POSC07.311** Women in American Politics
- **POSC07.340** Civil Rights and Civil Liberties
- **POSC07.323** Politics of Race, Poverty & Welfare
- **PSY01.235** African American Psychology
- **RTF03.280** African American Film History
- **RTF03.272** Images/Women in Film
- **THD08.311** African Influences in American Dance
- **Special Topics in African American Studies**

### Africana Comparative Studies

- **ECON04.310** Global Economics
- **ENGL02.116** Readings in Non-Western Literature
- **ENGL02.200** Women in Literature
- **GEOG16.140** World Regional Geography
- **HIST05.120** World History Since 1500
- **HIST05.417** Women in Islam
- **HIST05.413** Comparative Race Relations: S. Afr/Brazil/US
- **HIST05.425** History of Feminisms
- **HIST05.441** Imperialism & Colonialism
- **INTR01.130** Women in Perspective
- **INTR01.200** Issues in Women's Health
- **LAWJ05.330** Problems in World Justice
- **LAWJ05.415** Law & Human Rights
- **MKT09.370** International Marketing
- **MUSG06.448** Music in World Cultures
- **POSC07.230** Comparative Political Systems
- **POSC07.321** Contemporary World Problems
- **PSY01.105** Psychology of Ethnic Identity & Community
- **PSY01.310** Psychology of Racism & Ethnocentrism
- **PSY01.200** Psychology of Women & Cultural Experience
- **RTF03.272** Images of Women in Film
- **SOC08.120** Sociology of Minority Groups
- **SOC08.330** Sociological Stratification in Contemporary Societies
- **THD07.301** African, African-American Theatre
- **Special Topics in Africana Comparative Studies**
### Afro-Latin American & the Caribbean Studies

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH02.210</td>
<td>Natives of South America</td>
</tr>
<tr>
<td>ENGL02.217</td>
<td>U.S. Literature of Latino &amp; Hispanic Peoples</td>
</tr>
<tr>
<td>GEOG16.344</td>
<td>Geography of Latin America</td>
</tr>
<tr>
<td>HIST05.347</td>
<td>Traditional Latin America</td>
</tr>
<tr>
<td>HIST05.350</td>
<td>Modern Latin America</td>
</tr>
<tr>
<td>HIST05.409</td>
<td>Latin America Revolution &amp; Reform</td>
</tr>
<tr>
<td>HIST05.362</td>
<td>History of Mexico &amp; the Caribbean</td>
</tr>
<tr>
<td>HIST05.411</td>
<td>Topics in Latin American History</td>
</tr>
<tr>
<td>SPAN05.323</td>
<td>Spanish American Literature</td>
</tr>
<tr>
<td>SPAN05.324</td>
<td>Spanish American Civilization &amp; Culture</td>
</tr>
<tr>
<td>SPAN05.327</td>
<td>Spanish American Poetry</td>
</tr>
<tr>
<td>SPAN05.328</td>
<td>Spanish American Theatre</td>
</tr>
<tr>
<td>SPAN05.326</td>
<td>Spanish American Novel</td>
</tr>
<tr>
<td></td>
<td>Special Topics in Afro-Latin Amer/Caribbean Studies</td>
</tr>
</tbody>
</table>

**Program Electives**

Students majoring in Africana Studies must elect a minimum of nine credit hours from courses offered under any of the areas above. At least two (2) of these electives must be at the 300 or 400 level.

### Other Requirements

In addition to the hours needed to fulfill the Rowan University General Education Requirements, Africana Studies majors must take the following additional credits from the courses listed under the Social and Behavioral Sciences Banks and the History, Humanities and Language Banks.

### Courses

- Social and Behavioral Sciences 6 s.h.
- Foreign/World Language (Zulu, Swahili, Arabic, French, Spanish, or Portuguese) 6 s.h.
- Non-Program Electives 8-9 s.h.

### Study Abroad

Students will be required to earn between 3 and 15 Credit Hours of a Study Abroad Experience in Africa, the Americas, the Caribbean, or elsewhere in the African Diaspora, during which they can complete course electives in their major to complement their career interests.

Students may apply for and undertake a traditional semester or academic year experience within the program that the University offers for study abroad in a number of countries, including Egypt, Ghana, Kenya, the Republic of South Africa, and South and Central America. Students may also participate for course credit in faculty-led two to four-week summer institutes and two-week intersession or mid-year study abroad programs.

Students who are unable to undertake either the semester, year-long, summer or intersession study abroad alternatives for documented reasons will be able to fulfill the requirement through domestic internships which enables them to approximate some of the important intercultural benefits of international study.

Students who have had travel, work or formal program experience in another country, (for example, within another major) that may be equivalent to the study abroad as outlined above, may apply with appropriate documentation to the Coordinator of Africana Studies for exemption from the requirement.

### Grade-Point Average

Students who choose to major and graduate in Africana Studies must have and maintain a cumulative 2.0 Grade-Point Average as a minimum, with no grade lower than a 2.0 in courses in the major.

### Free Electives

21 s.h.

### CONCENTRATION IN AFRICAN AMERICAN STUDIES

The African American Studies Concentration consists of interdisciplinary curricular offerings that engage faculty and students in critical analysis, reflection and transformational thinking about African Americans within the framework of the multicultural diversity and global connectedness of American society.

The African American Studies Program dates back to the late 1960s when the Civil Rights Movement across the nation and the Southern New Jersey region led to the establishment of the King Scholar Program (The Educational Opportunity Fund or EOF Program) in the Fall of 1968. Following the offering of the first Black History course by the History Department in 1969 in response to Black student demands, a slow but steady growth in African American and African curricular offerings over the course of the next two decades culminated in the formal establishment of the African American Studies Concentration in 1989.

See the requirements for this concentration listed under the Interdisciplinary Studies Concentrations section of this catalog.
Bachelor of Arts in American Studies
Emily Blanck
Coordinator
Robinson Hall
856.256.4500 ext. 3994
blancke@rowan.edu

The American Studies major is a guided interdisciplinary program that offers students a rigorous and flexible major. The program in American Studies focuses upon concepts of citizenship and is ideal to pair with almost any pre-professional program that deals with people. Introduction to American Studies AMST13.101 acquaints students with basic interdisciplinary methodology and provides students with insight into popular culture and citizenship. Students will follow up this course with a rigorous methods course in Interdisciplinary Research and Writing AMST 13.301 that prepares students for the upper level coursework.

In addition, you will study in the College of Communication and most of the departments in the College of Humanities & Social Sciences addressing issues in American society, culture, history, geography and popular culture. Students will also take an internship course to prepare themselves for their future careers.

The program will introduce you to the diversity of peoples who comprise America and to the United States’ relationship to the world. The highlight of every student’s career is the Senior Seminar in American Studies AMST13.402, an intense, discussion-led, capstone experience.

The major offers you the flexibility to tailor your program to your personal interests and the time to further explore those courses that interest you or that best apply to your specific career goals by taking courses in several disciplines on American topics. Students are encouraged to specialize by taking several courses from various departments on a similar topic.

Except for free electives, no course can be taken as Pass/Fail and all courses must be completed with a C- or better. Students who are not transfers must take a Rowan Seminar.

General Education
All students must complete the University General Education Requirements as described on page 33

Rowan Experience
All students must complete the Rowan Experience requirements as described on page 35

Required Courses

- One free elective in Mathematics or Science (this course also satisfies a Math/Science Gen. Ed. Requirement)

Five courses out of the following introductory selections:

- American Government (this course also satisfies an SBS Gen. Ed. Requirement)
- Geography of the U.S. and Canada (this course also satisfies an SBS Gen. Ed. Requirement)
- Introduction to Sociology OR Social Problems (this course also satisfies an SBS Gen. Ed. Requirement)
- United States History to 1865 (this course also satisfies a Humanities Gen. Ed. Requirement)
- United States History Since 1865 (this course also satisfies a Humanities Gen. Ed. Requirement)
- Readings in U.S. Literature (this course also satisfies a History/Humanities/Language Gen. Ed. Requirement and the Rowan Experience broad-based literature requirement)
- History of American Art (this course also satisfies a Rowan Experience in Art Requirement)

Required courses

- AMST13.101 Introduction to American Studies (Prerequisite: Comp01.112)
- AMST13.402 Senior Seminar in American Studies - WI (Prerequisite: AMST13.301 Interdisciplinary Research and Writing plus 5 course in the major)

Core Choices
Eight American Studies Approved Courses (24 s.h.), six of which must be 300 or 400 level from the American Studies Approved Core list.

Those required credit hours will be composed of the following:

- Upper-level disciplinary requirement (18 s.h.)
  - One upper-level English course
  - One upper-level History course
  - Courses must come from a minimum of 4 disciplines

Topics requirement:
At least one of the Core Choice Courses must fulfill the following topic requirements, courses are labeled below in the American Studies Approved Core Course list.
• Diversity
• Gender
• Social Class
• U.S. in Global Perspective
• Media and Popular Culture

**Internship Requirement:** One course must be an internship

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST05.495</td>
<td>Internship in History (I)</td>
</tr>
<tr>
<td>HSRV01.351</td>
<td>Field Experience for Human Services [I]</td>
</tr>
<tr>
<td>INTR20.399</td>
<td>Internship In Applied Liberal Arts [I]</td>
</tr>
<tr>
<td>ELEM02.448</td>
<td>Clinical Practice In Elementary Education [I] (Waived)</td>
</tr>
</tbody>
</table>

**Note:** Courses may double count for topics, Internship, and disciplinary requirements.

**List of Eligible Courses by Discipline**

**D= Diversity, G=Gender, SC=Social Class, M=Media and Popular Culture, GL= U.S. in Global Perspective, I=Internship**

**History**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>HIST05.150</td>
<td>U.S. History to 1865</td>
</tr>
<tr>
<td>HIST05.151</td>
<td>U.S. History since 1865</td>
</tr>
<tr>
<td>HIST05.201</td>
<td>History of the American Revolution &amp; Early Republic</td>
</tr>
<tr>
<td>HIST05.221</td>
<td>U.S. History 1820-186</td>
</tr>
<tr>
<td>HIST05.222</td>
<td>Civil War and Reconstruction [D]</td>
</tr>
<tr>
<td>HIST05.324</td>
<td>Twentieth Century U.S.</td>
</tr>
<tr>
<td>HIST05.328</td>
<td>Colonial North America</td>
</tr>
<tr>
<td>HIST05.329</td>
<td>Gilded Age and Progressive Era</td>
</tr>
<tr>
<td>HIST05.338</td>
<td>America War to War</td>
</tr>
<tr>
<td>HIST05.370</td>
<td>U.S. Legal and Constitutional History to 1870</td>
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<tr>
<td>HIST05.371</td>
<td>U.S. Legal and Constitutional History since 1870</td>
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<tr>
<td>HIST05.373</td>
<td>Civil Rights and Black Power Movements (D)</td>
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<tr>
<td>HIST05.375</td>
<td>America Since 1945 [D, G, M]</td>
</tr>
<tr>
<td>HIST05.376</td>
<td>African American History to 1865 (D)</td>
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<tr>
<td>HIST05.377</td>
<td>African American History since 1865 [D]</td>
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<tr>
<td>HIST05.407</td>
<td>History of World War II (GL)</td>
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<tr>
<td>HIST05.412</td>
<td>American Intellectual History</td>
</tr>
<tr>
<td>HIST05.413</td>
<td>Urban History of the U.S. (SC)</td>
</tr>
<tr>
<td>HIST05.414/415</td>
<td>U.S. Diplomatic History I/II [GL]</td>
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<tr>
<td>HIST05.422</td>
<td>Women in American History (G)</td>
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<tr>
<td>HIST05.429</td>
<td>Topics in U.S. History (with approval from Coordinator, might fulfill other requirements)</td>
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<tr>
<td>HIST05.436</td>
<td>U.S. Homefront 1941-1945</td>
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<td>HIST05.438</td>
<td>History of the Vietnam War (GL)</td>
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<tr>
<td>HIST05.441</td>
<td>Imperialism and Colonialism [GL]</td>
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<tr>
<td>HIST05.471</td>
<td>History of the American West (D)</td>
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<tr>
<td>HIST05.472</td>
<td>Cultural History of the U.S. (M)</td>
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<td>HIST05.473</td>
<td>U.S. Labor History (SC)</td>
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<td>HIST05.475</td>
<td>History of NJ</td>
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<tr>
<td>HIST05.495</td>
<td>Internship in History (I)</td>
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**English**

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<td>ENGL02.113</td>
<td>Readings in U.S Lit</td>
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<tr>
<td>ENGL02.200</td>
<td>Women in Literature [G]</td>
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<tr>
<td>ENGL02.205</td>
<td>Adolescent Literature</td>
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<tr>
<td>ENGL02.216</td>
<td>African American Literature I [D]</td>
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<tr>
<td>ENGL02.217</td>
<td>U.S. Latino/a Literature [D]</td>
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<tr>
<td>ENGL02.316</td>
<td>African American Literature II[D]</td>
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<tr>
<td>ENGL02.313</td>
<td>U.S. Literature I</td>
</tr>
<tr>
<td>ENGL02.315</td>
<td>U.S. Literature II</td>
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<td>ENGL02.317</td>
<td>Children’s Literature: Texts and Contexts</td>
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<td>ENGL02.322</td>
<td>Literature of the American Renaissance</td>
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<td>ENGL02.324</td>
<td>American Realism And Naturalism</td>
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<td>Modern American Poetry</td>
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<td>ENGL02.423</td>
<td>The American Novel</td>
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<td>ENGL02.424</td>
<td>American Dramatist</td>
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<td>ENGL02.425</td>
<td>Contemporary Literature</td>
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<td>Course Code</td>
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<tr>
<td>ENGL05.301</td>
<td>American English Grammar</td>
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<tr>
<td>AFST11.104</td>
<td>Introduction to Africana Studies [D, GL]</td>
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<tr>
<td>AFST11.304</td>
<td>Africana Social Thought [D, GL]</td>
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<tr>
<td>ANTH02.310</td>
<td>Indians of North America [D]</td>
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<tr>
<td>ANTH02.350</td>
<td>Comparative Cultures [GL]</td>
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<tr>
<td>ARHS03.310</td>
<td>History of American Art</td>
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<tr>
<td>ARHS03.230</td>
<td>Survey of Women Artists [G]</td>
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<tr>
<td>CMS04.210</td>
<td>Mass Media and its Influences [M]</td>
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<tr>
<td>CMS04.215</td>
<td>Fiction to Film [M]</td>
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<tr>
<td>CMS04.310</td>
<td>Images of Gender in Popular Culture [M, G]</td>
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<tr>
<td>CMS04.315</td>
<td>Participatory Media [M]</td>
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<td>CMS04.320</td>
<td>Communicating Gender [G, M]</td>
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<tr>
<td>CMS04.330</td>
<td>International Media Communication [GL, M]</td>
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<td>ECON04.100</td>
<td>American Economic Systems</td>
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<td>GEOG16.201</td>
<td>Geography of U.S. /Canada</td>
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<tr>
<td>GEOG16.302</td>
<td>Urban Geography [D, SC]</td>
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<td>GEOG16.331</td>
<td>Geology of the National Parks</td>
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<td>GEOG16.241</td>
<td>Geography of NJ [SC]</td>
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<td>GEOG16.303</td>
<td>Political Geography [GL]</td>
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<td>INTR01.130</td>
<td>Women and Gender in Perspective [G]</td>
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<td>INTR20.399</td>
<td>Internship In Applied Liberal Arts [I]</td>
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<td>NTR99.300</td>
<td>Environmental Internship [I]</td>
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<td>LAWJ05.202</td>
<td>American Police</td>
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<td>LAWJ05.205</td>
<td>Minorities in Criminal Justice [D]</td>
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<td>Criminal Procedure II</td>
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<td>LAWJ05.315</td>
<td>Criminal Justice and Social Conflict [D, SC]</td>
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<td>LAWJ05.322</td>
<td>Illegal Drugs and Crime in America [D, SC]</td>
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<td>LAWJ05.346</td>
<td>Women, Crime &amp; Criminal Justice [G]</td>
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<td>LAWJ05.401</td>
<td>Law and Human Rights [GL]</td>
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<td>PHIL09.325</td>
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<td>PHIL09.241</td>
<td>Philosophy and Society</td>
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<td>PHIL09.393</td>
<td>Contemporary Moral Problems</td>
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<td>PHIL09.328</td>
<td>Philosophy and Gender [G]</td>
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<td>POSC07.110</td>
<td>American Government</td>
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<td>POSC07.220</td>
<td>State And Local Government</td>
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<tr>
<td>POSC07.230</td>
<td>Comparative Political Systems [GL]</td>
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<td>POSC07.306</td>
<td>The Presidency</td>
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<tr>
<td>POSC07.310</td>
<td>American Constitutional Law</td>
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<td>POSC07.311</td>
<td>Women in American Politics [G, M]</td>
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<td>POSC07.320</td>
<td>International Relations [GL]</td>
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<td>POSC07.321</td>
<td>Contemporary World Problems [SC, GL]</td>
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<td>POSC07.323</td>
<td>Politics of Race, Poverty, and Welfare in the U.S. [D, G, SC, M]</td>
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<td>POSC07.330</td>
<td>Contemporary U.S. Foreign Policy [GL]</td>
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<tr>
<td>POSC07.340</td>
<td>Civil Rights and Civil Liberties [D, G, SC]</td>
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<td>POSC07.380</td>
<td>Politics On Film [M]</td>
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<tr>
<td>POSC07.400</td>
<td>American Political Thought [D, G, SC]</td>
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<tr>
<td>EDPA02.490</td>
<td>Public Service Internship [I]</td>
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<tr>
<td>PSY01.200</td>
<td>Psychology of Women &amp; Cultural Experience [G, D]</td>
</tr>
<tr>
<td>PSY01.235</td>
<td>African American Psychology [D]</td>
</tr>
</tbody>
</table>
# Bachelor of Arts in Liberal Studies: Humanities/Social Science

**Cindy Finer**  
**Program Advisor**  
**Campbell Library, 5th Floor, Room 546**  
**856.256.4599**  
**finer@rowan.edu**

The Liberal Studies: Humanities/Social Science major is a quality liberal arts program that offers students the opportunity to pursue multiple areas of study in the humanities and social sciences. The ability to combine diverse areas of interest is highly desired by traditional as well as non-traditional students to enrich their lives and prepare for productive rewarding careers. This structured yet versatile major provides an excellent interdisciplinary education for increased marketability upon graduation.

## Program Requirements

Major courses will be completed in two program sequences. Students must choose one subject from approved Program A Sequences and one from approved Program B Sequences or two may be chosen from Program A Sequences. A minimum number of Free Electives is also required and dependent upon the combined total credits earned in the Program Sequences. Courses used to fulfill the requirements of Program A Sequences may not be used to fulfill requirements for Program B Sequences. Courses eligible for Program A Sequence requirements but not used to fulfill that requirement may be used to fulfill Program B Sequence requirements. Courses used toward Program A and B Sequence completion are not eligible to complete General Education Requirements. The Liberal Studies: Humanities/Social Science program requires a minimum GPA of 2.0 for graduation. In addition, a minimum of 30 credits must be earned at Rowan University to satisfy residency requirements.

## General Education

All students must complete the University General Education Requirements as described on page 33.

## Rowan Experience

All students must complete the Rowan Experience requirements as described on page 35.

## Other Requirements

### Additional History/Humanities/Language courses  
6 s.h.
**Additional Social and Behavioral Science courses**
6 s.h.

**Additional Non-Program courses**
11 s.h.

The Liberal Studies: Humanities/Social Science major promotes regular academic advising and consultation with the program advisor for students to follow a clear sequence of courses both in general education and the major Program Sequences for degree completion.

### Program Sequence: A Choices

#### Africana Studies

**Required Credits**
18 s.h.

**Introductory Level Courses**
AFST11.104
Introduction to Africana Studies (M/G)

And choose one course from:
- ENGL12.216
  African American Lit I (M/G)
- ENGL12.217
  US Lit of Latino and Hispanic Peoples (M/G)
- SOC08.230
  Sociology of Minority Groups (M/G)
- INTR01.130
  Women in Perspective

**Advanced Level Courses**
AFST11.304
Africana Social/Political Thought

Choose one course from:
- AFST11.305
  Research Methods in Africana Studies
- HIST05.306
  Historical Methods (M/G)
- LAW05.380
  Criminal Justice Research
- POSC07.360
  Methods & Statistics in Political Science Research
- SOC08.375
  Sociological Research Methods
- GEOG16.350
  Quantitative Methods in Geography
- PSY01.200
  Psychology of Women and Cultural Experience (M/G)

And choose one course from:
- PSY01.310
  Psychology of Racism & Ethnocentrism (M/G)
- ENGL12.316
  African American Lit II
- HIST05.347
  Traditional Latin America
- HIST05.350
  Modern Latin America
- HIST05.362
  History of Mexico and the Caribbean
- HIST05.376
  African American History to 1865
- HIST05.377
  African American History since 1865
- HIST05.394
  Sub-Saharan Africa to 1800
- HIST05.397
  Sub-Saharan Africa since 1800

**Senior Level Capstone**
AFST11.450
Africana Studies Senior Seminar WI

#### American Studies

**Required Credits**
21 s.h.

**Introductory Level Courses**
AMST13.201
Introduction to American Studies

**Advanced Level Courses**

Choose one course from:
- HIST05.321
  US History 1820-1861
- HIST05.322
  Civil War & Reconstruction
- HIST05.324
  Twentieth Century US
- HIST05.328
  Colonial North America 1500-1775
- HIST05.329
  Gilded Age & Progressive Era 1877-1914
- HIST05.338
  America from War to War
- HIST05.371
  US Legal & Constitutional History to 1870
- HIST05.372
  US Legal & Constitutional History since 1870
- HIST05.373
  Civil Rights/Black Power Movement
- HIST05.375
  America since 1945: The Modern Era
- HIST05.407
  History of World War II
- HIST05.412
  Intellectual History of US
- HIST05.472
  Cultural History of US
- HIST05.334
  Urban History of US
- HIST05.436
  US Home front 1941-1945
- HIST05.438
  History of the Vietnam War
- HIST05.470
  Issues in American History
- HIST05.471
  History of the American West
- HIST05.473
  American Military History 1775-present
College of Humanities and Social Sciences

HIST05.474  US Labor History
HIST05.475  History of New Jersey
HIST05.495  Internship in History
PHIL09.325  American Philosophy
POSC07.400  American Political Thought
ARHS03.310  History of American Art (ACE)

Choose one course from:
GEOG16.302  Urban Geography
GEOG16.241  Geography of New Jersey
LAWJ05.312  Criminal Procedure II
LAWJ05.322  Illegal Drugs & Crime in America
PHIL09.241  Philosophy & Society
PHIL09.392  Contemporary Moral Problems (M/G)
PHIL09.393  Contemporary Moral Problems-WI
POSC07.308  Current Problems in American Politics
POSC07.310  American Constitutional Law
POSC07.340  Civil Rights & Civil Liberties
SOC08.320  Urban Sociology
SOC08.326  The Socialization of the Child through Adolescence
SOC08.330  Social Stratification
SOC08.331  Classical Social Theory
SOC08.332  Contemporary Sociological Theory
SOC08.336  Sociology of Education
SOC08.431  Social Psychology of City Life

Choose one course from:
ENGL02.228  Genre Studies: Short Fiction
ENGL02.313  US Literature I
ENGL02.315  US Literature II
ENGL02.322  Literature of the American Renaissance
ENGL02.327  Modern American Poetry
ENGL02.423  The American Novel
ENGL02.424  American Dramatists
ENGL02.435  Contemporary Literature
ENGL05.301  American English Grammar
RTF03.372  American Film Directors
THD07.360  Musical Theatre

Choose one course from:
ANTH02.310  Indians of North America (M/G)
ANTH02.350  Comparative Cultures
ENGL02.200  Women in Literature
ENGL02.216  Afro-American Lit I (M/G)
ENGL02.217  US Literature of Latino/a & Hispanic Peoples (M/G)
ENGL02.316  Afro-American Lit II (M/G)
HIST05.376  Afro-American History to 1865
HIST05.377  Afro-American History since 1865
HIST05.422  Women in American History
LAWJ05.346  Women, Crime & Criminal Justice
PHIL09.328  Philosophy & Gender (M/G)
PHIL09.329  Philosophy & Gender-WI
POSC07.311  Women & American Politics (M/G)
POSC07.323  Politics of Race, Poverty & Welfare in the US
PSY01.200  Psychology of Women & Cultural Experience
REL01.210  Religion in America (M/G)
RTF03.272  Images of Women in Film
SOC08.230  The Sociology of Minority Groups (M/G)
SOC08.370  The Sociology of Women in Society
SOC08.493  Seminar on Gender Roles

Choose one course from:
ECON04.307  Economic Development (M/G)
ECON04.310  Global Economic
ECON04.320  Contemporary Economic Systems (M/G)
GEOG16.303  Political Geography (M/G)
HIST05.414  Diplomatic History of the US to 1900
HIST05.415  Diplomatic History of the US since 1900
HIST05.441  Imperialism & Colonialism
POSC07.230  Comparative Political Systems (M/G)
POSC07.321  Contemporary World Problems (M/G)
POSC07.320  International Relations
POSC07.330  Contemporary US Foreign Policy
POSC07.420  International Law
POSC07.421  International Organizations
SOC08.327  Comparative Education in Sociological Perspective

Senior Level Capstone
AMST13.402  Senior Seminar in American Studies 3 s.h.

Applied Spanish
Required credits 18 s.h.
Introductory Level Courses
SPAN05.212  Spanish Reading and Composition* 3 s.h.

Advanced Level Courses
Choose four courses from:
SPAN05.305  Oral Spanish
SPAN05.300  Spanish Phonetics
SPAN05.312  Spanish for Business
SPAN05.313  Spanish for Medical Personnel
SPAN05.320  Spanish Civilization and Culture
SPAN05.324  Spanish American Civilization and Culture (M/G)
SPAN05.340  Intro to Spanish Translation

Senior Level Capstone
SPAN05.411  Advanced Spanish Conversation** 3 s.h.

*Upon declaring the Applied Spanish Program Sequence, all students are required to take the STAMP 4S Spanish Placement Exam for initial course placement. Contact the Spanish Placement Coordinator, Esther Mas (mas@rowan.edu), for information regarding this exam.

**All students must take the STAMP 4S Spanish Placement Exam again, as a final assessment of proficiency, while enrolled in "Advanced Spanish Conversation."

Economics
Required credits 21 s.h.
Introductory Level Courses
ECON04.101  Introduction to Macroeconomics
ECON04.102  Introduction to Microeconomics
MATH03.125  Calculus T&A

Advanced Level Courses
ECON04.202  Statistics for Economists
ECON04.302  Intermediate Microeconomics
ECON04.392  Econometrics

Senior Level Capstone
ECON04.492  Seminar in Economics (WI) 3 s.h.

English
Required credits 21 s.h.
Introductory Level Courses
ENGL02.101  Literary Studies for English Majors 3 s.h.

Advanced Level Courses
Choose from:
ENGL02.313  US Literature I
ENGL02.315  US Literature II
or
ENGL02.309  British Literature I
ENGL02.311  British Literature II

And choose one course from:
ENGL02.234  Genre: Drama
ENGL02.231  World Mythology
ENGL02.228  Genre Studies: Short Fiction
ENGL02.205  Adolescent Literature

And choose one course from:
ENGL02.216  African American Literature I (M/G)
ENGL02.200  Women in Literature (M/G)
ENGL02.217  US Lit Hispanic/Latino Peoples (M/G)
And choose one course from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>ENGL02.316</td>
<td>African American Literature II (M/G)</td>
</tr>
<tr>
<td>ENGL02.424</td>
<td>American Drama</td>
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<tr>
<td>ENGL05.301</td>
<td>American English Grammar</td>
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<tr>
<td>ENGL02.423</td>
<td>American Novel</td>
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<td>ENGL02.317</td>
<td>Children's Literature</td>
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<td>ENGL02.345</td>
<td>Shakespeare I</td>
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**Senior Level Capstone**

<table>
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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>ENGL02.393</td>
<td>Seminar I WI</td>
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</table>

### Geography

**Required credits**: 21-22 s.h.

**Introductory Level Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>GEOG16.160</td>
<td>Intro to Mapping and Geographical Information Systems</td>
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And choose two courses from:

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>GEOG16.100</td>
<td>Earth, People, and the Environment (M/G)</td>
</tr>
<tr>
<td>GEOG16.110</td>
<td>Cultural Geography (M/G)</td>
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<tr>
<td>GEOG16.130</td>
<td>Earth Sciences Lab I</td>
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<tr>
<td>GEOG16.140</td>
<td>World Regional Geography (M/G)</td>
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**Advanced Level Courses**

Choose three courses from:

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<th>Course Code</th>
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<tbody>
<tr>
<td>GEOG16.301</td>
<td>Economic Geography (M/G)</td>
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<tr>
<td>GEOG16.302</td>
<td>Urban Geography</td>
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<td>GEOG16.303</td>
<td>Political Geography (M/G)</td>
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<tr>
<td>GEOG16.304</td>
<td>Population Geography (M/G)</td>
</tr>
<tr>
<td>GEOG16.338</td>
<td>Climatology</td>
</tr>
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<td>GEOG16.332</td>
<td>Geomorphology</td>
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<tr>
<td>GEOG16.334</td>
<td>The Geoscience of Natural Disasters</td>
</tr>
<tr>
<td>PLAN31.280</td>
<td>Intro to Planning</td>
</tr>
<tr>
<td>GEOG16.240</td>
<td>Geography of US and Canada</td>
</tr>
<tr>
<td>GEOG16.241</td>
<td>Geography of New Jersey</td>
</tr>
<tr>
<td>GEOG16.342</td>
<td>Geography of Europe (M/G)</td>
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<tr>
<td>GEOG16.343</td>
<td>Geography of Asia (M/G)</td>
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<tr>
<td>GEOG16.344</td>
<td>Geography of Latin America (M/G)</td>
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<tr>
<td>GEOG16.345</td>
<td>Geography of Africa</td>
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<tr>
<td>GEOG16.346</td>
<td>Geography of Soviet Union (M/G)</td>
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<tr>
<td>GEOG16.347</td>
<td>Geography of Middle East (M/G)</td>
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**Senior Level Capstone**

<table>
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<tr>
<th>Course Code</th>
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<tr>
<td>GEOG16.490</td>
<td>Senior Seminar WI</td>
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### History

**Required credits**: 18 s.h.

**Introductory Level Courses**

Choose two courses from:

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>HIST05.150</td>
<td>US History to 1865</td>
</tr>
<tr>
<td>HIST05.151</td>
<td>US History since 1865</td>
</tr>
<tr>
<td>HIST05.100</td>
<td>Western Civilization to 1660</td>
</tr>
<tr>
<td>HIST05.101</td>
<td>Western Civilization since 1660</td>
</tr>
<tr>
<td>HIST05.120</td>
<td>World History after 1500 (M/G)</td>
</tr>
</tbody>
</table>

**Advanced Level Courses**

Choose one 300/400 level Global History Elective

**Senior Level Capstone**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>HIST05.492</td>
<td>Seminar in History WI</td>
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</table>

### Law & Justice Studies

**Required credits**: 21 s.h.

**Introductory Level Courses**

<table>
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<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>LAWJ05.175</td>
<td>Survey of Criminal Justice</td>
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And choose up to two courses from:

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>LAWJ05.201</td>
<td>Intro to Courts</td>
</tr>
<tr>
<td>LAWJ05.255</td>
<td>Criminal Law</td>
</tr>
<tr>
<td>LAWJ05.202</td>
<td>American Police</td>
</tr>
<tr>
<td>LAWJ05.200</td>
<td>Introduction to Corrections</td>
</tr>
</tbody>
</table>
**Advanced Level Courses**

Choose three to five courses from:

- LAWJ05.369 Theories of Crime & Criminality
- LAWJ05.380 Criminal Justice Research
- LAWJ05.401 Law & Human Rights (M/G)
- LAWJ05.335 Criminal Procedure I
- LAWJ05.312 Criminal Procedure II
- LAWJ05.361 Introduction to Juvenile Justice
- LAWJ05.320 Civil Aspects of Law Enforcement
- LAWJ05.310 Criminal Jurisprudence
- LAWJ05.305 Law and Evidence
- LAWJ05.367 Theories of Justice
- LAWJ05.205 Minorities and Criminal Justice
- LAWJ05.346 Women, Crime and Criminal Justice
- LAWJ05.315 Criminal Justice and Social Conflict
- LAWJ05.330 Problems in World Justice
- LAWJ05.337 Treatment of the Offender
- LAWJ05.342 Counseling and Guidance of the Offender
- LAWJ05.395 Incarceration Experience

**Senior Level Capstone**

Choose one course from:

- LAWJ05.479 Seminar in Police Science WI
- LAWJ05.469 Seminar in Law WI
- LAWJ05.465 Seminar in Social Justice WI
- LAWJ05.461 Seminar in Corrections WI

**Philosophy**

**Required credits** 21 s.h.

**Introductory Level Courses** 6-9 s.h.

- PHIL09.120 Introduction to Philosophy (M/G)
  or PHIL09.121 Introduction to Philosophy WI (M/G)

And choose one or both of the following:

- PHIL09.110 Logic of Everyday Reasoning
- PHIL09.130 Introduction to Symbolic Logic

**Advanced Level Courses** 9-12 s.h.

- PHIL09.211 World Philosophy I WI (M/G) or
- PHIL09.213 World Philosophy II WI (M/G)

And choose two or three philosophy courses at the 200, 300 or 400 level

**Senior Level Capstone** 3 s.h.

- PHRE11.490 Senior Seminar in Philosophy and Religion

**Philosophy and Religion**

**Required Credits** 21 s.h.

**Introductory Level Courses** 6 s.h.

- PHIL09.120 Intro to Philosophy (M/G)
  or PHIL09.121 Intro to Philosophy (W) (M/G)
- REL10.200 Religions of the World (M/G)

**Advanced Level Courses** 12 s.h.

One course at the 100 level or above

One course at the 200 level or above

Two courses at the 300 level or above

Must include minimum of one Philosophy and one Religion Studies course

**Senior Level Capstone** 3 s.h.

- PHRE11.490 Senior Seminar in Philosophy and Religion

**Political Science Program**

**Required credits** 21 s.h.

Introductory Level Courses: 3-6 credits

- POSC07.110 American Government (required)
### College of Humanities and Social Sciences

**Survey of Western Political Theory (optional)**

**Advanced Level Courses**
- POSC07.200
- POSC07.360

And choose **three or four** Political Science courses at the 200, 300, or 400 level, with the exception of Public Service Internship (EDPA02.490), which is ineligible.

**Senior Level Capstone**
- POSC07.489

**Sociology**

**Required credits**
- **18 s.h.**

**Introductory Level Courses**
- SOC08.120
  - Introduction to Sociology

And choose **one** course from:
- SOC08.221
  - Social Problems
- SOC08.230
  - Minority Groups (M/G)
- SOC08.233
  - Sociology of Social Welfare
- SOC08.220
  - Sociology of the Family (M/G)
- SOC08.269
  - Self and Society

**Advanced Level Courses**
- SOC08.331
  - Classical Social Theory

And choose **two** courses from:
- SOC08.401
  - Human Service Organizations
- SOC08.323
  - Sociology of Social Work
- SOC08.339
  - Sociological Practice
- SOC08.333
  - Sociology of Work
- SOC08.336
  - Sociology of Education
- SOC08.370
  - Sociology of Women
- SOC08.353
  - Sociology of Complex Organizations
- SOC08.400
  - Environment, Policy and Society
- SOC08.325
  - Deviant Behavior and Social Control (WI)
- SOC08.431
  - Social Psychology of City Life
- SOC09.323
  - Sociology of Crime and Criminal Law
- SOC08.350
  - Social Stratification
- SOC08.440
  - Selected Topics
- SOC08.320
  - Urban Sociology

**Senior Level Capstone**
- SOC08.427
  - Sociological Imagination (WI)

### PROGRAM SEQUENCE: B CHOICES

#### Advertising in the Workplace

**Required Credits**
- **21 s.h.**

**Introductory Level Courses**
- CMS04.210
  - Mass Media

**Advanced Level Courses**
- ADV04.330
  - Introduction to Advertising
- ADV04.375
  - Advertising Copywriting
- PRO6.310
  - Intro to PR and Advertising Research
- ADV04.421
  - Account Planning
- ADV04.360
  - Integrated Marketing Communication

**Senior Level Capstone**
- ADV04.432
  - Media Planning

#### Applied Computing

**Required Credits**
- **21-24 s.h.**

**Introductory Level Courses**
- CS01.100
  - Computing Environments

And choose one course from:
- CS01.102
  - Introduction to Programming
- CS04.110
  - Introduction to Programming Using Robots
- CS01.104
  - Introduction to Scientific Programming
- CS04.140
  - Enterprise Computing I (4 cr.)
- CS04.113
  - Introduction to Object Oriented Programming (4 cr.)
- CS04.103
  - Computer Science and Programming (4 cr.)

**Advanced Level Courses**
- 12-13 s.h.
College of Humanities and Social Sciences

And choose four courses from:
- CS01.105 Web Literacy
- CS01.205 Computer Laboratory Techniques
- CS01.190 Introduction to Computer Game Modeling
- CS01.210 Introduction to Computer Networks and Data Communications
- CS04.114 Object-Oriented Programming and Data Abstraction (4 cr.)
- CS04.142 Enterprise Computing II
- INTR01.265 Computers and Society
- INTR01.266 Computers and Society (WI)
- CS04.102 Introductory Explorations in Programming and Robotics (4 cr.)
- MIS02.338 Design of Database Systems
- CS01.211 Principles of Information Security

Senior Level Capstone
- CS99.300 Computer Field Experience 3 s.h.

Art History

Required Credits 18 s.h.

Introductory Level Courses
- ARHS03.103 Art History Survey I
- ARHS03.104 Art History Survey II
- ARHS03.205 Art History Survey III

Advanced Level Courses
Choose six courses from: Rowan University courses offered in Art History at the 210 (or higher) level.

Senior Level Capstone
Choose one course from: Rowan University courses offered in Art History at the 300 (or higher) level

Asian Studies

Required Credits 18 s.h.

Introductory Level Courses
Choose one or two courses from:
- INTR01.136 Gateway to Asia
- CHIN07.101 Elementary Chinese I
- CHIN07.102 Elementary Chinese II
- CHIN07.201 Intermediate Chinese I
- CHIN07.211 Intermediate Chinese II
- JAPA08.101 Elementary Japanese I
- JAPA08.102 Elementary Japanese II
- ENGL02.112 Readings in Asian Literature (LIT) (M/G)
- POSC07.350 Asian Political Systems
- PHRE11.310 Introduction to Buddhism (M/G)
- REL10.230 Religions of Asia (M/G)

Advanced Level Courses
Choose three or four courses from:
- HIST05.355 Modern China
- HIST05.351 Modern Japan
- HIST05.408 Chinese Cultural History
- PHL09.330 Asian Thought (M/G)
- PHRE11.330 Introduction to Daoism (M/G)
- GEOG16.343 Geography of Asia (M/G)
- ARHS03.231 Survey of Asian Art

Senior Level Capstone
Choose one course (must be an Asia-related topic and requires the writing of a research paper)
- PHRE11.340 Selected Topics in Philosophy and Religion Studies
- PHRE11.490 Senior Seminar in Philosophy and Religion Studies
- HIST05.429 Topics in History
- HIST05.492 Senior Seminar in History

Dance

Required Credits 23 s.h.

Introductory Level Courses
- THD08.135 Elements of Dance (3 cr.)
- THD08.140 Dance Improvisation I (1.5 cr.)
- THD08.141 Dance Improvisation II (1.5 cr.)

ROWAN UNIVERSITY UNDERGRADUATE CATALOG 2016-2017 184
### Advanced Level Courses

- **THD08.465**  
  Dynamics of Human Movement (3 cr.)
- **THD08.225**  
  Dance Composition I (3 cr.)

And choose **9 credits** from:

- **THD08.237**  
  Modern Dance I (3 cr.)
- **THD08.377**  
  Modern Dance II (3 cr.)
- **THD08.378**  
  Modern Dance III (3 cr.)
- **THD08.379**  
  Modern IV (1.5 cr.)
- **THD08.246**  
  Fundamentals of Ballet (3 cr.)
- **THD08.247**  
  Advanced Ballet (repeat up to 9 credits)
- **THD08.256**  
  Fundamentals of Tap (3 cr.)
- **THD08.202**  
  Advanced Tap (up to 9 credits)
- **THD08.222**  
  Dance Musical Theatre (3 cr.)
- **THD08.146**  
  World Dance Forms (3 cr.)
- **THD08.436**  
  Dance History (3 cr.)
- **THD08.315**  
  Creative Dance for Children (3 cr.)
- **THD08.337**  
  Choreography (3 cr.)

### Senior Level Capstone

- **THD07.460**  
  Senior Project in Theatre Arts (2 cr.)

### Journalism

**Required Credits**  
**21 s.h.**

**Introductory Level Courses**  
**3 s.h.**

- **JRN02.205**  
  Journalism Principles & Practices

**Advanced Level Courses**  
**15 s.h.**

- **JRN02.310**  
  News Reporting I
- **JRN02.318**  
  Enterprise Journalism

And choose **three** courses from:

- **JRN02.320**  
  Broadcast Journalism Radio
- **JRN02.341**  
  Broadcast News Writing
- **JRN02.335**  
  Communication Law
- **JRN02.411**  
  Copyediting
- **JRN02.313**  
  Magazine Article Writing
- **JRN02.319**  
  Media Ethics
- **JRN02.311**  
  News Reporting II
- **JRN02.312**  
  Newspaper Feature Writing
- **JRN02.321**  
  Online Journalism I

**Senior Level Capstone**  
**3 s.h.**

- **JRN02.410**  
  Journalism Senior Seminar (WI)

### Mathematics

**Required Credits**  
**22 s.h.**

**Introductory Level Courses**  
**8 s.h.**

- **MATH01.130**  
  Calculus I (4 cr.)
- **MATH01.131**  
  Calculus II (4 cr.)

**Advanced Level Courses**  
**11 s.h.**

(additional prerequisites may be required*)

Choose **11 credits from:**

- **MATH01.205**  
  Tech Tools for Discovering Math (2 cr.)
- **MATH01.210**  
  Linear Algebra (3 cr.)
- **MATH01.230**  
  Calculus III (4 cr.)
- **MATH01.231**  
  Ord. Diff. Equation (3 cr.)
- **MATH01.310**  
  College Geometry (4 cr.)
- **MATH01.330**  
  Introduction to Real Analysis (3 cr.)
- **MATH01.331**  
  Real Analysis II (3 cr.)
- **MATH01.332**  
  Numerical Analysis (3 cr.)
- **MATH01.340**  
  Modern Algebra I (3 cr.)
- **MATH01.341**  
  Modern Algebra II (3 cr.)
- **MATH01.352**  
  Theory of Numbers (3 cr.)
- **MATH01.354**  
  Introduction to Topology (3 cr.)
- **MATH01.386**  
  Intro. to Partial Differential Equations (3 cr.)
- **MATH01.410**  
  History of Math (3 cr.)
- **MATH01.430**  
  Introduction to Complex Analysis (3 cr.)
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<td>MATH03.400</td>
<td>Application of Mathematics (3 cr.)</td>
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<td>MATH03.411</td>
<td>Deterministic Mod. in Op. Research (3 cr.)</td>
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<td>MATH03.412</td>
<td>Stochastic Mod. in Op. Research (3 cr.)</td>
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<td>STAT02.360</td>
<td>Probability &amp; Random Variables (3 cr.)</td>
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<td>STAT02.361</td>
<td>Mathematical Statistics (3 cr.)</td>
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<td>STAT02.371</td>
<td>Stat Design of Exp. I (3 cr.)</td>
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<td>JRN02.310</td>
<td>News Reporting I</td>
<td>3 s.h.</td>
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<tr>
<td>JRN02.318</td>
<td>Enterprise Journalism</td>
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**Senior Level Capstone**

Choose one 300/400 level Rowan University Math Department course from the list above

### Perspectives of Business

**Required Credits**

**Introductory Level Courses**

<table>
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<th>Course Title</th>
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<tbody>
<tr>
<td>BUS01.105</td>
<td>Business Perspectives</td>
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And choose three courses from:

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>MGT98.242</td>
<td>Legal Environment of Business</td>
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<tr>
<td>MKT09.200</td>
<td>Principles of Marketing</td>
</tr>
<tr>
<td>MIS02.214</td>
<td>Management Information Systems</td>
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<tr>
<td>ENT06.240</td>
<td>Entrepreneurship and Innovation</td>
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**Advanced Level Courses**

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<tr>
<td>ACC03.210</td>
<td>Principles of Accounting I</td>
</tr>
<tr>
<td>ACC03.211</td>
<td>Principles of Accounting II</td>
</tr>
<tr>
<td>BUS01.401</td>
<td>Issues in Business: Directed Research (WI)</td>
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**Senior Level Capstone**

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<tr>
<td>BUS01.303</td>
<td>Business Practicum</td>
</tr>
</tbody>
</table>

*Business Practicum (BUS01.303) requires 150 hours of internship experience in a business setting. Before registering for Business Practicum, students must complete the Business Practicum Application, obtain internship supervisor's signature, and receive approval of the faculty supervisor.

### Physical Sciences: Chemistry

**Required Credits**

**Introductory Level Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM06.100</td>
<td>Chemistry I</td>
<td>4 s.h.</td>
</tr>
</tbody>
</table>

**Advanced Level Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM06.101</td>
<td>Chemistry II</td>
<td>16 s.h.</td>
</tr>
<tr>
<td>CHEM07.200</td>
<td>Organic Chemistry I</td>
<td></td>
</tr>
<tr>
<td>CHEM07.201</td>
<td>Organic Chemistry II</td>
<td></td>
</tr>
<tr>
<td>CHEM09.250</td>
<td>Quantitative Analysis</td>
<td></td>
</tr>
</tbody>
</table>

**Senior Level Capstone**

Advanced Chemistry course subject to approval

### Physical Sciences: General (Chemistry and Physics)

**Required Credits**

**Introductory Level Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM06.100</td>
<td>Chemistry I</td>
<td>8 s.h.</td>
</tr>
</tbody>
</table>

And choose one course from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS00.220</td>
<td>Introductory Mechanics</td>
</tr>
<tr>
<td>PHYS00.210</td>
<td>Physics I w/out Calculus</td>
</tr>
</tbody>
</table>

**Advanced Level Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM06.101</td>
<td>Chemistry II</td>
</tr>
</tbody>
</table>

And choose one course from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS00.222</td>
<td>Introductory Electricity &amp; Magnetism</td>
</tr>
<tr>
<td>PHYS00.211</td>
<td>Physics II w/out Calculus</td>
</tr>
</tbody>
</table>

**Senior Level Capstone**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS00.300</td>
<td>Modern Physics</td>
</tr>
<tr>
<td>CHEM09.250</td>
<td>Quantitative Analysis</td>
</tr>
</tbody>
</table>

### Physical Sciences: Physics

**Required Credits**

**Introductory Level Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS00.150</td>
<td>Physics of Everyday Life</td>
</tr>
</tbody>
</table>

**Advanced Level Courses**

Choose one course from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS00.220</td>
<td>Introductory Mechanics</td>
</tr>
<tr>
<td>PHYS00.210</td>
<td>Physics I w/out Calculus</td>
</tr>
</tbody>
</table>
**College of Humanities and Social Sciences**

And choose one course from:
- PHYS00.222 Introductory Electricity & Magnetism
- PHYS00.211 Physics II w/ out Calculus

And choose one course from:
- ASTR11.230 Astronomy and Astrophysics
- PHYS00.340 Optics and Light

**Senior Level Capstone**
- PHYS00.300 Modern Physics 4 s.h.

**Physics**

**Required Credits** 18 - 20 s.h.

**Introductory Level Courses**
- PHYS00.220 Introductory Mechanics (4 cr.) 4 s.h.

**Advanced Level Courses**
- PHYS00.222 Introductory Electricity & Magnetism (4 cr.)
- PHYS00.300 Modern Physics (4 cr.)

And choose one course from:
- PHYS00.310 Analytical Mechanics (4 cr.)
- PHYS00.320 Electricity and Magnetism I (4 cr.)
- PHYS00.410 Quantum Mechanics (4 cr.)
- PHYS00.430 Statistical Physics (3 cr.)
- PHYS00.340 Optics and Light (4 cr.)

**Senior Level Capstone**
Choose one course from:
- PHYS00.440 Advanced Laboratory (4 cr.)
- PHYS00.250 Physics Research (3 cr.)

**Public Relations in the Workplace**

**Required Credits** 18 s.h.

**Introductory Level Courses**
- PR06.350 Introduction to Public Relations 3 s.h.

**Advanced Level Courses**
- ADV04.330 Introduction to Advertising 12 s.h.
- PR06.310 Intro to Public Relations and Advertising Research
- PR06.301 Basic Public Relations Writing
- ADV04.360 Integrated Marketing Communication

**Senior Level Capstone**
- PR99.362 Public Opinion 3 s.h.

**Theater**

**Required Credits** 22 s.h.

**Introductory Level Courses**
- THD07.111 Colloquium I (0.5 cr.) 7 s.h.
- THD07.112 Colloquium II (0.5 cr.)
- THD07.201 Intro to Theatre and Dance
- THD07.101 Intro to Performance

**Advanced Level Courses**
Choose 12 credits from:
- THD07.230 Stagecraft Fundamentals
- THD07.231 Stagecraft II (1.5 cr.)
- THD07.140 Dance Improvisation I (1.5 cr.)
- THD07.141 Dance Improvisation II (1.5 cr.)
- THD07.235 Acting I
- THD07.236 Acting II
- THD07.339 Theatre History to 1700
- THD07.340 Theatre History 1700 – 1956
- THD08.436 Dance History
- THD07.203 Costuming I (1.5 cr.)
- THD07.205 Costuming II (1.5 cr.)
- THD07.310 Foundation of Theatrical Design
- THD08.126 Movement for the Actor
- THD07.103 Speech for the Stage
- THD08.222 Dance for the Musical Theatre
- THD07.360 Musical Theatre
- THD07.363 Singing for the Actor

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<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>THD07.405</td>
<td>Seminar in Theatre</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>THD07.430</td>
<td>Directing I</td>
<td></td>
</tr>
<tr>
<td>THD07.440</td>
<td>Contemporary World Theater (WI) (LIT) (ACE)</td>
<td></td>
</tr>
</tbody>
</table>

### Urban Studies

**Required Credits**

18 s.h.

#### Introductory Level Courses

Choose one or two courses from:

- HIST05.151 United States History Since 1865
- INTR01.130 Women and Gender in Perspective
- SOC08.120 Introduction to Sociology
- ECON04.102 Introduction to Microeconomics
- GEOG16.160 Introduction to Mapping & Geographic Information Systems

#### Advanced Level Courses

Choose three or four courses from:

- ECON04.360 Urban Economics
- ECON04.210 Environmental Economics
- GEOG16.302 Urban Geography
- PLAN31.383 Metropolitan and Regional Planning
- HIST05.334 Urban History of the United States
- HIST05.474 U.S. Labor History
- SOC08.320 Urban Sociology
- SOC08.431 Social Psychology of City Life
- THD07.205 Costuming II (1.5 cr.)
- THD07.310 Foundation of Theatrical Design

### Senior Level Capstone

Choose one course from:

- PLAN31.383 Metropolitan & Regional Planning Internship
- HIST05.474 U.S. Labor History

Or other Senior Level course approved by the Urban Studies Coordinator

### Women's and Gender Studies

**Required Credits**

18 s.h.

#### Introductory Level Courses

Choose one course from:

- INTR01.130 Women and Gender in Perspective

#### Advanced Level Courses

Choose four courses from:

- ANTH02.322 Sex and Sex Roles in Cross Cultural Perspective
- ARHS03.340 Survey of Women Artists
- CMS04.320 Communicating Gender
- CMS04.310 Images of Gender in Popular Culture
- ECON04.225 Women in the Economy
- ENGL02.200 Women in Literature
- HIST05.417 Women in Islam
- HIST05.418 Women in Europe to 1700
- HIST05.419 Women in Modern Europe
- HIST05.422 Women in American History
- HIST05.435 History of Feminism
- HIST05.429 Pro-Seminar in History: Women in African History
- HIST05.455 Gender, Sexuality, and History
- INTR01.200 Issues in Women's Health
- LAWJ05.346 Women, Crime and Criminal Justice
- PHIL09.328 Philosophy and Gender
- PHIL09.346 Feminist Ethics (WI)
- POSC07.311 Women in American Politics
- PSY01.200 Psychology of Women and Cultural Experience
- RTF03.272 Images of Women in Film
- SOC08.370 Sociology of Women
- SOC08.493 Seminar on Gender Roles
- Various Selected Special Topics Courses (as approved by the WGS Council)

### Senior Level Capstone

Choose one course from:

- ANTH02.322 Sex and Sex Roles in Cross Cultural Perspective
- CMS04.320 Communicating Gender
Writing Arts

Required Credits 22 s.h.

Introductory Level Courses 3 s.h.
- WA01.200 Introduction to Writing Arts

Advanced Level Courses 15 s.h.
- WA01.300 The Writer's Mind (WI)
- WA01.301 Writing, Research, and Technology (WI)

And choose one course from:
- WA07.290 Creative Writing I
- WA07.309 Writing Children's Stories

And choose two courses from:
- WA07.290 Creative Writing I (if not previously taken)
- WA07.309 Writing Children's Stories (if not previously taken)
- WA07.291 Creative Writing II
- WA07.391 Writing Fiction
- WA07.395 Writing Poetry
- WA01.302 Introduction to Technical Writing
- WA01.304 Writing With Style (WI)
- WA01.400 Writing for the Workplace (WI)
- WA01.409 Tutoring Writing
- RTF03.393 Film Scenario Writing
- CMS04.325 Linguistics
- ENGL05.301 American English Grammar
- JRN02.313 Magazine Article Writing

Senior Level Capstone 4 s.h.
- WA01.405 Senior Seminar: Evaluating Writing (3 cr.)
- WA01.450 Portfolio Seminar (1 cr.)

Bachelor of General Studies

Dr. Danielle Gougon
Coordinator
317B Robinson Hall
856.256.4500 ext. 3996
gougon@rowan.edu

Tiffany Fortunato
Program Advisor
2081 James Hall
856.256.4937
fortunato@rowan.edu

The Bachelor of General Studies (BGS) degree completion program provides a high-quality, interdisciplinary liberal arts education with an individualized academic focus area and attention to career preparation. It is intended for students without a feasible pathway to completion of a traditional degree program and as such is a program with restricted enrollment. BGS students:

- Achieve a well-rounded and rigorous liberal arts education in a degree program that is tailored to individual needs;
- Concentrate on a disciplinary or interdisciplinary academic focus area more flexible than a traditional major;
- Collaborate with the program coordinator and advisor to ensure achievement of program and individual goals;
- Actively prepare for a future career as part of the degree requirements.

General Education

All General Studies majors must complete the University General Education requirements as described on page 33.

Rowan Experience

All General Studies majors must complete the Rowan Experience requirements as described on page 35.

Program Requirements

All students must complete the following courses in addition to the requirements listed below:
College of Humanities and Social Sciences

<table>
<thead>
<tr>
<th>Code</th>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTR01.488</td>
<td>Career Planning &amp; Development</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>INTR01.499</td>
<td>Bachelor of General Studies Portfolio</td>
<td>1 s.h.</td>
</tr>
</tbody>
</table>

General Education & Rowan Experience courses: 42 s.h.
Focus area courses (9 s.h. must be at the 300-400 level): 18-24 s.h.
Elective courses (9 s.h. must be at the 300-400 level): 57 s.h.
BGS Portfolio requirement: 1 s.h.
BGS Career Development course: 2 s.h.

TOTAL: 120-126 s.h.

How to Apply:

Admission Criteria: Admission to the Bachelor of General Studies program is available to matriculated students who have earned a minimum of 75 credits, or who have earned 60 credits and have not been enrolled in an institution of higher education in at least 2 years, who require a degree completion program.

Procedure for Admission: Upon advisor or self-referral to the program, students will meet with the program advisor, Ms. Tiffany Fortunato (fortunato@rowan.edu; 856-256-4937), to evaluate their candidacy for the BGS program and to identify the academic focus area. Students deemed to be suitable candidates will complete the BGS application and Learning Contract.
College of Science and Mathematics

Karen Magee-Sauer
Dean
Robinson Hall
856.256.4850
sauer@rowan.edu

Tricia Yurak
Associate Dean for Academic Affairs
Robinson Hall
856.256.4853
yurak@rowan.edu

Eve Sledjeski
Assistant Dean
Robinson Hall
856.256.4869
sledjeski@rowan.edu

Tomas Varela
Health Professions Advisor
Robinson Hall
856.256.5480
varela@rowan.edu

Mission
The College of Science and Mathematics is dedicated to excellence in undergraduate and education and research and increasing the number of students choosing these fields of study. We promote a student-centered approach to learning in a research-rich environment both inside and outside of the classroom. We are committed to providing our students with outstanding degree programs in basic and applied sciences and mathematics and preparing them to function in a multi-cultural and economically interdependent world. As a result, we are preparing students to succeed in quality graduate/professional programs and careers in industry, education, research, government and health professions. The College of Science and Mathematics plays an essential role in educating non-science majors. For these majors, we will provide a sound grounding in the essentials of science and mathematics that will enable them to better understand the world in which they live and the role of science and scientific thinking in their society.

Departments
The departments in the College are: Biological Sciences, Chemistry and Biochemistry, Computer Science, Mathematics, Nursing, Physics and Astronomy, and Psychology.

Services
OFFICE of HEALTH PROFESSIONS
Tomas Varela
Advisor
Robinson Hall 203
856.256.5480
varela@rowan.edu

The Office of Health Professions strives to provide Rowan students, from all majors, with the appropriate information and resources to develop competitive, well-rounded applications to the various professional graduate programs. The Office will invite these graduate programs on campus to educate students on all aspects of the application process. In addition, the Office will introduce additional careers and workshops that cultivate an environment in which Rowan students are equipped to address current and emerging health issues in the community.

Programs Offered
The College provides General Education courses in the natural sciences, behavioral sciences, and mathematics. These courses give our students a breadth of knowledge while developing skills in oral and written communication, quantitative reasoning, computing, critical thinking, and research. Our students go on to acquire a depth of knowledge in one of the major programs in the College. Expert faculty who have distinguished themselves in their disciplines through research, scholarship, and other professional activities help our students learn both in the classroom, through engaging lectures and interactive pedagogical approaches, and outside of the classroom, through laboratories and research projects. Our faculty care genuinely about the success of our students and make themselves available for advising, mentoring, and academic discussion.
The College also offers pre-professional programs in medicine and allied health. Articulation agreements between Rowan University and professional schools of dentistry, medicine, medical technology, optometry, podiatry and veterinary science help our students make a smooth transition to those schools.

**Department of Biological Sciences**

Michael Grove  
Chair  
Science Hall  
856.256.4834  
grove@rowan.edu

The Biological Sciences Department offers a liberal arts major which leads to a Bachelor of Science degree in Biology. While the Department's major program ensures that students become well-rounded, it is also flexible enough that students can specialize in a particular area of interest. The Department emphasizes excellence and innovation in teaching in the classroom as well as in the laboratory and in the field. Coursework for the major emphasizes preparing students for career success, including both development of skills and understanding of biological principles. The Department is housed in a modern science building with state-of-the-art research laboratories and teaching laboratories.

Students are encouraged to become engaged in research with faculty members not just as seniors but also as underclassmen. Such research opportunities are a unique experience, allowing a student to work closely with faculty members. Students have the opportunity to network with faculty and students at Cooper Medical School and the School of Osteopathic Medicine.

Rowan University currently has 14 affiliations with health profession schools. Graduating students may take advantage of a diversity of affiliations, including with schools of dentistry, medicine, optometry, physical therapy, podiatry, radiation therapy, toxicology, and veterinary medicine. A current listing of affiliations may be found through the following link: [www.rowan.edu/biological/affiliations](http://www.rowan.edu/biological/affiliations)

Students interested in pursuing a career in K-12 teaching may complete a double major in biology and education. Another pathway for student interested in elementary education is the liberal studies program with a math/science track. Each of these options can lead to Biological Science Certificate required for public school teaching.

Biology majors may participate in any of several concentrations offered by Rowan University. Concentrations suited to biology majors include an Environmental Science concentration, a Pre Health concentration, and a concentration in Bioethics and the Philosophy of Medicine. Biology majors may also choose to complete a minor suited to career plans, such as a minor in Chemistry.

Students are invited to learn more specifics and recent changes regarding the Department's programs and facilities by visiting at [www.rowan.edu/biology](http://www.rowan.edu/biology)

The Biological Sciences Department also supports a variety of other programs on campus as well as General Education. The Department offers a number of courses intended for non-majors, including:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL01.110</td>
<td>Human Biology</td>
</tr>
<tr>
<td>BIOL01.100</td>
<td>Introduction to Natural Resources</td>
</tr>
<tr>
<td>BIOL01.112</td>
<td>General Biology: Environmental Focus</td>
</tr>
<tr>
<td>BIOL01.113</td>
<td>General Biology: Human Focus</td>
</tr>
<tr>
<td>BIOL01.115</td>
<td>General Biology: Plants &amp; People</td>
</tr>
<tr>
<td>BIOL01.105</td>
<td>Essentials of Biology</td>
</tr>
<tr>
<td>BIOL20.401</td>
<td>Principles of Ecology</td>
</tr>
<tr>
<td>BIOL01.210</td>
<td>Biological Systems and Applications</td>
</tr>
</tbody>
</table>

Biology majors should be aware that the above courses may not be counted towards the Biology major.

**BACHELOR OF SCIENCE IN BIOLOGY**

Students majoring in Biology are required to take a four semester introductory sequence (Biology 1 through Biology 4). While this sequence offers greater content knowledge coverage compared to a traditional Biology I & II sequence, it also includes extensive development of skills in the areas of reading and researching primary literature, scientific writing, experimental design, and data analysis.

Beyond the core sequence, majors must take an additional 22 semester hours of Biology courses which must include at least four different laboratory courses. A course in Special Topics in Biological Sciences is required during the student’s Junior or Senior year. A grade of C or higher must be earned in each biology course. An average grade of C is also required for the chemistry, physics, math, and statistics courses listed below. Majors must take at least 15 s.h. of their Biology electives at Rowan University in order to be awarded a degree.

The Department of Biological Sciences advises all students that all Biology courses may require observation of, dissection of, manipulation of and experimentation with living or preserved organisms. These exercises are an integral part of biology courses and provide an essential experience.

**General Education**

All students must complete the University General Education requirements for both Bachelor of Science and Bachelor of Arts in Biological Sciences as described on page 33.
Rowan Experience
All students must complete the Rowan Experience requirements as described on page 35

Required courses for the Bachelor of Science in Biology

*BIOL01.104  Biology 1: Diversity, Evolution, & Adaptation
*BIOL01.106  Biology 2: Concepts in Genetics
*BIOL01.203  Biology 3: Introduction to Cell Biology
BIOL01.204  Biology 4: Global Ecology
CHEM06.100  Chemistry I
CHEM06.101  Chemistry II
CHEM07.200  Organic Chemistry I
CHEM07.201  Organic Chemistry II
PHYS00.210  Physics I
PHYS00.211  Physics II
PHIL09.369  Philosophy of Science
or PHIL09.376  Philosophy of Medicine
MATH01.130  Calculus I
STAT02.280  Biometry

*Transfer students who have taken the equivalent of BIOL01.100 (Biology I) and BIOL01.101 (Biology II) at another institution are required to take BIOL01.202 (Biology 3T: Biological Skills and Methods), which will allow them to take BIOL01.204. This will complete the introductory sequence and allow them to take most Biology electives.

Additional Required Courses

BIOL01.445  Special Topics (Senior Seminar)
BIOL01.475  Lab/Field Research)

3 s.h.

Biology Electives 22 s.h.

Students may choose electives from any 300 or higher-level Biology courses, as well as one of the following 200-level courses: BIOL10.210 (Human Anatomy and Physiology I) and BIOL10.212 (Human Anatomy and Physiology II) Students may count one of these two 200-level courses toward the requirement of four elective lab courses for the major.

Total credits in program 120 s.h.

BACHELOR OF ARTS IN BIOLOGICAL SCIENCES

Students majoring in Biology are required to take a four semester introductory sequence (Biology 1 through Biology 4). While this sequence offers greater content knowledge coverage compared to a traditional Biology I & II sequence, it also includes extensive development of skills in the areas of reading and researching primary literature, scientific writing, experimental design, and data analysis. Beyond the core sequence, majors for the BA must take an additional 15 semester hours of Biology courses which must include at least three different 300 level laboratory courses. A course in Special Topics in Biological Sciences is required during the student’s Junior or Senior year. A grade of C or higher must be earned in each biology course. An average grade of C is also required for the chemistry, physics, math, and statistics courses listed below. Majors must take at least 15 s.h. of their Biology electives at Rowan University in order to be awarded a degree. Students pursuing the BA will take Chemistry 1 and 2, Physics without Calculus 1 and 2 and Biometry or Statistics 1. The Department of Biological Sciences advises all students that all Biology courses may require observation of, dissection of, manipulation of and experimentation with living or preserved organisms. These exercises are an integral part of biology courses and provide an essential experience.

Required courses for the Bachelor of Arts in Biological Sciences

*BIOL01.104  Biology 1: Diversity, Evolution, & Adaptation
*BIOL01.106  Biology 2: Concepts in Genetics
*BIOL01.203  Biology 3: Introduction to Cell Biology
BIOL01.204  Biology 4: Global Ecology
CHEM06.100  Chemistry I
CHEM06.101  Chemistry II
PHYS00.210  Physics I without Calculus
PHYS00.211  Physics II without Calculus
PHIL09.369  Philosophy of Science
or PHIL09.376  Philosophy of Medicine
STAT02.280  Biometry
or STAT02.220  Statistics 1

*Transfer students who have taken the equivalent of BIOL01.100 (Biology I) and BIOL01.101 (Biology II) at another institution are required to take BIOL01.202 (Biology 3T: Biological Skills and Methods), which will allow them to take BIOL01.204. This will complete the introductory sequence and allow them to take most Biology electives.

Additional Required Courses

BIOL01.445  Special Topics (Senior Seminar)

15 s.h.
Students may choose electives from any 300 or higher-level Biology courses

**Total credits in program**

120 s.h.

**MINOR IN BIOLOGICAL SCIENCES**

The Minor in Biology consists of 23-24 semester hours, with a minimum of 15 of these to be taken at Rowan University. The 300- or 400-level courses may be taken in any order. In keeping with the policy of the Biology major, any Biology grade below a C will not count towards the Minor.

- BIOL01.104: Biology 1: Diversity, Adaptation, & Evolution
- BIOL01.106: Biology 2: Concepts in Genetics
- BIOL01.203: Biology 3: Introduction to Cell Biology
- BIOL01.204: Biology 4: Global Ecology

Two (2) additional Biology courses, both of which must be 300-level or above.

**ENVIRONMENTAL SCIENCE CONCENTRATION**

This Interdisciplinary Concentration provides an instructional framework through which students may pursue interests in the areas of Environmental Planning, Environmental Sciences, and Environmental Testing and Technology. The concentration involves 18-24 s.h. of coursework, and is described in more detail within the Interdisciplinary Studies Concentration in this catalog. Course requirements for the concentration are available at the following link: [www.rowan.edu/geography/programs](http://www.rowan.edu/geography/programs)

**PRE-HEALTH CONCENTRATION**

Tomas Varela
Program Advisor
203 Robinson Hall
856.256.5480
healthadvising@rowan.edu

This concentration is open to any major at Rowan University and is intended primarily for non-biology majors who intend to enter medical or professional school following graduation at Rowan. The concentration involves 22-23 s.h. The courses incorporated into the concentration are those most often required or recommended for admission to accredited medical schools in the United States. These courses are as follows:

- BIOL22.335: Genetics
- PHYS00.211: Physics II
- MATH01.131: Calculus I
- CHEM07.348: Biochemistry
- or BIOL14.449: Introduction to Biochemistry
- One Psychology Course

Plus one of the following:

- CHEM09.250: Quantitative Analysis
- BIOL07.301: Comparative Anatomy
- BIOL01.428: Developmental Biology
- BIOL11.330: Microbiology

**Accelerated Dual Degree (3 + 4 program): B.S. in Biology and M.D. degree**

**Overview**

The Department of Biological Sciences and the Cooper Medical School of Rowan University (CMSRU) offer a B.S. in Biology and a M.D. degree, respectively. This accelerated program allows high-achieving Biology majors to obtain the B.S. and M.D. in a seven-year period, rather than the traditional period of eight years if both degrees were completed separately. The program is a 3 + 4 arrangement where students begin M.D. courses in their 4th year at Rowan University.

**3 + 4 UNDERGRADUATE PROGRAM REQUIREMENTS**

120 s.h.

**General Education** (all courses are three credits unless noted otherwise) 42 credits

- COMP01.101: College Composition I
- COMP01.102: College Composition II
- CMS04.205: Public Speaking
- PHIL09.369: Philosophy of Science
- or PHIL09.376: Philosophy of Medicine-WI
- PSY01.107: Essentials of Psychology
- SOC08.120: Introduction to Sociology

One course from the History, Humanities, and Language Bank

One course from Arts and Creative Experience bank

- MATH01.130: Calculus I 4 s.h.
CHEM06.100 Chemistry I 4 s.h.

Ten hours of non-program electives

**B.S. Program Requirements** (all courses are four credits unless noted otherwise) 78 credits

**BIOL01.104** Biology 1: Diversity, Evolution, & Adaptation

**BIOL01.106** Biology 2: Concepts in Genetics

**BIOL01.203** Biology 3: Introduction to Cell Biology

**BIOL01.204** Biology 4: Global Ecology

**BIOL11.330** Microbiology

**BIOL01.430** Cell Biology

**BIOL14.440** Introduction to Biochemistry 3 s.h.

**BIOL22.450** Molecular Genetics

**BIOL01.475** Biology Lab/Field Research

or **BIOL01.445** Special Topics in Biological Sciences 3 s.h.

**CHEM06.101** Chemistry II

**CHEM07.200** Organic Chemistry I

**CHEM07.201** Organic Chemistry II

**PHYS02.202** Physics I

**PHYS02.203** Physics II

**STAT02.280** Biometry

Free elective 3 s.h.

*CMSRU courses in the first year of M.D. program (17 s.h.): Fundamentals, Scholar’s Workshop, Infectious Diseases

**3+4 M.D. PROGRAM REQUIREMENTS**

Requirements for the M.D. degree are set forth in the CMSRU Student Handbook.

**Additional Program Requirements:**

Students are required to maintain a minimum cumulative grade point average of 3.6 in all course work and a minimum grade point average of 3.6 in the science courses required for admission to CMSRU. Students must take part in one of the summer Premedical Urban Leaders Summer Enrichment PULSE programs at CMSRU or participate in forty hours of approved community service prior to entering their third undergraduate year. This service will be directed to underserved populations and is non-medical. The Health Professions Advisor (HPA), or designee on the Glassboro campus will serve as the supervisor for the service activity and provide verification that the service obligations have been completed.

Students accepted into the 3+4 Program will be admitted to CMSRU contingent upon the following:

- Completion of all general curriculum requirements at Rowan University.
- A minimum of 75% of the credits needed for a Baccalaureate degree completed before beginning the medical school phase of the Program.
- All prerequisite courses required for admission to CMSRU as specified in the CMSRU Handbook.
- Completion of requirements of the designated Rowan University major unless the major department agrees to provide credit for certain medical courses taken during the first year of medical school at CMSRU.
- A cumulative science grade point average of 3.60 or better.
- No final grade of “D”, “F” or “I” in any prerequisite course required for admission to CMSRU as indicated in the CMSRU Handbook.
- All students will be required to take the Medical College Admissions Test (MCAT) and obtain a score at or greater than the 70th percentile.
- Students in the Program will be required to participate in one summer Premedical Urban Leader Summer Enrichment Program “PULSE” program at CMSRU or an equivalent service experience as outlined above.
- Students must remain free of any citations for behavioral issues or academic integrity violations especially surrounding professionalism through their undergraduate education.
- CMSRU may refuse admission to any student applicant who does not meet the above requirements. Students may be required to decelerate or withdraw from the combined Program for academic or other reasons.

**Eligibility and Admissions:**

High school seniors who qualify for admission to Rowan University are eligible for admission to the 3+4 program. There are no restrictions on State of residency, but admission is limited to citizens or permanent residents of the United States. The high school grade point average and rank-in-class, along with letters of recommendation from high school teachers, will be of primary importance in evaluating an applicant’s credentials. Applicants are required to submit scores of the College Board Scholastic Aptitude Tests (SAT) Verbal and Mathematical components or the American College Testing (ACT). Applicants are expected to demonstrate knowledge of, and activity resonant with, the mission of CMSRU.

Students who self-identify that they wish to be part of this Program will formally apply to the Health Professions Advisor (HPA) at Rowan University upon acceptance to Rowan University. They will be given all the requirements of the program by the HPA. There will be an application form made available to the HPA through CMSRU that needs to be completed and sent by the HPA to the Director of Admissions at CMSRU. Qualified applicants will be scheduled for interview by
members of a subcommittee of the CMSRU Admissions Committee. These interviews will be held on the CMSRU campus and at a date and time that will allow student notification prior to any final decision date for matriculation to Rowan University.

Student Status:
Tuition for the first three (3) years of study at Rowan University, including summer courses, if any, will be the same tuition as charged to undergraduate Rowan University students. Tuition during the four (4) years of study at CMSRU will be the same as the tuition charged to students enrolled in the regular curriculum at CMSRU. Students who satisfactorily complete the appropriate courses in the first year at CMSRU, in addition to all other Rowan University requirements, will receive a B.S. in Biology degree.

If, after the first semester of the medical first year, the student fails to meet the required CMSRU standards of performance and competency, CMSRU shall notify Rowan University. Representatives from Rowan University and CMSRU will meet with the student. If, after meeting with the student, CMSRU concludes that the student should not continue in the medical school, the student shall be dismissed from the B.S./M.D. Program. In consultation with the Biology coordinator, the B.S. in Biology degree may be completed.

**Accelerated Dual Degree (3 + 4 program): B.S. in Biology and D.O. degree**

**Overview**
The Department of Biological Sciences and the Rowan University School of Osteopathic Medicine (Rowan SOM) offer a B.S. in Biology and a D.O. degree, respectively. This accelerated program allows high-achieving Biology majors to obtain the B.S. and D.O. in a seven-year period, rather than the traditional period of eight years if both degrees were completed separately. The program is a 3 + 4 arrangement where students begin D.O. courses in their 4th year at Rowan University.

**3 + 4 UNDERGRADUATE PROGRAM REQUIREMENTS**

<table>
<thead>
<tr>
<th>General Education (all courses are three credits unless noted otherwise)</th>
<th>42 credits</th>
</tr>
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<tbody>
<tr>
<td>COMP01.101 College Composition I</td>
<td></td>
</tr>
<tr>
<td>COMP01.102 College Composition II</td>
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<tr>
<td>CMS04.205 Public Speaking</td>
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<tr>
<td>PHIL09.369 Philosophy of Science</td>
<td></td>
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<tr>
<td>PHIL09.376 Philosophy of Medicine-WI</td>
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<tr>
<td>PSY01.107 Essentials of Psychology</td>
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<tr>
<td>SOCo8.120 Introduction to Sociology</td>
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</tbody>
</table>

One course from the History, Humanities, and Language Bank

One course from Arts and Creative Experience bank

MATH01.130 Calculus I 4 s.h.

CHEM06.100 Chemistry I 4 s.h.

Ten hours of non-program electives

<table>
<thead>
<tr>
<th>B.S. Program Requirements (all courses are four credits unless noted otherwise)</th>
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<tbody>
<tr>
<td>BIOL01.104 Biology 1: Diversity, Evolution, &amp; Adaptation</td>
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</tr>
<tr>
<td>BIOL01.106 Biology 2: Concepts in Genetics</td>
<td></td>
</tr>
<tr>
<td>BIOL01.203 Biology 3: Introduction to Cell Biology</td>
<td></td>
</tr>
<tr>
<td>BIOL01.204 Biology 4: Global Ecology</td>
<td></td>
</tr>
<tr>
<td>BIOL11.330 Microbiology</td>
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<tr>
<td>BIOL01.430 Cell Biology</td>
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</tr>
<tr>
<td>BIOL4.440 Introduction to Biochemistry</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>BIOL22.450 Molecular Genetics</td>
<td></td>
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<tr>
<td>BIOL01.475 Biology Lab/Field Research</td>
<td></td>
</tr>
<tr>
<td>or BIOL01.445 Special Topics in Biological Sciences</td>
<td>3 s.h.</td>
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<tr>
<td>CHEM06.101 Chemistry II</td>
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<td>CHEM07.200 Organic Chemistry I</td>
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<td>CHEM07.201 Organic Chemistry II</td>
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<tr>
<td>PHYS02.202 Physics I</td>
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<tr>
<td>PHYS02.203 Physics II</td>
<td></td>
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<tr>
<td>STAT02.280 Biometry</td>
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</tr>
<tr>
<td>Free elective</td>
<td>3 s.h.</td>
</tr>
</tbody>
</table>

*Rown SOM courses in the first year of D.O. program (17 s.h.): Biochemistry/Human Genetics, Medical Physiology, Histology, Microbiology/Immunology

**3 + 4 D.O. PROGRAM REQUIREMENTS**
Requirements for the D.O. degree are set forth in the Rowan SOM Education Handbook.
Additional Program Requirements:
Students are required to maintain a minimum cumulative grade point average of 3.6 in all course work and a minimum grade point average of 3.6 in the science courses required for admission to Rowan SOM. Students must also take the Medical College Admissions Test (MCAT) and score a minimum of 27. Students in the accelerated BS/DO Program will be strongly encouraged to construct an undergraduate degree plan that incorporates experiences involving community outreach and service, as well as the premedical sciences.

Students accepted into the 3+4 Program, to be qualified for transition to Rowan SOM, shall have met all of the following criteria:

- Completion of all general curriculum requirements at Rowan University
- A minimum of 75% of the credits needed for a Baccalaureate degree
- Completion of all prerequisite courses required for admission to Rowan SOM as specified in the Rowan SOM Education Handbook
- A cumulative grade point average of 3.60 or better.
- No final grade of “D”, “F” or “I” in any prerequisite course required for admission to Rowan SOM as indicated in the Rowan SOM Education Handbook
- A minimum score of 8 on each section of the Medical College Admissions Test or a total minimum total score of 27
- Recommendation by the Rowan University Premed Advisor based on a majority approval of the Rowan University Program Admissions Committee
- Satisfactory interviews with the Program Admissions Committees at Rowan University and Rowan SOM

Students in the 3+4 program will be required to visit the Rowan SOM campus to participate in all of the activities listed below during their three undergraduate years:

- OMM demonstrations (including a shadow experience at the OMM clinic
- Lecture presentation on research opportunities at Rowan SOM
- Tour of the Clinical Education and Assessment Center
- Mini skills workshop focusing on elementary doctoring skills, specifically interpersonal skills and basic history taking
- Anatomy lecture and lab
- Brown Bag Sessions with Associate Dean for Academic Affairs and or designee

Eligibility and Admissions:
High school seniors who qualify for admission to Rowan University are eligible for admission to the 3+4 program. There are no restrictions on State of residency, but admission is limited to citizens or permanent residents of the United States. The high school grade point average and rank-in-class, along with letters of recommendation from high school teachers, will be of primary importance in evaluating an applicant’s credentials. Applicants are required to submit scores of the College Board Scholastic Aptitude Tests (SAT) Verbal and Mathematical components or the American College Testing (ACT). Applicants are expected to demonstrate knowledge of, and activity resonant with, the mission of Rowan SOM.

After preliminary evaluation of applications by the Rowan University Admissions Office, the Joint Admissions Committee, composed of representatives from the premedical faculty of Rowan University and the Admissions Committee of Rowan SOM, will decide which applicants to invite for interview at Rowan University and Rowan SOM. Interviews at Rowan SOM will be conducted by a member of the Rowan SOM Admissions Committee.

Applicants not invited for an interview, or not selected for admission to the 3+4 program, shall be notified of decisions as early as possible and shall be considered for regular admission to Rowan University. First year students at Rowan University who are not accepted into the program may continue their undergraduate course of study and would be eligible to apply for the 4+4 program in their Sophomore year at Rowan University

Student Status:
Students will be eligible admission to the D.O. portion of the program after the Rowan University Coordinator of Premedical Programs has certified that the candidate has met all basic prerequisite requirements, after completion of the MCAT, and after a successful interview with the Rowan SOM Admissions Committee. Students apply for an admissions decision to Rowan SOM no later than October I of the 3" year, but preferably by August 15 before their 3rd year. Acceptance of such candidates is based on meeting or surpassing the requirements listed above.

Tuition for the first three (3) years of study at Rowan University, including summer courses, if any, will be the same tuition as charged to undergraduate Rowan University students. Tuition during the four (4) years of study at Rowan SOM will be the same as the tuition charged to students enrolled in the regular curriculum at Rowan SOM

Students who satisfactorily complete the appropriate courses in the first year at Rowan SOM, in addition to all other undergraduate degree requirements, will receive a B.S. in Biology degree.

If, after the first semester of the medical first year, the student fails to meet the required Rowan SOM standards of performance and competency, representatives from Rowan University and Rowan SOM will meet with the student. If, after meeting with the student, Rowan SOM concludes that the student should not continue in the medical school, the student shall be dismissed from the B.S./D.O. Program. In consultation with the Biology coordinator, the B.S. in Biology degree may be completed.
Department of Biomedical and Translational Sciences
Gregory Caputo
Coordinator
856.256.5453
caputo@rowan.edu

The Department of Biomedical and Translational Sciences provides innovative curricula to prepare students entering the ever-growing biomedical and health workforce. The Department offers a Bachelor of Science in Translational Biomedical Sciences. Students are invited to visit www.rowan.edu/departments/bts to learn more about the department.

BACHELOR OF SCIENCE IN TRANSLATIONAL BIOMEDICAL SCIENCES
Joining the fast-growing biomedical workforce requires diverse training in mathematics, statistics, the life sciences and the physical sciences. The Bachelor of Science in Translational Biomedical Sciences effectively integrates these disciplines to facilitate acquisition of a broad knowledge base and skill set. This major is designed to provide an excellent preparation of undergraduate students who pursue any of the following:

- Apply to medical professional degree programs (MD, DO, etc.)
- Pursue a master’s or doctoral degree in the biomedical field
- Enter the biomedical workforce upon completion of the degree

The program will provide general computation skills, laboratory skills, and analytical skills that will be valuable regardless of the graduates’ ultimate career path.

General Education
All students must complete the University General Education Requirements as described on page 33

Rowan Experience
All students must complete the Rowan Experience requirements as described on page 35

Introductory Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMS01.105</td>
<td>Introduction to Biomedical Sciences I</td>
</tr>
<tr>
<td>BMS01.110</td>
<td>Introduction to Biomedical Sciences II</td>
</tr>
<tr>
<td>CHEM06.100</td>
<td>Chemistry I</td>
</tr>
<tr>
<td>CHEM06.101</td>
<td>Chemistry II</td>
</tr>
<tr>
<td>CHEM07.200</td>
<td>Organic Chemistry I</td>
</tr>
<tr>
<td>CHEM07.203</td>
<td>Organic Chemistry II for Biomedical Sciences</td>
</tr>
<tr>
<td>MATH01.130</td>
<td>Calculus I</td>
</tr>
<tr>
<td>MATH01.131</td>
<td>Calculus II</td>
</tr>
<tr>
<td>STAT02.284</td>
<td>Statistics for the Biomedical Sciences</td>
</tr>
<tr>
<td>PHYS00.220</td>
<td>Introductory Mechanics</td>
</tr>
<tr>
<td>or PHYS00.221</td>
<td>Introductory Thermodynamics, Fluids, Waves &amp; Optics</td>
</tr>
<tr>
<td>BIOL01.205</td>
<td>Foundations in Biology for Biomedical Sciences 1</td>
</tr>
<tr>
<td>BIOL01.206</td>
<td>Foundations in Biology for Biomedical Sciences 2</td>
</tr>
</tbody>
</table>

Required Biomedical and Translational Courses

**Biosciences Core Courses**
22 s.h.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>or BIOL10.345</td>
<td>Human Physiology</td>
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<tr>
<td>BMS01.333</td>
<td>Cellular Biochemistry</td>
</tr>
<tr>
<td>BMS01.315</td>
<td>Instrumentation of Biomedical Sciences</td>
</tr>
<tr>
<td>BMS01.306</td>
<td>Translational Cell Biology</td>
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<tr>
<td>PHYS00.360</td>
<td>Biophysics I</td>
</tr>
<tr>
<td>BIOL01.205</td>
<td>Foundations in Biology for Biomedical Sciences 1</td>
</tr>
<tr>
<td>or BIOL01.206</td>
<td>Foundations in Biology for Biomedical Sciences 2</td>
</tr>
</tbody>
</table>

**Bioscience Focus Courses**
12 s.h.

Advanced Biomedical Instrumentation
Genetics of Pathogens
Molecular Pharmacology
Bioinformatics & Modeling

**Bioscience Elective Courses**
12 s.h.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM05.430</td>
<td>Advanced Topics in Chemistry - (Special permission via advising based on topic)</td>
</tr>
<tr>
<td>CHEM06.301</td>
<td>Inorganic Chemistry</td>
</tr>
<tr>
<td>CHEM07.405</td>
<td>Introduction to Polymer Chemistry</td>
</tr>
</tbody>
</table>
CHEM07.410 Medicinal Chemistry
CHEM07.470 Organic Spectroscopic Analysis (Lecture and Lab)
CHEM07.431 Advanced Topics in Biochemistry- (Special permission via advising based on topic)
CHEM07.464 Advanced Organic Chemistry I (Lecture) - WI
CHEM07.492 Pharmaceutical Chemistry
CHEM07.357 Chemical Biology
CHEM09.420 Supramolecular chemistry
CHEM09.411 Electrochemistry
BIOL11.330 Microbiology
BIOL22.335 Genetics
BIOL11.338 Immunology
BIOL01.428 Developmental Biology
BIOL22.410 Concepts in Human Genetics
BIOL22.450 Molecular Genetics
BIOL10.381 Cellular/Molecular Neuroscience
BIOL01.421 Fundamentals in Cell Culture Techniques
BIOL01.433 Cell Culture Technology
PHYS00.300 Modern Physics
PHYS00.320 Electricity & Magnetism I
PHYS00.410 Quantum Mechanics I
PHYS00.430 Statistical Physics
PHYS00.321 Electricity & Magnetism II
PHYS00.325 Electric Circuits
PHYS00.340 Optics and Light
PHYS00.361 Biophysics II: Biomaterials
PHYS00.475 Radiation Physics
PHYS00.411 Quantum Mechanics II
PHYS00.470 Selected Topics Special (permission via advising based on topic)
PSY10.315 Physiological Psychology
PSY10.380 Cognitive Neuroscience
BIOL01.430 Cell Biology

Translational Biomedical Research 12 s.h.
Total Semester Hours 131 s.h.

Department of Chemistry and Biochemistry
Gregory A. Caputo
Department Head
Science Hall
856.256.5453
caputo@rowan.edu

The Chemistry and Biochemistry Department strives to reach the excellence on innovative educational programs and cutting-edge research. We have made great strides in quality education, providing unique learning opportunities for students and meeting the challenge of industry demands. The Department strongly supports innovation of curriculum to prepare competent majors and encourage fundamental and applied research projects involving our major students.

The Department of Chemistry and Biochemistry offers a Bachelor of Science in Chemistry, a Bachelor of Science in Biochemistry, a Bachelor of Arts in Chemistry and also co-offers a Bachelor of Science in Physical Sciences with the Department of Physics and Astronomy.

Our goal is to prepare students to be contributing members of the scientific community and society at large. We believe this is essential to each student’s success in his/her professional career. We believe in rigorous, employment-base learning. It is also important to the students’ potential employers and graduate faculty and to society in general as well as to Rowan University and the Department of Chemistry and Biochemistry. We strive to accomplish this goal using a wide variety of techniques that include modern, strong coursework, state-of-the-art instrumentation, hands-on activities, teamwork, and the requirement of research and seminar capstone experiences. In addition, our students participate fully in the general education plan at Rowan.

Students are invited to learn more detailed information about the Department and Programs by visiting the following website: www.rowan.edu/chemistry.

Chemistry and Biochemistry graduates will be able to:

• Demonstrate contemporary skills and knowledge for entry-level positions in the field, or for admission to graduate or professional school
• Ask questions, design experiments, analyze data, and interpret results
• Obtain and use data from the chemical literature
• Effectively communicate orally and in writing
• Work effectively as a member of a team
• Make accurate and precise measurements and observations using scientific instrumentation
• Work safely and with a safety-conscious attitude
• Exhibit ethical scientific conduct
• Behave and think in patterns leading to innovation
• Demonstrate scientific curiosity
• Demonstrate leadership
• Become a lifelong learner

BACHELOR OF SCIENCE IN PHYSICAL SCIENCES (with Physics and Astronomy)

PHYSICAL SCIENCE-CHEMISTRY SPECIALIZATION
Gregory A. Caputo
Program Coordinating Advisor
Science Hall
856.256.5453
caputo@rowan.edu

PHYSICAL SCIENCE-PHYSICS SPECIALIZATION
See the program description listed in the Department of Physics and Astronomy.

BACHELOR OF SCIENCE IN CHEMISTRY
Kandalam Ramanujachary
Coordinator
Science Hall
856.256.5451
chary@rowan.edu

The B.S. degree in Chemistry, approved by the American Chemical Society, prepares students for graduate study and for careers in industry, government or medicine. Laboratories are equipped with modern instrumentation and computers for hands-on use by students at all levels. Each student is expected to carry out a laboratory-based research project.

General Education
All students must complete the University General Education Requirements as described on page 33

Rowan Experience
All students must complete the Rowan Experience requirements as described on page 35

Required Courses

| PHIL09.369 | Philosophy of Science-WI |
| MATH01.130 | Calculus I |
| MATH01.131 | Calculus II |
| MATH01.230 | Calculus III |
| CS01.104 | Intro to Scientific Programming |
| PHYS00.220 | Introductory Mechanics |
| PHYS00.222 | Introductory Electricity & Magnetism |
| CHEM06.100 | Chemistry I |
| and CHEM06.101 | Chemistry II |
| or CHEM06.105 | Advanced Chemistry I |
| and CHEM06.106 | Advanced Chemistry II |
| CHEM07.200 | Organic Chemistry I |
| CHEM07.201 | Organic Chemistry II |
| CHEM06.301 | Inorganic Chemistry |
| CHEM06.400 | Advanced Inorganic Chemistry Lecture |
| CHEM06.401 | Advanced Inorganic Chemistry Laboratory |
| CHEM07.348 | Biochemistry |
| CHEM09.250 | Quantitative Analysis |
| CHEM08.400 | Physical Chemistry I |
| CHEM08.401 | Physical Chemistry II |
| CHEM08.402 | Physical Chemistry Lab I |
| CHEM08.403 | Physical Chemistry Lab II |
 Restricted Electives  
12 s.h.
Chosen with the approval of your advisor. 8 s.h. must be in upper level Chemistry and must have a Physical Chemistry prerequisite. The remainder of the 12 s.h. may be chosen in chemistry or in subjects closely related to chemistry such as physics, biology or mathematics. Students planning graduate study would find a course in differential equations, linear algebra, or advanced physics helpful. See the list of Approved Restricted Electives below.

 Free Electives  
15 s.h.
Chosen with the help of advisor and with consideration of future educational and career plans.

Total Credits in Program  
120 s.h.

 List of Approved Restricted Electives

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>CHEM05.430</td>
<td>Advanced Topics in Chemistry</td>
</tr>
<tr>
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<td>Introduction to Polymer Chemistry</td>
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<tr>
<td>CHEM07.410</td>
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<tr>
<td>CHEM07.470</td>
<td>Organic Spectroscopic Analysis (Lecture and Lab)</td>
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<tr>
<td>CHEM07.408</td>
<td>Advanced Biochemistry</td>
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<tr>
<td>CHEM07.409</td>
<td>Advanced Biochemistry Laboratory</td>
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<tr>
<td>CHEM07.431</td>
<td>Advanced Topics in Biochemistry</td>
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<tr>
<td>CHEM07.464</td>
<td>Advanced Organic Chemistry I (Lecture) - WI</td>
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<tr>
<td>CHEM07.475</td>
<td>Polymer Synthesis</td>
</tr>
<tr>
<td>CHEM07.478</td>
<td>Polymer Characterization</td>
</tr>
<tr>
<td>CHEM07.357</td>
<td>Chemical Biology</td>
</tr>
<tr>
<td>CHEM05.310</td>
<td>Independent Study (if taken as a junior or senior)</td>
</tr>
<tr>
<td>CHEM07.399</td>
<td>Bioinformatics - Biochemical Applications</td>
</tr>
<tr>
<td>CHEM08.410</td>
<td>Survey of Molecular Modelling Methods</td>
</tr>
<tr>
<td>CHEM07.492</td>
<td>Pharmaceutical Chemistry</td>
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<td>CHEM09.300</td>
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<td>CHEM09.411</td>
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<td>Optics and Light (Lecture and Lab)</td>
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<tr>
<td>PHYS100.310</td>
<td>Analytical Mechanics (Lecture Only)</td>
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<td>Electricity and Magnetism I</td>
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<tr>
<td>INTR01.486</td>
<td>Interdisciplinary Materials Science</td>
</tr>
</tbody>
</table>

BACHELOR OF ARTS IN CHEMISTRY
Lei Yu
Coordinator
Science Hall
856.256.5409
yu@rowan.edu

The B.A. degree in Chemistry prepares students for teaching careers in high school or science, businesses or law careers. Laboratories are equipped with modern instrumentation and computers for hands-on use by students at all levels. Each student is expected to carry out a laboratory-based research project.

General Education
All students must complete the University General Education Requirements as described on page 33

Rowan Experience
All students must complete the Rowan Experience requirements as described on page 35

Required Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
</tr>
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<tbody>
<tr>
<td>PHIL09.369</td>
<td>Philosophy of Science-WI</td>
</tr>
<tr>
<td>MATH101.130</td>
<td>Calculus I</td>
</tr>
<tr>
<td>MATH101.131</td>
<td>Calculus II</td>
</tr>
</tbody>
</table>
Free Electives 39 s.h.
Chosen with the help of the advisor and with consideration of future educational and career plans.

Total Credits in Program 120 s.h.

MINOR IN CHEMISTRY
Gregory A. Caputo
Advisor
Science Hall
856.256.5453
caputo@rowan.edu

A chemistry minor is available for any student wishing a coherent sequence of chemistry courses. The minor is not available for Physical Sciences B.S. students specializing in chemistry or Biochemistry majors. Transfer students must complete at least 8 s.h. of the minor at Rowan University.

Requirements 23-24 s.h.

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM06.100</td>
<td>Chemistry I</td>
</tr>
<tr>
<td>or CHEM06.105</td>
<td>Advanced Chemistry I</td>
</tr>
<tr>
<td>CHEM06.101</td>
<td>Chemistry I</td>
</tr>
<tr>
<td>or CHEM06.106</td>
<td>Advanced Chemistry II</td>
</tr>
<tr>
<td>CHEM07.200</td>
<td>Organic Chemistry I</td>
</tr>
<tr>
<td>CHEM07.201</td>
<td>Organic Chemistry II</td>
</tr>
<tr>
<td>CHEM09.249</td>
<td>Analytical Chemistry</td>
</tr>
</tbody>
</table>

And one other course that has Organic Chemistry II as a prerequisite.

BACHELOR OF SCIENCE IN BIOCHEMISTRY
Gregory Caputo
Coordinator
Science Hall
856.256.5453
caputo@rowan.edu

The B.S. Degree in Biochemistry, an interdisciplinary program, is designed to prepare students for a career in biochemistry or graduate studies. Completion of the degree requirements can also increase a student’s chances of success in medical, dental or other related health programs by helping students develop a strong academic foundation needed for success in such professional schools. The program combines the value of a liberal education with appropriate classroom and laboratory training in chemistry, biology, math and physics. The focus is on a molecular approach to studying living systems.

The biochemistry major can choose to specialize in related areas of chemistry, biochemistry, molecular biology, genetics or structural biology, pre-med, allied health sciences or biomedical sciences by a careful selection of elective courses. The emphasis in all courses is on the acquisition of a solid knowledge base combined with hands-on laboratory work using modern equipment. Each student is expected to carry out a laboratory-based research project.

General Education
All students must complete the University General Education Requirements as described on page 33

Rowan Experience
All students must complete the Rowan Experience requirements as described on page 35

Required Courses
PHILO9.369 Philosophy of Science-WI
MATH01.130 Calculus I
MATH01.131 Calculus II
CS01.104 Intro to Scientific Programming
or CS01.200 Computing Environments
or CS01.102 Intro to Programming
PHYS00.220 Introductory Mechanics
PHYS00.222 Introductory Electricity & Magnetism
CHEM06.100 Chemistry I
and CHEM06.101 Chemistry II
or CHEM06.105 Advanced Chemistry I
and CHEM06.106 Advanced Chemistry II
CHEM07.200 Organic Chemistry I
CHEM07.201 Organic Chemistry II
CHEM07.348 Biochemistry
CHEM09.250 Quantitative Analysis
CHEM08.305 Introduction to Biophysical Chemistry
BIOL01.203 Biology 3
CHEM07.408 Advanced Biochemistry
CHEM07.409 Advanced Biochemistry Laboratory
CHEM05.440 Research I
or CHEM05.435 Co-op
CHEM05.450 Seminar I

List of Approved Restricted Electives
CHEM07.410 Medicinal Chemistry
CHEM09.410 Instrumental Methods (Lecture and Lab)
CHEM06.700 Advanced Inorganic Chemistry
CHEM06.301 Inorganic Chemistry
CHEM06.400 Advanced Inorganic Chemistry Lecture
CHEM06.401 Advanced Inorganic Chemistry Laboratory
CHEM08.401 Physical Chemistry II (Lecture)
CHEM07.470 Organic Spectroscopic Analysis (Lecture and Lab)
CHEM07.431 Advanced topics in Biochemistry
CHEM07.405 Introduction to Polymer Chemistry
CHEM05.430 Advanced Topics in Chemistry
CHEM07.337 Chemical Biology
CHEM07.492 Pharmaceutical Chemistry
CHEM08.410 Survey of Molecular Modelling Methods
CHEM07.399 Bioinformatics - Biochemical Applications
CHEM09.300 Environmental Chemistry
CHEM09.411 Electrochemistry
CHEM09.420 Supramolecular Chemistry
BIOL11.330 Microbiology
BIOL01.430 Immunology
BIOL22.335 Genetics
BIOL01.430 Cell Biology
BIOL22.428 Developmental Biology
BIOL22.410 Concepts in Human Genetics
BIOL22.450 Molecular Genetics

Free Electives
Chosen with the help of advisor and with consideration for future educational and career plans.

Total Credits in Program
120 s.h.

Accelerated Dual Degree Program Bachelor of Science in Biochemistry - Master of Science in Pharmaceutical Sciences

Overview
The Department of Chemistry and Biochemistry currently offers a Bachelor of Science (BS) in Biochemistry as well as a Master of Science (M.S.) in Pharmaceutical Sciences. There are two track available in the MS program (a) Thesis track and (b) Non-Thesis track. The thesis track of the MS program is designed as a research-intensive program and may not be amenable for the accelerated track. The non-thesis track of our MS program is designed for students who intend to further their knowledge in the area of pharmaceutical sciences and hence it would be ideally suited for the creation of an accelerated track. We propose an accelerated program in which high-achieving Rowan Biochemistry majors can obtain the B.S. and M.S. (non-thesis track) in a five-year period (rather than the traditional period of six years if both degrees were completed independently). This would create a "3+2" program in which students would be enrolled as undergraduates in the first.
semester of their fourth year but would enroll as graduate students in the second semester of the 4th year. By beginning graduate-level studies in their fourth year, highly talented and motivated students will be able to complete both degrees on an accelerated timeline. The B.S./M.S. dual degree program will enable students to obtain advanced graduate level training in the pharmaceutical sciences, which will prepare them for careers in industry or further graduate study.

Identification of Courses The courses required for graduation is a combination of the required courses for the complete core of the B.S. Biochemistry degree including Rowan general education courses (102 credits) as well as the full 31 credits for the M.S. Pharmaceutical Sciences (non-thesis track) degree. This intends to use up to 18 credits of the M.S. courses toward fulfilling the required 120 credits for undergraduate degree completion. The complete program will consist of 133 credits for the dual B.S. and M.S. degrees as opposed to 151 credits if both were done independently.

Course requirements for the accelerated B.S. Biochemistry degree ROWAN EXPERIENCE courses (all students are required to fulfill these requirements):
1. Artistic and Creative Experience (ACE)
2. Literature (LIT)
3. Multicultural/Global (M/G)
4. Public Speaking (PS)
5. Rowan Seminar (RS)
6. Writing Intensive (WI). The writing intensive course must be taken at Rowan. Composition II or its equivalent must be completed prior to enrollment in a WI course. The Program requires majors to take Philosophy of Science (PHIL 09369: M/G, WI, HHL) or Philosophy of Medicine (PHIL 09440: WI, HHL) in the Department of Philosophy and Religion.

General Education requirements

Science and Mathematics (MS) 47 credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH01.130</td>
<td>Calculus I</td>
<td>4 sh</td>
</tr>
<tr>
<td>CS01.104</td>
<td>Intro to Scientific Programming</td>
<td>3 sh</td>
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</tbody>
</table>

Communications (COM) 6 sh

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP01.111</td>
<td>College Composition I</td>
<td>3 sh</td>
</tr>
<tr>
<td>COMP01.112</td>
<td>College Composition II</td>
<td>3 sh</td>
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</tbody>
</table>

Social and Behavioral Sciences (SBS) 6 sh

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL09.369</td>
<td>Philosophy of Science-WI †HHL</td>
<td>3 sh</td>
</tr>
</tbody>
</table>

Elective 3 sh

Non-program Electives (Cannot be chemistry courses) 16 sh

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS00.220</td>
<td>Introductory Mechanics</td>
<td>4 sh</td>
</tr>
<tr>
<td>PHYS00.222</td>
<td>Introductory Electricity &amp; Magnetism</td>
<td>4 sh</td>
</tr>
<tr>
<td>MATH01.131</td>
<td>Calculus II</td>
<td>4 sh</td>
</tr>
<tr>
<td>BIOL01.106</td>
<td>Biology 2</td>
<td>4 sh</td>
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</tbody>
</table>

ROWAN EXPERIENCE 6 sh

<table>
<thead>
<tr>
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<th>Title</th>
<th>Credits</th>
</tr>
</thead>
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<tr>
<td>CMS06.202</td>
<td>Public Speaking</td>
<td>3 sh</td>
</tr>
<tr>
<td></td>
<td>Art or Creative Experience course</td>
<td>3 sh</td>
</tr>
</tbody>
</table>

Accelerated B.S. Biochemistry Major 61 sh

Common Core 43 sh

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL01.203</td>
<td>Biology III</td>
<td>4 sh</td>
</tr>
<tr>
<td>CHEM06.100</td>
<td>Chemistry I*</td>
<td>4 sh</td>
</tr>
<tr>
<td>or CHEM06.105</td>
<td>Advanced Chemistry I</td>
<td>4 sh</td>
</tr>
<tr>
<td>CHEM06.101</td>
<td>Chemistry II</td>
<td>4 sh</td>
</tr>
<tr>
<td>or CHEM06.106</td>
<td>Advanced Chemistry II</td>
<td>4 sh</td>
</tr>
<tr>
<td>CHEM07.200</td>
<td>Organic Chemistry I</td>
<td>4 sh</td>
</tr>
<tr>
<td>CHEM07.201</td>
<td>Organic Chemistry II</td>
<td>4 sh</td>
</tr>
<tr>
<td>CHEM09.250</td>
<td>Quantitative Analysis</td>
<td>4 sh</td>
</tr>
<tr>
<td>CHEM07.348</td>
<td>Biochemistry (with lab)</td>
<td>4 sh</td>
</tr>
<tr>
<td>CHEM07.407</td>
<td>Advanced Biochemistry Lecture</td>
<td>3 sh</td>
</tr>
<tr>
<td>CHEM07.409</td>
<td>Advanced Biochemistry Lab</td>
<td>2 sh</td>
</tr>
<tr>
<td>CHEM08.305</td>
<td>Introduction to Biophysical Chemistry</td>
<td>4 sh</td>
</tr>
<tr>
<td>CHEM05.440</td>
<td>Research I (or CHEM 05.435 Co-op)</td>
<td>3 sh</td>
</tr>
<tr>
<td>CHEM05.430</td>
<td>Advanced Topics in Chemistry</td>
<td>3 sh</td>
</tr>
</tbody>
</table>

Restricted Electives Undergrad (Chosen with the approval of an Advisor) 12 sh

Approved Restricted Electives
CHEM07.405  Introduction to Polymer Chemistry  3 sh
CHEM07.410  Medicinal Chemistry  3 sh
CHEM07.470  Organic Spectroscopic Analysis  3 sh

*(Lecture and Lab)*
CHEM07.407  Advanced Biochemistry Lecture  3 sh
CHEM07.409  Advanced Biochemistry Lab  2 sh
CHEM07.431  Advanced Topics in Biochemistry  3 sh
CHEM07.399  Bioinformatics - Biochemical Applications  3 sh
CHEM08.410  Survey of Molecular Modeling Methods  3 sh
CHEM07.464  Advanced Organic Chemistry I WI  3 sh
CHEM07.472  Organometallic Chemistry  3 sh
CHEM07.475  Polymer Synthesis  3 sh
CHEM07.478  Polymer Characterization  3 sh
CHEM07.492  Pharmaceutical Chemistry  3 sh
CHEM07.357  Chemical Biology  3 sh
BIOL11.330  Microbiology  4 sh
BIOL22.335  Genetics  4 sh
BIOL11.338  Immunology  4 sh
BIOL01.430  Cell Biology  4 sh
BIOL01.428  Developmental Biology  4 sh
BIOL22.410  Concepts in Human Genetics  4 sh
BIOL22.450  Molecular Genetics  4 sh

**Restricted Electives (Graduate Courses)**  4 sh
Any graduate Pharmaceutical Sciences courses taken as part of the accelerated M.S. program count toward undergraduate Restricted Electives.

**Free Electives (Graduate Courses)**  14 sh
Any graduate Pharmaceutical Sciences courses taken as part of the accelerated M.S. program count toward undergraduate Free Electives.

Total Undergrad Hours  102 Credits
Total Graduate Hours Applied to the B.S.  18 Credits
Total Credit Hours for the Accelerated B.S. Biochemistry Degree  120 Credits

**Course Requirements for the Accelerated M.S. in Pharmaceutical Sciences**

**Core Courses**  16 sh
CHEM07.592  Advanced Pharmaceutical Chemistry  3 sh
CHEM07.590  General Aspects of Pharmacology  3 sh
CHEM07.364  Advanced Organic Synthesis  3 sh
CHEM07.560  Advanced Biochemistry Lecture  3 sh
CHEM05.530  Special Topics in Chemistry  3 sh
or CHEM05.531  Special Topics in Biochemistry  3 sh
CHEM05.550  Advanced Seminar  1 sh

**Restricted Electives 15 sh Choose free courses from the list below.**
CHEM07.568  Medicinal Chemistry  3 sh
CHEM07.570  Organic Spectroscopy  3 sh
CHEM07.575  Organic Reaction Mechanisms  3 sh
CHEM07.572  Advanced Organometallic Chemistry  3 sh
CHEM06.400  Advanced Inorganic Chemistry Lecture  3 sh
CHEM08.510  Advanced Survey of Molecular Modeling Methods  3 sh
CHEM09.520  Advanced Bioanalytical Chemistry  3 sh
CHEM08.505  Advanced Biophysical Chemistry  3 sh
CHEM09.510  Instrumental Analysis  3 sh
CHEM07.557  Chemical Biology  3 sh

Total credit hours for the M.S. Pharmaceutical Sciences Degree  31 Credit Hours
Total graduate credit hours Applied to the B.S. in Biochemistry  18 Credit Hours
Total Credit Hours for the Accelerated B.S. Biochemistry Degree  102 Credit Hours
Total credit hours for the Accelerated B.S. in Biochemistry and M.S. in Pharmaceutical Sciences  133 Credit Hours

**Requirements for Admission and Graduation**

**Admission**
Applicants to the accelerated program will submit all application materials by January 15 of the spring semester of their third year at Rowan (nominally “junior” year). The graduate admissions committee in the Department of Chemistry and Biochemistry will review the applications and students will be notified by February 1. We plan to revisit and potentially fine-tune the details of the admission process two or three years after implementation to take into account the practical aspects that might arise during the first few rounds of applications.

Application for admission requires:
- A minimum overall GPA of 2.8 in undergraduate coursework
- A complete online CGCE application including personal statement
- A letter of nomination/recommendation from Department of Chemistry & Biochemistry

Graduation
To graduate from the accelerated B.S./MS (non-thesis) dual degree program in Biochemistry and Pharmaceutical Sciences, students must meet the following requirements:
- Completion of all program requirements for the B.S. in Biochemistry (maintain cumulative GPA of 2.0).
- Completion of all program requirements for the M.S. in Pharmaceutical Sciences (non-thesis) (maintain cumulative GPA of 3.0 as well as obtain no grade less than B- in any of the graduate courses).
- Maintain satisfactory progress through the program. Upon completion of the requirements above, the student will be granted both a Bachelor of Science in Biochemistry and a Master of Science in Pharmaceutical Sciences.

Student Status
Students enrolled in the accelerated B.S./M.S. Program will pay undergraduate fees for all courses until they have reached the required number of credits as part of the “3.5” years (i.e. 102 credits). Beyond this, students will pay graduate credit for graduate courses. Students will be able to take up to 6 credits of graduate courses at the undergraduate rate (senior privilege). Students must maintain full time student status during the entire 5-year program. Students will be expected to maintain satisfactory progress through the program. Satisfactory progress will be defined by the following parameters:
- Earning at least a grade of B- in all the graduate courses.
- Any student who fails to maintain satisfactory progress as described above will be placed on probation within the program for one semester— if the performance still does not improve, he/she will be dropped from the graduate program. If the student has not already earned the B.S. in Biochemistry, he/she will be re-admitted into the B.S. subject to the requirements of that program.
- Students with extenuating circumstances may request an exception to this requirement by obtaining written approval of the Program Coordinator of MS Pharmaceutical Sciences as well as their Undergraduate Advisor, and other approvals if needed under University policy.

Students who enter the accelerated M.S. program but do not maintain satisfactory progress or opt-out of the M.S. degree will be allowed to apply up to 18 credits of Pharmaceutical Sciences coursework credits as restricted or free electives toward the B.S. Biochemistry degree. If the student opts out before 18 credits have been completed in the Pharmaceutical Sciences program, any remaining credits to make up the required 120 credits for the undergraduate B.S. Biochemistry degree will be taken using traditional coursework at the Glassboro campus.

**Dual Degree (4 +1 program): B.S. in Bioinformatics + M.S. in Cell and Molecular Biology (SOM-GSBS)**

**Overview**
This 4 +1 accelerated dual degree program allows high-achieving Rowan Bioinformatics majors to obtain the B.S. and M.S. in a five-year period (rather than the traditional period of six years if both degrees were completed independently). This would create a “3.5+1.5” program in which students would be enrolled as undergraduates in the first semester of their fourth year but would enroll in graduate level courses in the second semester of this year. By beginning graduate-level studies in their fourth year, highly talented and motivated students will be able to complete both degrees on an accelerated timeline. The B.S./M.S. dual degree program will enable students to obtain advanced graduate level training in the biomedical sciences which will prepare them for careers in industry or further graduate study.

**4 + 1 Undergraduate Program Requirements**

<table>
<thead>
<tr>
<th>Bioinformatics Core Courses</th>
<th>total 11 s.h.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BINF07.250 Introduction to Bioinformatics</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>CS04.301 Bioinformatics - Computational Aspects</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>BIOI05.355 Bioinformatics - Biological Applications</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>CHEM07.399 Bioinformatics: Biochemical Applications</td>
<td>3 s.h.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Introductory Science, Math and Computer Science Core</th>
<th>total 54 s.h.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOI01.104 Biology 1</td>
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</tr>
<tr>
<td>BIOI01.106 Biology 2</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>BIOI01.203 Biology 3</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>BIOI01.204 Biology 4</td>
<td>4 s.h.</td>
</tr>
</tbody>
</table>
College of Science and Mathematics

MATH01.130 Calculus I 4 s.h.
STAT02.280 Biometry 4 s.h.
CHEM06.101 Chemistry II 4 s.h.
CHEM07.200 Organic Chemistry I 4 s.h.
CHEM07.201 Organic Chemistry II 4 s.h.
CS01.104 Introduction to Scientific Programming 3 s.h.
CS04.103 Computer Science and Programming 4 s.h.
CS01.205 Computer Laboratory Techniques 3 s.h.
PHYS00.220 Introductory Mechanics 4 s.h.
PHYS00.222 Intro Elec. & Mag. 4 s.h.
or PHYS00.221 Intro Thermodynamics 4 s.h.

Required upper-level courses:

- BIOL22.335 Genetics 4 s.h.
- CHEM07.348 Biochemistry 4 s.h.

Restricted Electives:
Capstone course: 3 s.h.
- CHEM05.440 Research I
- or BIOL01.475 Lab/Field Research

At least 1 of the following courses

- BIOL01.310 Evolution 4 s.h.
- BIOL01.405 Conservation Biology 4 s.h.
- BIOL01.428 Developmental Biology 4 s.h.
- BIOL01.430 Cell Biology 4 s.h.
- BIOL11.330 Microbiology 4 s.h.
- BIOL11.405 Environmental Microbiology 4 s.h.
- BIOL20.310 Ecology 4 s.h.
- BIOL22.410 Concepts in Human Genetics 4 s.h.
- BIOL22.450 Molecular Genetics 4 s.h.
- CHEM07.357 Chemical Biology 3 s.h.
- CHEM07.407 Advanced Biochemistry Lecture 3 s.h.
- CHEM07.409 Advanced Biochemistry Laboratory 2 s.h.
- CHEM07.410 Medicinal Chemistry 3 s.h.
- CHEM07.431 Advanced Topics in Biochemistry 3 s.h.
- CHEM08.305 Biophysical Chemistry 4 s.h.
- CHEM08.410 Survey Of Molecular Modeling Methods 3 s.h.
- CS04.113 Introduction to Object Oriented Programming 4 s.h.
- CS04.114 Object Oriented Programming and Data Abstraction 4 s.h.
- CS04.222 Data Structures and Algorithms 4 s.h.
- CS06.205 Computer Organization 3 s.h.
- CS07.370 Introduction to Information Visualization 3 s.h.
- CS06.390 Introduction to Systems Simulation and Modeling 3 s.h.

*CMB graduate courses taken as part of the accelerated B.S.-M.S. program will count toward and fulfill the remaining 6 s.h. Restricted Upper-Level Elective Course credit required for the BS Bioinformatics degree (see below).

Rowan Experience, General Education, and Free Elective Courses 35 s.h.

Four approved graduate-level M.B.A. courses may substitute for any of the free elective courses. No more than 12 graduate credits total may be used to replace undergraduate coursework.

Total Required Credits for the Undergraduate Portion of the Program 120 or 110** s.h. total **The first number is the official number of credits required for the undergraduate degree; however, the second number reflects the actual number of credits students will take through undergraduate coursework since 12 of the graduate credits are completed in the senior year and count towards both the undergraduate and graduate degrees.

4 + 1 Graduate Program Requirements

Required M.S. Courses taken as an Undergraduate 4 + 1 student 9 s.h.

- CMB00.702 Molecular Biology of the Cell 4 s.h.
- CMB00.809 Dept Seminar Series 1 s.h.
- CMB00.802 Experimental Design 2 s.h.
- or CMB00.803 Scientific Writing 2 s.h.
- CMB00.682 Lab rotation C M.S. CMB 1 s.h.
- CMB00.683 Lab rotation D M.S. CMB 1 s.h.

Required M.S. Courses taken as a Graduate 4 + 1 Student 18 s.h.

- CMB00.801 Bioethics in Science and Medicine 2 s.h.
- CMB00.802 Experimental Design 2 s.h.
or CMB00.803 Scientific Writing 2 s.h.
CMB00.804 Critical Readings in Cell & Molecular Biology 2 s.h.
CMB00.690 Thesis Research/M.S. 5 s.h.
CMB00.699 M.S. Thesis Continuation (2 semesters) 5 + 5 s.h.‡
CMB00.809 Department Seminar Series 1 s.h.
‡(no tuition, only fee)

Alternate Focus Courses 4-8 s.h.

Alternate courses permit the M.S. student to tailor the program to special needs for career development and research interests. *The available Alternate Focus Courses are subject to change in response to student and faculty interests. If a student has a specific interest in a topic covered by a course offered by another GSBS program, this course may be substituted for one Alternate Focus Courses with permission of the student’s Advisory Committee and the GSBS Executive Council:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMB00.805</td>
<td>Cell Culture and Stem Cells</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>CMB00.806</td>
<td>Graduate Genetics</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>CMB00.808</td>
<td>Molecular Oncology</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>CMB00.810</td>
<td>Biomolecular Interactions</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>MBS00.602</td>
<td>Antimicrobial Drugs: Mechanisms of Action and Resistance</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>MBS00.603</td>
<td>Basic Immunology</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>MBS00.604</td>
<td>Cancer Chemotherapy</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>MBS00.605</td>
<td>Developmental Biology</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>MBS00.606</td>
<td>Essential Neuroscience</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>MBS00.609</td>
<td>Mechanisms of Disease</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>MBS00.610</td>
<td>Microbiology</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>MBS00.611</td>
<td>Pathophysiology of the Cardiovascular System</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>MBS00.612</td>
<td>Principles of Pharmacology</td>
<td>3 s.h.</td>
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<tr>
<td>MPI00.504</td>
<td>Topics in Molecular Pathology and Immunology</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>MPI00.601</td>
<td>Techniques in Molecular Diagnostics</td>
<td>2 s.h.</td>
</tr>
</tbody>
</table>

Total Required Credits for the Graduate Portion of the Program 36 s.h.

This number includes the 12 graduate credits that may be applied towards both the graduate and undergraduate portions of the program.

Total Required Credits for the Entire 4 + 1 Program 146 s.h.

Requirements for Admission:
Applicants to the accelerated program will submit all application materials by January 15 of the spring semester of their third year at Rowan (nominally “junior” year). Applications will be reviewed by the GSBS admissions committee and students will be notified by February 1. Junior Admission:

- A minimum overall GPA of 3.0 in undergraduate coursework
- A complete online GSBS application including personal statement
- A letter of nomination/recommendation from 2 faculty members affiliated with the Bioinformatics Program.
- Official GRE General Exam score

Requirements for Graduation
To graduate from the accelerated B.S./MS dual degree program in Bioinformatics and Cell and Molecular Biology, students must meet the following requirements:

- Completion of all requirements for the Accelerated B.S. in Bioinformatics
- Completion of all requirements for the Accelerated M.S. in Cell and Molecular Biology
- Maintain satisfactory progress through the program.

Upon completion of the requirements above, the student will be granted both a Bachelor of Science and a Master of Science in Cell and Molecular Biology.

Student Status:
Students enrolled in the accelerated B.S./M.S. Program will pay undergraduate fees for all courses until they have reached the required number of credits as part of the “3.5” years (i.e. 105 credits). Beyond this, students will pay graduate credit for graduate courses. Students will not be allowed to take GSBS graduate courses at the undergraduate rate. Students must maintain full-time student status during the entire 5-year program.

Students will be expected to maintain satisfactory progress through the program. Satisfactory progress will be defined by the following parameters:

- Completion of the required Cell and Molecular Biology courses at the end of fourth year of study.
- Earning at least a grade of B in all graduate courses taken during that period.

Any student who fails to maintain satisfactory progress as described above will be dropped from the graduate program. If the student has not already earned the B.S. in Bioinformatics, he/she will be readmitted into the B.S. subject to the
requirements of that program. Students with extenuating circumstances may request an exception to this requirement by obtaining written approval of the GSBS Executive Council and the Undergraduate Advisor, and other approvals if needed under University policy.

**Contingency for Students who do not complete the M.S. program:** Students who enter the accelerated M.S. program but do not maintain satisfactory progress or opt-out of the M.S. degree will be allowed to apply up to 18 credits of Cell and Molecular Biology coursework credits as free-electives toward the Bioinformatics B.S. degree. If the student opts out before 18 credits have been completed in the Cell and Molecular Biology program, any remaining credits to make up the required 120 credits for the undergraduate B.S. Bioinformatics degree will be taken using traditional coursework at the Glassboro campus.

**Accelerated Dual Degree (3 + 4 program): B.S. in Biochemistry and M.D. degree**

**Overview**
The Department of Chemistry and Biochemistry and the Cooper Medical School of Rowan University (CMSRU) offer a B.S. in Biochemistry and a M.D. degree, respectively. This accelerated program allows high-achieving Biochemistry majors to obtain the B.S. and M.D. in a seven-year period, rather than the traditional period of eight years if both degrees were completed separately. The program is a 3 + 4 arrangement where students begin M.D. courses in their 4th year at Rowan University.

**3 + 4 UNDERGRADUATE PROGRAM REQUIREMENTS**

<table>
<thead>
<tr>
<th>Category</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Education</strong></td>
<td>47</td>
</tr>
<tr>
<td><strong>Science and Mathematics (MS)</strong></td>
<td></td>
</tr>
<tr>
<td>MATH01.130 - Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>CS01.104 - Intro to Scientific Programming</td>
<td>3</td>
</tr>
<tr>
<td><strong>Communications (COM)</strong></td>
<td>6</td>
</tr>
<tr>
<td>COMP01.111 - College Composition I</td>
<td>3</td>
</tr>
<tr>
<td>COMP01.112 - College Composition II</td>
<td>3</td>
</tr>
<tr>
<td><strong>Social and Behavioral Sciences (SBS)</strong></td>
<td>6</td>
</tr>
<tr>
<td>PHIL09.369 - Philosophy of Science-WI †HHL</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td><strong>Non-program Electives (Cannot be chemistry courses.)</strong></td>
<td>16</td>
</tr>
<tr>
<td>PHYS00.220 - Introductory Mechanics</td>
<td>4</td>
</tr>
<tr>
<td>PHYS00.222 - Introductory Electricity &amp; Magnetism</td>
<td>4</td>
</tr>
<tr>
<td>MATH01.131 - Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>BIOL01.106 - Biology 2</td>
<td>4</td>
</tr>
<tr>
<td><strong>ROWAN EXPERIENCE</strong></td>
<td>6</td>
</tr>
<tr>
<td>CMS06.202 - Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>Art or Creative Experience course</td>
<td>3</td>
</tr>
<tr>
<td><strong>B.S. Program Requirements</strong></td>
<td>61</td>
</tr>
<tr>
<td>BIOL01.203 - Biology 3</td>
<td>4</td>
</tr>
<tr>
<td>CHEM06.100 - Chemistry I*</td>
<td>4</td>
</tr>
<tr>
<td>or CHEM06.105 - Advanced Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>CHEM06.101 - Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>or CHEM06.106 - Advanced Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>CHEM07.200 - Organic Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>CHEM07.201 - Organic Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>CHEM09.250 - Quantitative Analysis</td>
<td>4</td>
</tr>
<tr>
<td>CHEM07.348 - Biochemistry (with lab)</td>
<td>4</td>
</tr>
<tr>
<td>CHEM07.407 - Advanced Biochemistry Lecture</td>
<td>3</td>
</tr>
<tr>
<td>CHEM07.409 - Advanced Biochemistry Lab</td>
<td>2</td>
</tr>
<tr>
<td>CHEM08.305 - Introduction to Biophysical Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>CHEM05.440 - Research I (or CHEM 05.435 Co-op)</td>
<td>3</td>
</tr>
<tr>
<td>CHEM05.430 - Advanced Topics in Chemistry</td>
<td>3</td>
</tr>
</tbody>
</table>

Restricted Electives Undergrad 12 sh (Chosen with the approval of an Advisor; courses in the first year of SOM will count toward these electives).

*MRSU courses in the first year of M.D. program (17 s.h.): Fundamentals, Scholar’s Workshop, Infectious Diseases

**3+4 M.D. PROGRAM REQUIREMENTS**

Requirements for the M.D. degree are set forth in the CMSRU Student Handbook.
Additional Program Requirements:

Students are required to maintain a minimum cumulative grade point average of 3.6 in all course work and a minimum grade point average of 3.6 in the science courses required for admission to CMSRU. Students must take part in one of the summer Premedical Urban Leaders Summer Enrichment PULSE programs at CMSRU or participate in forty hours of approved community service prior to entering their third undergraduate year. This service will be directed to underserved populations and is non-medical. The Health Professions Advisor (HPA), or designee on the Glassboro campus will serve as the supervisor for the service activity and provide verification that the service obligations have been completed.

Students accepted into the 3+4 Program will be admitted to CMSRU contingent upon the following:

- Completion of all general curriculum requirements at Rowan University.
- A minimum of 75% of the credits needed for a Baccalaureate degree completed before beginning the medical school phase of the Program.
- All prerequisite courses required for admission to CMSRU as specified in the CMSRU Handbook.
- Completion of requirements of the designated Rowan University major unless the major department agrees to provide credit for certain medical courses taken during the first year of medical school at CMSRU.
- A cumulative science grade point average of 3.60 or better.
- No final grade of “D”, “F” or “I” in any prerequisite course required for admission to CMSRU as indicated in the CMSRU Handbook.
- All students will be required to take the Medical College Admissions Test (MCAT) and obtain a score at or greater than the 70th percentile.
- Students in the Program will be required to participate in one summer Premedical Urban Leader Summer Enrichment Program “PULSE” program at CMSRU or an equivalent service experience as outlined above.
- Students must remain free of any citations for behavioral issues or academic integrity violations especially surrounding professionalism through their undergraduate education.
- CMSRU may refuse admission to any student applicant who does not meet the above requirements. Students may be required to decelerate or withdraw from the combined Program for academic or other reasons.

Eligibility and Admissions:

High school seniors who qualify for admission to Rowan University are eligible for admission to the 3+4 program. There are no restrictions on State of residency, but admission is limited to citizens or permanent residents of the United States. The high school grade point average and rank-in-class, along with letters of recommendation from high school teachers, will be of primary importance in evaluating an applicant’s credentials. Applicants are required to submit scores of the College Board Scholastic Aptitude Tests (SAT) Verbal and Mathematical components or the American College Testing (ACT). Applicants are expected to demonstrate knowledge of, and activity resonant with, the mission of CMSRU.

Students who self-identify that they wish to be part of this Program will formally apply to the Health Professions Advisor (HPA) at Rowan University upon acceptance to Rowan University. They will be given all the requirements of the program by the HPA. There will be an application form made available to the HPA through CMSRU that needs to be completed and sent by the HPA to the Director of Admissions at CMSRU. Qualified applicants will be scheduled for interview by members of a subcommittee of the CMSRU Admissions Committee. These interviews will be held on the CMSRU campus and at a date and time that will allow student notification prior to any final decision date for matriculation to Rowan University.

Student Status:

Tuition for the first three (3) years of study at Rowan University, including summer courses, if any, will be the same tuition as charged to undergraduate Rowan University students. Tuition during the four (4) years of study at CMSRU will be the same as the tuition charged to students enrolled in the regular curriculum at CMSRU.

Students who satisfactorily complete the appropriate courses in the first year at CMSRU, in addition to all other Rowan University requirements, will receive a B.S. in Biochemistry degree.

If, after the first semester of the medical first year, the student fails to meet the required CMSRU standards of performance and competency, CMSRU shall notify Rowan University. Representatives from Rowan University and CMSRU will meet with the student. If, after meeting with the student, CMSRU concludes that the student should not continue in the medical school, the student shall be dismissed from the B.S./M.D. Program. In consultation with the Biochemistry coordinator, the B.S. in Biochemistry degree may be completed.

Accelerated Dual Degree (3+4 program): B.S. in Biochemistry and D.O. degree

Overview

The Department of Chemistry & Biochemistry and the Rowan University School of Osteopathic Medicine (Rowan SOM) offer a B.S. in Biochemistry and a D.O. degree, respectively. This accelerated program allows high-achieving Biochemistry majors to obtain the B.S. and D.O. in a seven-year period, rather than the traditional period of eight years if both degrees were completed separately. The program is a 3+4 arrangement where students begin D.O. courses in their 4th year at Rowan University.

3+4 UNDERGRADUATE PROGRAM REQUIREMENTS

120 s.h.
## General Education (all courses are three credits unless noted otherwise)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH01.130 Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>CS01.104 Intro to Scientific Programming</td>
<td>3</td>
</tr>
</tbody>
</table>

## Science and Mathematics (MS)

<table>
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## Communications (COM)

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<td>COMP01.111 College Composition I</td>
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</tr>
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<td>COMP01.112 College Composition II</td>
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## Social and Behavioral Sciences (SBS)

<table>
<thead>
<tr>
<th>Course</th>
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</tr>
</thead>
<tbody>
<tr>
<td>MATH01.131 Calculus II</td>
<td>4</td>
</tr>
</tbody>
</table>

## History, Humanities and Languages (HHL)

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
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## ROWAN EXPERIENCE

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<th>Course</th>
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<tr>
<td>CMS06.202 Public Speaking</td>
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</tr>
</tbody>
</table>

## B.S. Program Requirements

<table>
<thead>
<tr>
<th>Course</th>
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</tr>
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<tbody>
<tr>
<td>BIOL01.203 Biology 3</td>
<td>4</td>
</tr>
<tr>
<td>CHEM06.100 Chemistry I</td>
<td>4</td>
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<tr>
<td>CHEM06.105 Advanced Chemistry I</td>
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<td>3</td>
</tr>
</tbody>
</table>

Restricted Electives Undergrad 12 sh (Chosen with the approval of an Advisor; courses in the first year of SOM will count toward these electives).

*Rowan SOM courses in the first year of D.O. program (17 s.h.): Biochemistry/Human Genetics, Medical Physiology, Histology, Microbiology/Immunology

### 3+4 D.O. PROGRAM REQUIREMENTS

Requirements for the D.O. degree are set forth in the Rowan SOM Education Handbook.

#### Additional Program Requirements:

Students are required to maintain a minimum cumulative grade point average of 3.6 in all course work and a minimum grade point average of 3.6 in the science courses required for admission to Rowan SOM. Students must also take the Medical College Admissions Test (MCAT) and score a minimum of 27. Students in the accelerated BS/DO Program will be strongly encouraged to construct an undergraduate degree plan that incorporates experiences involving community outreach and service, as well as the premedical sciences.

Students accepted into the 3+4 Program, to be qualified for transition to Rowan SOM, shall have met all of the following criteria:

- Completion of all general curriculum requirements at Rowan University
- A minimum of 75% of the credits needed for a Baccalaureate degree
- Completion of all prerequisite courses required for admission to Rowan SOM as specified in the Rowan SOM Education Handbook
- A cumulative grade point average of 3.60 or better.
- No final grade of “D”, “F” or “I” in any prerequisite course required for admission to Rowan SOM as indicated in the Rowan SOM Education Handbook
• A minimum score of 8 on each section of the Medical College Admissions Test or a total minimum total score of 27
• Recommendation by the Rowan University Premed Advisor based on a majority approval of the Rowan University Program Admissions Committee
• Satisfactory interviews with the Program Admissions Committees at Rowan University and Rowan SOM

Students in the 3+4 program will be required to visit the Rowan SOM campus to participate in all of the activities listed below during their three undergraduate years:

• OMM demonstrations (including a shadow experience at the OMM clinic
• Lecture presentation on research opportunities at Rowan SOM
• Tour of the Clinical Education and Assessment Center
• Mini skills workshop focusing on elementary doctoring skills, specifically interpersonal skills and basic history taking
• Anatomy lecture and lab
• Brown Bag Sessions with Associate Dean for Academic Affairs and or designee

Eligibility and Admissions:
High school seniors who qualify for admission to Rowan University are eligible for admission to the 3+4 program. There are no restrictions on State of residency, but admission is limited to citizens or permanent residents of the United States. The high school grade point average and rank-in-class, along with letters of recommendation from high school teachers, will be of primary importance in evaluating an applicant’s credentials. Applicants are required to submit scores of the College Board Scholastic Aptitude Tests (SAT) Verbal and Mathematical components or the American College Testing (ACT). Applicants are expected to demonstrate knowledge of, and activity resonant with, the mission of Rowan SOM.

After preliminary evaluation of applications by the Rowan University Admissions Office, the Joint Admissions Committee, composed of representatives from the premedical faculty of Rowan University and the Admissions Committee of Rowan SOM, will decide which applicants to invite for interview at Rowan University and Rowan SOM. Interviews at Rowan SOM will be conducted by a member of the Rowan SOM Admissions Committee.

Applicants not invited for an interview, or not selected for admission to the 3+4 program, shall be notified of decisions as early as possible and shall be considered for regular admission to Rowan University. First year students at Rowan University who are not accepted into the program may continue their undergraduate course of study and would be eligible to apply for the 4+4 program in their Sophomore year at Rowan University.

Student Status:
Students will be eligible admission to the D.O. portion of the program after the Rowan University Coordinator of Premedical Programs has certified that the candidate has met all basic prerequisite requirements, after completion of the MCAT, and after a successful interview with the Rowan SOM Admissions Committee. Students apply for an admissions decision to Rowan SOM no later than October I of the 3rd year, but preferably by August 15 before their 3rd year. Acceptance of such candidates is based on meeting or surpassing the requirements listed above.

Tuition for the first three (3) years of study at Rowan University, including summer courses, if any, will be the same tuition as charged to undergraduate Rowan University students. Tuition during the four (4) years of study at Rowan SOM will be the same as the tuition charged to students enrolled in the regular curriculum at Rowan SOM.

Students who satisfactorily complete the appropriate courses in the first year at Rowan SOM, in addition to all other undergraduate degree requirements, will receive a B.S. in Biochemistry degree.

If, after the first semester of the medical first year, the student fails to meet the required Rowan SOM standards of performance and competency, representatives from Rowan University and Rowan SOM will meet with the student. If, after meeting with the student, Rowan SOM concludes that the student should not continue in the medical school, the student shall be dismissed from the B.S./D.O. Program. In consultation with the Biochemistry coordinator, the B.S. in Biochemistry degree may be completed.

Department of Computer Science

Vasil Y. Hnatyshin
Chair
Robinson Hall
856.256.4758
hnatyshin@rowan.edu

The Field of Computer Science deals with computational systems that represent and process symbolic data. Major themes of the Computer Science course offerings include data structures, algorithms, problem-solving techniques, programming languages, software engineering, data communication and networking, and the architecture of digital computer systems.

The Department offers a Bachelor of Arts in Computing and Informatics, a Bachelor of Science in Computer Science, a minor in Computer Science, and an accelerated Bachelor of Science / Master of Science dual degree in Computer Science.

BACHELOR OF ARTS IN COMPUTING AND INFORMATICS
856.256.4805
computerscience@rowan.edu

This program is designed for students who are interested in pursuing careers in information technology which requires a solid understanding of the principles of computing – but not the underpinnings of computer science theory and mathematics.

Students will acquire the requisite computer programming skills across programming languages and development platforms to develop a career as a computing professional, work as part of a project team, be able to analyze a problem and effectively document and communicate all aspects of the solution, and understand ethical, legal, security, and social issues and responsibilities in computing.

The Bachelor of Arts in Computing and Informatics contains several optional specializations and a wide range of advanced electives. This degree prepares graduates for jobs in business and industry and can easily be combined with other degrees for students seeking a double major. Students, in consultation with faculty advisors, can construct flexible and comprehensive programs. The program prepares students to find careers in business, industry, government, and education, where they work as computer programmers, infrastructure administrators, deployment technicians, QA/testing engineers, support technicians, technical application trainers, and technical documentation specialists. Advanced placement credit is accepted; for incoming freshmen students.

General Education
All students must complete the University General Education requirements for both Bachelor of Science and Bachelor of Arts in Biological Sciences as described on page 33

Rowan Experience
All students must complete the Rowan Experience requirements as described on page 35

The credits of Science and Mathematics must include:

- One 4 s.h. laboratory science course
- One Mathematics course from the list below:
  
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT01.260</td>
<td>Statistics I</td>
</tr>
<tr>
<td>MATH01.122</td>
<td>Precalculus</td>
</tr>
<tr>
<td>MATH03.125</td>
<td>Calculus Techniques and Applications</td>
</tr>
<tr>
<td>MATH01.130</td>
<td>Calculus I</td>
</tr>
</tbody>
</table>

The credits of History, Humanities and Languages should include Introduction to Symbolic Logic (PHIL09.130). If this course is not taken, students may complete either Discrete Structures (MATH03.160) or Discrete Math (MATH 01.150).

Required Courses
To complete the B.S. degree in computer science, students must complete all courses in the list of required courses.

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS04.171</td>
<td>Creating Android Applications</td>
</tr>
<tr>
<td>or CS01.104</td>
<td>Introduction to Scientific Programming</td>
</tr>
<tr>
<td>or CS04.110</td>
<td>Introduction to Programming Using Robots</td>
</tr>
<tr>
<td>or CS04.103</td>
<td>Computer Science and Programming</td>
</tr>
<tr>
<td>CS04.210</td>
<td>Advanced Programming Workshop* (two sections)</td>
</tr>
<tr>
<td>CS04.225</td>
<td>Principles of Data Structures</td>
</tr>
<tr>
<td>MIS02.338</td>
<td>Design of Database Systems</td>
</tr>
<tr>
<td>CS01.210</td>
<td>Intro to Computer Networks and Data Communications</td>
</tr>
<tr>
<td>CS10.310</td>
<td>Introduction to Web Development</td>
</tr>
<tr>
<td>CS10.430</td>
<td>Computing and Informatics Capstone Experience</td>
</tr>
<tr>
<td>INTR01.265</td>
<td>Computers and Society</td>
</tr>
</tbody>
</table>

*two sections required with unique topics, e.g. "Advanced Programming Workshop: Ruby" and "Advanced Programming Workshop: node.js"

Restricted Elective Courses
To complete the B.A. degree in Computing and Informatics, students must complete 12 s.h. from the list of restricted electives.

Restricted Elective Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS01.211</td>
<td>Principles of Information Security (strongly recommended)</td>
</tr>
<tr>
<td>CS07.430</td>
<td>Human-Computer Interaction</td>
</tr>
<tr>
<td>BINFO5.250</td>
<td>Introduction to Bioinformatics</td>
</tr>
<tr>
<td>GEOG16.160</td>
<td>Introduction to Mapping / Geographic Info Science</td>
</tr>
<tr>
<td>GEOG16.260</td>
<td>Geographic Info Science I</td>
</tr>
<tr>
<td>GEOG16.261</td>
<td>Cartography</td>
</tr>
<tr>
<td>MIS02.336</td>
<td>Advanced Database Management</td>
</tr>
<tr>
<td>MIS02.322</td>
<td>Project Management</td>
</tr>
</tbody>
</table>

Any Computer Science course at or above the 200 level not used to fulfill a different B.A. Computing and Informatics requirement and for which a student has completed all necessary pre-requisites
Other courses at or above the 200 level by permission of faculty advisor

Specializations: In order to give Computing and Informatics majors the opportunity to concentrate, optional specializations have been added to the Computing and Informatics major at Rowan University. A specialization is composed of four or more specified courses (12 s.h. or more) in computer science and other related disciplines that provide a solid foundation in some fundamental area of computing and informatics.

The areas of specialization are:

- "Dev Ops" (an agile relationship between Development and IT Operations)
- Mobile Application Development

Note: For comprehensive information on the individual computing and informatics specializations, students should request from the Department of Computer Science the appropriate curriculum guide which details each specialization and see their Computer Science advisor

Total Credits in Program 120 s.h.

BACHELOR OF SCIENCE IN COMPUTER SCIENCE
856.256.4805
computerscience@rowan.edu

This program focuses on developing flexible professionals who are equipped to learn new technologies and principles that are essential for success in such a rapidly evolving field.

Students will learn how to apply advanced scientific and industrial methodologies, knowledge of mathematics, algorithmic principles, and computer science theory to develop computing solutions and demonstrate these skills through presentations, written work and projects.

The Bachelor of Science in Computer Science contains several optional specializations and a wide range of advanced electives. This degree prepares graduates for jobs in business and industry, as well as further study at the graduate level. The Computer Science major requires courses in mathematics and applied and theoretical computer science. Students, in consultation with faculty advisors, can construct flexible and comprehensive programs. The program prepares students for graduate study in computer science or such related fields as business, operations research, and information sciences. Graduates also find careers in business, industry, government, and education, where they work as applications programmers, scientific programmers, systems programmers, systems analysts, and software engineers.

It is recommended that the students who are entering the program have several years of high school mathematics and programming courses. Advanced placement credit is accepted; for incoming freshmen students. A grade of C- or better in the following courses is required for graduation: Calculus I, Discrete Structures, Introduction to Object-Oriented Programming, Object-Oriented Programming and Data Abstraction, Computer Organization, and Data Structures and Algorithms, whether they are taken locally or are transferred.

General Education
All students must complete the University General Education requirements as described on page 33

Rowan Experience
All students must complete the Rowan Experience requirements as described on page 35

Required Courses
To complete the B.S. degree in computer science, students must complete all courses in the list of required courses.

Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH03.160</td>
<td>Discrete Structures</td>
</tr>
<tr>
<td>MATH01.130</td>
<td>Calculus I</td>
</tr>
<tr>
<td>MATH01.131</td>
<td>Calculus II</td>
</tr>
<tr>
<td>MATH01.210</td>
<td>Linear Algebra</td>
</tr>
<tr>
<td>STAT02.290</td>
<td>Probability and Statistical Inference for Computing Systems</td>
</tr>
<tr>
<td>CS04.113</td>
<td>Intro to Object Oriented Programming</td>
</tr>
<tr>
<td>CS04.114</td>
<td>Object-Oriented Programming and Data Abstraction</td>
</tr>
<tr>
<td>CS04.222</td>
<td>Data Structures and Algorithms</td>
</tr>
<tr>
<td>CS06.205</td>
<td>Computer Organization</td>
</tr>
<tr>
<td>CS07.210</td>
<td>Foundations of Computer Science</td>
</tr>
<tr>
<td>CS07.321</td>
<td>Software Engineering I</td>
</tr>
<tr>
<td>CS04.315</td>
<td>Programming Languages</td>
</tr>
<tr>
<td>CS06.310</td>
<td>Principals of Digital Computers</td>
</tr>
<tr>
<td>CS06.311</td>
<td>Digital Computer Lab</td>
</tr>
<tr>
<td>CS07.340</td>
<td>Design &amp; Analysis of Algorithms</td>
</tr>
<tr>
<td>CS04.390</td>
<td>Operating Systems</td>
</tr>
<tr>
<td>CS04.400</td>
<td>Senior Project</td>
</tr>
</tbody>
</table>

ROWAN UNIVERSITY UNDERGRADUATE CATALOG 2016-2017
Choose any three courses from the following list:

### Biology
- BIOR01.104 Diversity, Evolutions & Adaptation
- BIOR01.106 Concepts in Genetics
- BIOR01.203 Introduction to Cell Biology
- BIOR01.100, BIOR01.101 Biology I, II (transfers only)
- BIOR01.202 Biological Skills and Methods (only when Biology I was transferred)

### Chemistry
- CHEM06.100 Chemistry I
- CHEM06.101 Chemistry II
- CHEM09.250 Quantitative Analysis
- CHEM07.200 Organic Chemistry

### Physics & Astronomy
- ASTR11.220 Observational Astronomy
- ASTR11.230 Introductory Astrophysics
- PHYS00.220 Introductory Mechanics
- PHYS00.222 Intro to Electricity & Magnetism
- PHYS00.221 Introductory Thermodynamics, Fluids, Waves & Optics
- PHYS00.300 Modern Physics
- PHYS00.340 Optics and Light
- PHYS00.325 Electric Circuits

### Restricted Elective Courses
To complete the B.S. degree in Computer Science, students must complete 12 s.h. from the list of restricted electives.

- CS01.395 Selected Topics in CS
- CS04.305 Web Programming
- CS04.371 Introduction to Android Programming
- CS04.372 Advanced Android Programming
- CS04.373 Introduction to Windows Mobile Application Programming
- CS04.374 Advanced Windows Mobile Application Programming
- CS04.375 Introduction to iOS Application Programming
- CS04.376 Advanced iOS Application Programming
- CS04.380 Object Oriented Design
- CS04.391 Concurrent Programming
- CS04.392 System Programming and OS Internals
- CS04.394 Distributed Systems
- CS04.401 Compiler Design
- CS04.430 Database Systems: Theory/Programming
- CS04.471 Topics in Mobile Programming
- CS06.390 Introduction to Systems Simulation and Modeling
- CS06.410 Data Communications and Networking
- CS06.412 Advanced Computer Architecture
- CS06.415 Wireless Networks, Protocols, and Applications
- CS06.416 TCP/IP and Internet Protocols and Technologies
- CS06.417 Principles of Network Security
- CS06.420 Embedded Systems Programming
- CS07.310 Robotics
- CS07.322 Software Engineering II
- CS07.350 Computer Cryptography
- CS07.351 Cyber Security: Fundamentals, Principles and Applications
- CS07.360 Introduction to Computer Graphics
- CS07.370 Introduction to Information Visualization
- CS07.380 Introduction to Computer Animation
- CS07.390 Introduction to Computer Game Design and Development
- CS07.422 Theory of Computing
- CS07.424 Introduction to Agile Software Engineering
- CS07.430 Human-Computer Interaction
- CS07.450 Artificial Intelligence
- CS07.460 Computer Vision
- CS07.470 Theory and Applications of Pattern Recognition
Total Credits in Program | 120 s.h.
--- | ---
**Specializations:** In order to give Computer Science majors the opportunity to concentrate, optional specializations have been added to the Computer Science major at Rowan University. A specialization is composed of four or more specified courses (12 s.h. or more) in Computer Science and other related disciplines that provide a solid foundation in some fundamental area of computer science.

The areas of specialization are:
- Artificial Intelligence;
- Cyber Security;
- Graphics and Visualization;
- Information Technology;
- Mobile Application Development;
- Networking and Operating Systems;
- Programming Languages and Compilers;
- Software Engineering.

**Note:** For comprehensive information on the individual computer science specializations, students should request from the Department of Computer Science the appropriate curriculum guide which details each specialization and see their Computer Science advisor.

**MINOR IN COMPUTER SCIENCE**

Total Credits | 24-25 s.h.
--- | ---

The Minor in Computer Science requires student to take the following core courses:

- **MATH03.160** Discrete Structures
- **CS04.113** Introduction to Object Oriented Programming
- **CS04.114** Object Oriented Programming and Data Abstraction
- **CS04.222** Data Structures and Algorithms
- **CS06.205** Computer Organization

Students then select two (2) additional elective courses from the following list:

- **CS07.210** Foundations of Comp Science
- **CS06.310** Principles of Digital Computers
- **CS06.311** Digital Computer Lab
- **CS07.340** Design & Analysis of Algorithms
- **CS07.321** Software Engineering I
- **CS04.315** Programming Languages
- **CS04.390** Operating Systems
- **MATH01.332** Numerical Analysis
- Any restricted electives from the B.S. in Computer Science

**NOTE:**
- A grade of C- or better is required in all prerequisite courses
- Students may take CS04.103 Computer Science and Programming (if taught in Java) or both CS04.103 Computer Science and Programming (if not taught in Java) and CS04.112 Java for Object Oriented Programmers in place of CS04.113 Introduction to Object-Oriented Programming
- A minimum grade point average of 2.0 is required in the courses completed

**ACCELERATED BS/MS IN COMPUTER SCIENCE DUAL DEGREE PROGRAM**

856.256.4805
computerscience@rowan.edu

The Accelerated Bachelor of Science/Master of Science (BS/MS) in Computer Science Dual Degree Program allows competent and highly motivated undergraduate students to complete the BS in Computer Science and an MS in Computer Science in five years as opposed to the traditional period of six years if both degrees were completed separately.

Only upper-level undergraduate CS majors who have been admitted into the BS CS Degree Program will be allowed to apply for the Accelerated BS/MS CS Dual Degree Program. Once admitted, a student will enroll as a full-time undergraduate in both undergraduate and graduate CS courses in their first year of the Program to complete requirements for the BS CS Degree and then enroll as a full-time student in graduate CS courses in their second year of the Program to complete requirements for the MS CS Degree.

The MS CS Degree is a 30 credits program. The BS/MS CS Dual Degree is structured so that students first complete requirements for the BS CS Degree Program, but can replace 12 credits of undergraduate CS electives with 12 credits of graduate coursework that are required for the MS CS Degree Program in their senior year (fourth year). In their fifth year...
students will take the additional 18 graduate credits required for the MS CS Degree.

**CERTIFICATE OF UNDERGRADUATE STUDY IN FUNDAMENTAL COMPUTING**

Chia Chien  
Instructor  
Robinson Hall  
856.256.4805  
chien@rowan.edu

The Certificate of Undergraduate Study (CUGS) in Fundamental Computing is designed to increase student marketability while helping to contend with and meet the challenges of students’ current and future careers by providing a broad overview of key computing skills which are applicable and may be extended to almost every industry in the world today.  
The educational goals of this CUGS are to provide students with a general understanding of the domains of computing and expose students to the diverse areas of computing that can supplement their individual discipline and field.  

**Certificate of Undergraduate Study in Fundamental Computing**  
12 s.h.  

Students seeking this CUGS will be required to complete a total of 4 courses in 4 out of the 5 different domains of computing. This CUGS is not available to Computer Science majors or Computing and Informatics majors. No previous experience or knowledge of computing technologies is required.  

**Domain #1: Programming**  
CS01.102  
CS01.104  
CS04.110  
Introduction to Programming  
Introduction to Scientific Programming  
Introduction to Programming Using Robots

**Domain #2: Mobile Applications**  
CS04.171  
Creating Android Applications

**Domain #3: Web Systems**  
CS01.105  
Web Literacy

**Domain #4: Networks**  
CS01.210  
Introduction to Networks and Data Communications

**Domain #5: Security**  
CS01.211  
Principles of Information Security

**CERTIFICATE OF UNDERGRADUATE STUDY IN COMPUTER PROGRAMMING**

Chia Chien  
Instructor  
Robinson Hall  
856.256.4805  
chien@rowan.edu

The Certificate of Undergraduate Study (CUGS) in Computer Programming is designed to increase student marketability by enhancing their technical skill set – specifically focused programming proficiencies. These proficiencies may be easily applied to each student’s major disciplines and be beneficial when working in their specified fields.  

An educational goal of this CUGS is to enable students to undertake a comprehensive study of the concepts and techniques necessary to analyze problems, understand requirements, develop algorithms and implement solutions using computer programming. Another goal is to gain experience with the entire programming life-cycle utilizing various programming languages.  

**Certificate of Undergraduate Study in Computer Programming**  
12-13 s.h.  

Students seeking this CUGS will be required to complete a total of 4 courses. This CUGS is not available to Computer Science majors or Computing and Informatics majors.  

CS04.103  
CS04.113  
CS01.205  
CS04.210  
Computer Science and Programming  
Introduction to Object-Oriented Programming  
Computer Lab Techniques  
Advanced Programming Workshop

One additional course from the following  
CS04.225  
CS10.344  
CS04.371  
CS04.373  
CS04.375  
Principles of Data Structures  
Concepts in Computing Technologies  
Introduction to Android Programming  
Introduction to Windows Mobile Application Programming  
Introduction to iOS Programming

**CERTIFICATE OF UNDERGRADUATE STUDY IN MOBILE APPLICATION DEVELOPMENT**
The Certificate of Undergraduate Study (CUGS) in Mobile Application Development is designed to offer students the opportunity of a specialized study with the skills required to develop software applications on current platforms used on millions of mobile devices (i.e. smart phones and tablets) around the world.

The educational goals of this CUGS are to provide students with experience with the stages of mobile application development (i.e. user interface design, permissions and security, graphics and video resources) with varying languages and frameworks on a selected mobile platform.

Certificate of Undergraduate Study in Mobile Application Development

Students seeking this CUGS will be required to complete a total of 4 courses in 1 of the 3 different mobile technologies. This CUGS available to all majors. No previous experience or knowledge of computing technologies is required.

**Domain #1: Android**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS04.113</td>
<td>Introduction to Object Oriented Programming</td>
</tr>
<tr>
<td>or CS04.171</td>
<td>Creating Android Applications</td>
</tr>
<tr>
<td>CS04.371</td>
<td>Introduction to Android Programming</td>
</tr>
<tr>
<td>CS04.372</td>
<td>Advanced Android Programming</td>
</tr>
<tr>
<td>CS04.471</td>
<td>Topics in Mobile Programming</td>
</tr>
</tbody>
</table>

**Domain #2: Windows**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS04.103</td>
<td>Computer Science and Programming</td>
</tr>
<tr>
<td>or CS01.104</td>
<td>Introduction to Scientific Programming</td>
</tr>
<tr>
<td>or CS04.113</td>
<td>Introduction to Object Oriented Programming</td>
</tr>
<tr>
<td>CS04.373</td>
<td>Introduction to Windows Mobile Application Programming</td>
</tr>
<tr>
<td>CS04.374</td>
<td>Advanced Windows Mobile Application Programming</td>
</tr>
<tr>
<td>CS04.471</td>
<td>Topics in Mobile Programming</td>
</tr>
</tbody>
</table>

**Domain #3: iOS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS04.103</td>
<td>Computer Science and Programming</td>
</tr>
<tr>
<td>or CS01.104</td>
<td>Introduction to Scientific Programming</td>
</tr>
<tr>
<td>or CS04.113</td>
<td>Introduction to Object Oriented Programming</td>
</tr>
<tr>
<td>CS04.375</td>
<td>Introduction to iOS Application Programming</td>
</tr>
<tr>
<td>CS04.376</td>
<td>Advanced iOS Application Programming</td>
</tr>
<tr>
<td>CS04.471</td>
<td>Topics in Mobile Programming</td>
</tr>
</tbody>
</table>

**Department of Mathematics**

Dexter Whittinghill
Department Head
Robinson Hall
856.256.4844
whittinghill@rowan.edu

The Department offers a Bachelor of Arts, a Bachelor of Science in Mathematics, and an accelerated Bachelor of Science and Master of Arts dual degrees in Mathematics. The B.A. provides a broader liberal arts education whereas the B.S. provides a more specialized and extensive training in mathematics. Students pursuing the B.S. must have taken the calculus sequence and linear algebra with a 3.0 GPA or better.

The Department also offers a minor in Mathematics and concentrations in Applied Mathematics, and Statistics and Operations Research. The Department offers a Master of Arts degree in Mathematics and also supports the Master of Arts in Subject Matter Teaching: Mathematics Education. While the first concern of the 21 full-time and 12 part-time faculty is excellence in teaching, Department members also do research in in pure mathematics, many applied mathematical sciences, statistics, and mathematics and statistics education. The Department also sponsors the Mathematics Team, student competitions, an active faculty-student research agenda, and a regular colloquium series. The Department is located in Robinson Hall, which houses several microcomputer labs and classrooms.

**BACHELOR OF ARTS IN MATHEMATICS**

The Mathematics major consists of 120 semester hours. The major requires students to take courses in logic, physics, computer science and applied and theoretical mathematics. Students in consultation with faculty advisors can construct flexible and comprehensive programs.

The program prepares students to find careers in business, industry, government or education in positions such as researchers, actuaries, statisticians, analysts or teachers.
Three years of high school mathematics are required for admission; a fourth year of mathematics and at least one programming course is highly recommended. Advanced placement credit is accepted; waivers are available. Majors must pass all required and restricted elective courses needed for graduation with no grade lower than a C-.

**General Education**

All students must complete the University General Education Requirements as described on page 33.

**Rowan Experience**

All students must complete the Rowan Experience requirements as described on page 35.

**Required Courses:**

(may also fulfill General Education Requirements)

- MATH03.150 Discrete Mathematics
- PHYS00.220 Introductory Mechanics
- PHYS00.222 Introductory Electricity and Magnetism
- or PHYS00.221 Introduction to Thermodynamics, Fluids, Waves and Optics
- CS01.104 Introduction to Scientific Programming
- PHIL09.130 Introduction to Symbolic Logic

Math majors are also required to complete 7 s.h. of Non-Program courses beyond the 6 s.h. requirement needed to fulfill the Rowan University General Education requirement.

**Required Courses in the major**

**Core Courses**

- MATH01.130 Calculus I
- MATH01.131 Calculus II
- MATH01.230 Calculus III
- MATH01.210 Linear Algebra
- MATH01.231 Ordinary Differential Equations
- MATH01.330 Introduction to Real Analysis I
- MATH01.340 Modern Algebra I
- MATH01.498 Mathematics Seminar (WI)
- STAT02.360 Probability and Random Variables (satisfies Writing Intensive requirement)

**Restricted Electives** Nine (9) s.h. selected from the following:

- MATH01.205 Technological Tools for Discovering Math
- MATH01.310 College Geometry
- MATH01.331 Introduction to Real Analysis II
- MATH01.332 Numerical Analysis
- MATH01.341 Modern Algebra II
- MATH01.352 Theory of Numbers
- MATH01.354 Introduction to Topology
- MATH01.386 Introduction to Partial Differential Equations
- MATH01.410 History of Mathematics
- MATH01.430 Introduction to Complex Analysis
- MATH03.400 Applications of Mathematics
- MATH03.410 Deterministic Models in Operations Research
- MATH03.412 Stochastic Models in Operations Research
- STAT02.320 Concepts in Statistical Data Analysis
- STAT02.361 Introduction to Mathematical Statistics

**Note:** College Geometry and History of Mathematics are required for mathematics majors seeking certification as secondary education teachers.

**Total Credits in Program:** 120 s.h.

**BACHELOR OF SCIENCE IN MATHEMATICS**

The B.S. in Mathematics consists of 120 semester hours. The major requires students to take courses in logic, physics, computer science, and applied and theoretical mathematics.

The Bachelor of Science degree in mathematics is, first of all, designed to give the increasing number of our mathematics majors that do not intend to be teachers, the opportunity to prepare more thoroughly for graduate work in mathematics and other disciplines, such as engineering, the physical sciences, statistics, computer science, and other areas requiring extensive mathematical training. The requirements for this degree are also flexible enough so that students intending to seek employment in business, industry, or government can pursue courses of study that will allow them to enter their professions familiar with more of the relevant mathematics. The program is designed to allow students to study the mathematics that they will need with flexibility, breadth, and depth.
At least a 3.0 GPA in Calculus I, Calculus II, and Linear Algebra is required for admission. Majors must pass all required and restricted elective courses needed for graduation with no grade lower than a C-.

**General Education**

All students must complete the University General Education Requirements as described on page 33.

**Rowan Experience**

All students must complete the Rowan Experience requirements as described on page 35.

**Required Courses**

(may also fulfill General Education Requirements)

<table>
<thead>
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<th>Course Code</th>
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<td>PHYS00.220</td>
<td>Introductory Mechanics</td>
</tr>
<tr>
<td>PHYS00.222</td>
<td>Introductory Electricity and Magnetism</td>
</tr>
<tr>
<td>or PHYS00.221</td>
<td>Introduction to Thermodynamics, Fluids, Waves and Optics</td>
</tr>
<tr>
<td>CS01.104</td>
<td>Introduction to Scientific Programming</td>
</tr>
<tr>
<td>PHIL09.130</td>
<td>Introduction to Symbolic Logic</td>
</tr>
</tbody>
</table>

Math majors are also required to complete 7 s.h. of Non-Program courses beyond the 6 s.h. requirement needed to fulfill the Rowan University General Education requirement.

**Required Courses in the major**

**Core Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
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<tbody>
<tr>
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</tr>
<tr>
<td>MATH01.131</td>
<td>Calculus II</td>
</tr>
<tr>
<td>MATH01.230</td>
<td>Linear Algebra</td>
</tr>
<tr>
<td>MATH01.231</td>
<td>Ordinary Differential Equations</td>
</tr>
<tr>
<td>MATH01.330</td>
<td>Introduction to Real Analysis I</td>
</tr>
<tr>
<td>MATH01.340</td>
<td>Modern Algebra I</td>
</tr>
<tr>
<td>MATH01.430</td>
<td>Introduction to Complex Analysis</td>
</tr>
<tr>
<td>MATH01.498</td>
<td>Mathematics Seminar (WI)</td>
</tr>
<tr>
<td>STAT02.360</td>
<td>Probability and Random Variables</td>
</tr>
</tbody>
</table>

(satisfies Writing Intensive requirement)

**Restricted Electives**

Twenty-seven (27) s.h. selected from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH01.205</td>
<td>Technological Tools for Discovering Math</td>
</tr>
<tr>
<td>MATH01.310</td>
<td>College Geometry</td>
</tr>
<tr>
<td>MATH01.331</td>
<td>Introduction to Real Analysis II</td>
</tr>
<tr>
<td>MATH01.332</td>
<td>Numerical Analysis</td>
</tr>
<tr>
<td>MATH01.341</td>
<td>Modern Algebra II</td>
</tr>
<tr>
<td>MATH01.352</td>
<td>Theory of Numbers</td>
</tr>
<tr>
<td>MATH01.354</td>
<td>Introduction to Topology</td>
</tr>
<tr>
<td>MATH01.386</td>
<td>Introduction to Partial Differential Equations</td>
</tr>
<tr>
<td>MATH01.410</td>
<td>History of Mathematics</td>
</tr>
<tr>
<td>MATH01.421</td>
<td>Mathematics Field Experience</td>
</tr>
<tr>
<td>MATH03.400</td>
<td>Applications of Mathematics</td>
</tr>
<tr>
<td>MATH03.411</td>
<td>Deterministic Models in Operations Research</td>
</tr>
<tr>
<td>MATH03.412</td>
<td>Stochastic Models in Operations Research</td>
</tr>
<tr>
<td>STAT02.320</td>
<td>Concepts in Statistical Data Analysis</td>
</tr>
<tr>
<td>STAT02.361</td>
<td>Introduction to Mathematical Statistics</td>
</tr>
<tr>
<td>STAT02.371</td>
<td>Design of Experiments: Analysis of Variance</td>
</tr>
</tbody>
</table>

A maximum of two courses from the following list can be counted as restricted electives toward the B.S. in Mathematics:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM08.401</td>
<td>Physical Chemistry I</td>
</tr>
<tr>
<td>CHEM08.402</td>
<td>Physical Chemistry II</td>
</tr>
<tr>
<td>CS07.340</td>
<td>Design and Analysis of Algorithms</td>
</tr>
<tr>
<td>CS07.442</td>
<td>Theory of Computing</td>
</tr>
<tr>
<td>PHYS00.310</td>
<td>Analytical Mechanics</td>
</tr>
<tr>
<td>PHYS00.330</td>
<td>Mathematical Physics</td>
</tr>
<tr>
<td>PHYS00.430</td>
<td>Statistical Physics</td>
</tr>
<tr>
<td>PHYS00.410</td>
<td>Quantum Mechanics I</td>
</tr>
<tr>
<td>PHYS00.320</td>
<td>Electricity &amp; Magnetism I</td>
</tr>
</tbody>
</table>

**Total Credits in Program** 120 s.h.

**FIVE YEAR ACCELERATED B.S. AND M.A. DEGREE PROGRAM**

ROWAN UNIVERSITY UNDERGRADUATE CATALOG 2016-2017
Only a student seeking a B.S. degree can apply for this program to the Graduate Program Advisor. If accepted, the Assistant Chair becomes his or her advisor.

MINOR IN MATHEMATICS
The study of Mathematics enables a person to understand the nature and functioning of different mathematical systems and the process of solving problems related to these areas. Moreover, the increasing need for mathematical analysis of modern day problems will provide good employment opportunities for mathematically trained individuals in government and international agencies, education, business, and industry. People trained in mathematics are needed to solve many of the technical problems of the future.

The Minor in Mathematics encourages and facilitates the acquisition of mathematical skills and concepts. It thus provides an added dimension to a student’s program. Students wishing to Minor in Mathematics must take 21 semester hours, including 15 semester hours in required core courses and 6 semester hours in the approved math electives below.

NOTES: 1) A 2.0 G.P.A. is required in the Minor courses. At least 6 credits must be taken at Rowan University; 2) A number of the elective courses require Discrete Math as a prerequisite. All courses denoted with an asterisk either have Discrete Math as a prerequisite or have another prerequisite for which Discrete Math is a prerequisite. Prerequisite override forms will not be signed without documentation of equivalent subject matter in another course.

In order to Minor in Math you MUST select Track 1 or Track 2.

Track I (not Engineering)

Required courses: 15 s.h.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH01.130</td>
<td>Calculus I</td>
</tr>
<tr>
<td>MATH01.131</td>
<td>Calculus II</td>
</tr>
<tr>
<td>MATH01.230</td>
<td>Calculus III</td>
</tr>
<tr>
<td>MATH01.210</td>
<td>Linear Algebra</td>
</tr>
</tbody>
</table>

Electives (at least 6 semester hours) chosen from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH01.231</td>
<td>Ordinary Differential Equations</td>
</tr>
<tr>
<td>MATH01.310</td>
<td>College Geometry*</td>
</tr>
<tr>
<td>MATH01.330</td>
<td>Intro to Real Analysis I*</td>
</tr>
<tr>
<td>MATH01.331</td>
<td>Intro to Real Analysis II*</td>
</tr>
<tr>
<td>MATH01.332</td>
<td>Intro to Numerical Analysis</td>
</tr>
<tr>
<td>MATH01.340</td>
<td>Modern Algebra I*</td>
</tr>
<tr>
<td>MATH01.341</td>
<td>Modern Algebra II*</td>
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<tr>
<td>MATH01.352</td>
<td>Theory of Numbers*</td>
</tr>
<tr>
<td>MATH01.354</td>
<td>Topology*</td>
</tr>
<tr>
<td>MATH01.430</td>
<td>Intro to Complex Analysis*</td>
</tr>
<tr>
<td>MATH01.386</td>
<td>Intro to Partial Differential Equations</td>
</tr>
<tr>
<td>MATH03.400</td>
<td>Applications of Mathematics</td>
</tr>
<tr>
<td>MATH03.411</td>
<td>Deterministic Models in Operations Research</td>
</tr>
<tr>
<td>MATH03.412</td>
<td>Stochastic Models in Operations Research*</td>
</tr>
<tr>
<td>STAT02.360</td>
<td>Probability and Random Variables*</td>
</tr>
<tr>
<td>STAT02.361</td>
<td>Mathematical Statistics*</td>
</tr>
</tbody>
</table>

Track 2 (Engineering)

Required courses 16 s.h.

Take these four courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH01.130</td>
<td>Calculus I</td>
</tr>
<tr>
<td>MATH01.131</td>
<td>Calculus II</td>
</tr>
<tr>
<td>MATH01.230</td>
<td>Calculus III</td>
</tr>
<tr>
<td>MATH01.235</td>
<td>Mathematics for Engineering Analysis (I)</td>
</tr>
</tbody>
</table>

Electives (at least 6 s.h.) chosen from

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH01.310</td>
<td>College Geometry*</td>
</tr>
<tr>
<td>MATH01.330</td>
<td>Intro to Real Analysis I*</td>
</tr>
<tr>
<td>MATH01.331</td>
<td>Intro to Real Analysis II*</td>
</tr>
<tr>
<td>MATH01.332</td>
<td>Intro to Numerical Analysis</td>
</tr>
<tr>
<td>MATH01.340</td>
<td>Modern Algebra I*</td>
</tr>
<tr>
<td>MATH01.341</td>
<td>Modern Algebra II*</td>
</tr>
<tr>
<td>MATH01.352</td>
<td>Theory of Numbers*</td>
</tr>
<tr>
<td>MATH01.354</td>
<td>Topology*</td>
</tr>
<tr>
<td>MATH01.386</td>
<td>Intro to Partial Differential Equations</td>
</tr>
<tr>
<td>MATH01.430</td>
<td>Intro to Complex Analysis*</td>
</tr>
<tr>
<td>MATH03.400</td>
<td>Applications of Mathematics</td>
</tr>
<tr>
<td>MATH03.411</td>
<td>Deterministic Models in Operations Research</td>
</tr>
</tbody>
</table>
CONCENTRATION IN APPLIED MATHEMATICS
The applied mathematics concentration consists of 21 semester hours and increases the mathematics major’s ability to apply various fields of mathematics in the formulation, analysis and evaluation of problems in the physical, biological and social sciences. The concentration provides the opportunity for students to participate in the dynamic character of modern mathematics and its uses.

Required courses: 18 s.h.
- MATH01.210 Linear Algebra
- MATH01.231 Ordinary Differential Equations
- MATH01.332 Numerical Analysis
- MATH03.400 Applications of Mathematics
- STAT02.360 Probability and Random Variables
- CS01.xxx One course in Computer Science (Not CS07.100)

Elective courses (one): 3 s.h.
- MATH01.430 Introduction to Complex Analysis
- MATH03.411 Deterministic Models in Operations Research
- MATH03.412 Stochastic Models in Operations Research
- STAT02.361 Mathematical Statistics
- PHYS00.310 Analytical Mechanics
- PHYS00.330 Mathematical Physics

CONCENTRATION IN STATISTICS AND OPERATIONS RESEARCH
The concentration in Statistics and Operations Research is designed to increase the mathematics major's abilities in data analysis, mathematical modeling, algorithmic reasoning, and problem solving, as well as one’s knowledge in the fields of probability and mathematical statistics. The concentration provides a viable background for graduate study in these fields, employment in virtually any industry, preparation for the actuarial exam P/1, and the training necessary to teach AP statistics. It consists of 18 credit hours. Nine hours of required courses and nine hours of electives as listed below:

Required courses: 9 s.h.
- STAT02.260 Statistics I
- STAT02.261 Statistics II
- STAT02.360 Probability and Random Variables

Electives: 9 s.h.
- MATH03.411 Deterministic Models in Operations Research
- MATH03.412 Stochastic Models in Operations Research
- STAT02.361 Mathematical Statistics
- STAT02.371 Design of Experiments: Analysis of Variance

Up to one three-credit course may be approved on a case-by-case basis.

Department of Physics & Astronomy
David Klassen
Chair
Science Hall
856.256.4855
klassen@rowan.edu

The Department offers four majors: a Bachelor of Science in Physics, a Bachelor of Arts in Physics, a Bachelor of Science in Biophysics, and a Bachelor of Science in Physical Science. The Physics B.S. program allows the possibility of a Specialization in Photonics. The Physical Science program, which is an interdisciplinary program between the departments of Physics & Astronomy and Chemistry & Biochemistry, allows the possibility of two specializations, one in Physics and one in Chemistry. A minor in Physics and a concentration in Astronomy are also offered for those interested in adding some science content to their program. The department is also part of the interdisciplinary Materials Science concentration.

Physics majors learn significant subject content, develop many marketable skills, and develop well-defined analytical skills. Graduates from the Physics program have moved on to graduate programs in physics, engineering, education, and mathematics. Some have entered professional schools in law, medical physics, public relations and even MBA, MD and DO programs. The remainder have entered the work force as engineers, teachers, computer scientists, and technicians as well as others that have been hired by banks and insurance companies. The diversity of the professions selected by our graduates reflects the versatility of the Physics degree and the importance of analytical skills in almost any area.

The Physical Science major is a very flexible major since many courses can be selected depending on career plans. Perhaps the most important benefit of the program applies to future teachers. The course work allows for students to acquire all the science content required for state certification to teach all physical science subjects at the secondary level in the state of New Jersey. Certification will follow after pedagogical training and a degree from the College of Education. However, with
the breadth of this program, it offers an excellent preparation for areas where breadth is as important as depth of content knowledge such as journalism or technical writing, technical sales, technical product representative, or forensic science.

**BACHELOR OF SCIENCE IN PHYSICS**

The B.S. Program in Physics prepares students for graduate school in physics or engineering, professional schools and for careers in industry, government, business or teaching (students interested in teaching should pursue a second degree from the College of Education). All laboratories, both research and teaching, are well equipped with modern instrumentation, computers and data collection interfaces.

Undergraduate research opportunities exist in diverse areas of experimental physics including optics/laser spectroscopy, condensed matter/materials science, biophysics, theoretical physics including optical physics and high-energy physics, and in planetary science/astronomy. Many opportunities exist for student/faculty collaborative research. These activities are beneficial to the development of students' analytical skills and are strongly encouraged.

**General Education**

All students must complete the University General Education requirements as described on page 33

**Rowan Experience**

All students must complete the Rowan Experience requirements as described on page 35

**Required Courses**

- **PHIL09.369** Philosophy of Science (WI, MG) (or other approved)
- **MATH01.130** Calculus I
- **MATH01.131** Calculus II
- **MATH01.230** Calculus III
- **MATH01.210** Linear Algebra
- **MATH01.231** Differential Equations
- **CS01.104** Introduction Science Programming
  or **CS04.103** Computer Science & Programming
- **PHYS00.220** Introductory Mechanics
- **PHYS00.221** Introductory Thermodynamics, Fluids, Waves, & Optics
- **PHYS00.222** Introductory Electricity & Magnetism
- **PHYS00.300** Modern Physics
- **PHYS00.310** Analytical Mechanics
- **PHYS00.320** Electricity & Magnetism I
- **PHYS00.410** Quantum Mechanics I
- **PHYS00.430** Statistical Physics
- **PHYS00.440** Advanced Lab
- Two approved introductory level science courses, e.g. Chem I or Chem II

**Physics Electives - Choose at least two (6-8 s.h.) courses from:**

- **PHYS00.321** Electricity & Magnetism II
- **PHYS00.325** Electric Circuits
- **PHYS00.340** Optics and Light
- **PHYS00.345** Introduction to Optical Design Program ZEMAX
- **PHYS00.360** Biophysics I
- **PHYS00.371** Biophysics II
- **PHYS00.411** Quantum Mechanics II
- **PHYS00.470** Selected Topics in Advanced Physics
- **PHYS00.475** Radiation Physics
- **PHYS00.499** Independent Study - Physics
- **PHYS00.250** Physics Research I
- **PHYS00.251** Physics Research II
- **PHYS00.350** Physics Research III
- **PHYS00.450** Physics Research IV
  or **ASTR11.250** Astronomy Research I
- **ASTR11.251** Astronomy Research II
- **ASTR11.350** Astronomy Research III
- **ASTR11.450** Astronomy Research IV

(For Physics or Astronomy Research - Maximum of 3 s.h. count for Physics Electives)
Restricted Electives
Choose at least one approved course (3-5 s.h.; the sum of Restricted Electives and Physics Electives must be at least 11 s.h.) from: Physics, Astronomy, Atmospheric Science, Earth Science, Materials Science, Engineering, Math, Chemistry, Computer Science, Biology, or Education, or any Physics Electives listed above

Free Electives 13-15 s.h.
Total credits in program 120 s.h.

BACHELOR OF SCIENCE IN PHYSICS WITH A SPECIALIZATION IN PHOTONICS
A Specialization in Photonics is available to any student desiring a more advanced study of optics and photonics. This specialization is especially useful for Physics majors who are thinking about graduate work and a career in the field of optics and photonics.

To earn the specialization, choose the following free and restricted electives within the program above.

PHYS00.340 Optics and Light
PHYS00.321 Electricity and Magnetism II
PHYS00.345 Introduction to Optical Design Program ZEMAX

Four semester hours of the following:
PHYS00.250 Physics Research I (in optics)
PHYS00.251 Physics Research II (in optics)
PHYS00.350 Physics Research III (in optics)
PHYS00.450 Physics Research IV (in optics)

BACHELOR OF SCIENCE IN BIOPHYSICS
The B.S. Program in Biophysics prepares students for med school, graduate school in biophysics and for careers in medical industry. While a bit more specialized than the B.S. in Physics, there is still enough broad scientific learning such that the degree can also lead to similar post-graduate paths. All laboratories, research and teaching, are well-equipped with modern instrumentation, computers and data collection interfaces. Many opportunities exist for student/faculty collaborative research. These activities are beneficial to the development of students’ analytical skills and are strongly encouraged.

Required Courses
PHIL09.369 Philosophy of Science (WI, MG) (recommended)
MATH01.130 Calculus I
MATH01.131 Calculus II
MATH01.230 Calculus III
CHEM06.100 Chemistry I
CHEM06.101 Chemistry II
CHEM07.200 Organic Chemistry I
CHEM07.203 Organic Chemistry II for Biomedical Sciences
BIOl01.205 Foundations in Biology for Biomedical Sciences 1
BIOl01.206 Foundations in Biology for Biomedical Sciences 2
PHYS00.220 Introductory Mechanics
PHYS00.221 Introductory Thermodynamics, Fluids, Waves, & Optics
PHYS00.222 Introductory Electricity & Magnetism
PHYS00.300 Modern Physics
PHYS00.320 Electricity & Magnetism I
PHYS00.325 Electric Circuits (or approved career-track course)
PHYS00.330 Mathematical Physics
PHYS00.340 Optics & Light (or approved career-track course)
PHYS00.360 Biophysics I
PHYS00.361 Biophysics II: Biomaterials
PHYS00.451 Biophysics Research I
PHYS00.451 Biophysics Research II
PHYS00.475 Radiation Physics: Fundamentals and Applications
One approved career-track course

Free Electives 7-8 s.h.
Total credits in program 120 s.h.

BACHELOR OF SCIENCE IN PHYSICAL SCIENCE
The B.S. in Physical Science is a joint program of the Department of Physics & Astronomy and the Department of Chemistry & Biochemistry. It provides a broad background in the physical sciences with specializations in chemistry or physics. Students in this program can earn state certification to teach all physical science subjects by earning a second degree from the College of Education. This program can be tailored to provide excellent preparation for careers in science and science-based graduate work as provided in medical, dental, veterinary and optometry schools.
General Education
All students must complete the University General Education requirements as described on page 33

Rowan Experience
All students must complete the Rowan Experience requirements as described on page 35

Required Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL09.369</td>
<td>Philosophy of Science (WI, M/G) (or other approved)</td>
</tr>
<tr>
<td>MATH01.130</td>
<td>Calculus I</td>
</tr>
<tr>
<td>MATH01.131</td>
<td>Calculus II</td>
</tr>
<tr>
<td>GEOG16.330</td>
<td>Geology I</td>
</tr>
<tr>
<td>CS01.104, or CS04.103</td>
<td>Intro. Science Programming or Computer Science &amp; Programming</td>
</tr>
<tr>
<td>CHEM06.100</td>
<td>Chemistry I</td>
</tr>
<tr>
<td>CHEM06.101</td>
<td>Chemistry II</td>
</tr>
<tr>
<td>CHEM07.200</td>
<td>Organic Chemistry I</td>
</tr>
<tr>
<td>CHEM09.250</td>
<td>Quantitative Analysis</td>
</tr>
<tr>
<td>PHYS00.220</td>
<td>Introductory Mechanics</td>
</tr>
<tr>
<td>PHYS00.221</td>
<td>Introductory Thermodynamics, Fluids, Waves, &amp; Optics</td>
</tr>
<tr>
<td>PHYS00.222</td>
<td>Introductory Electricity &amp; Magnetism</td>
</tr>
<tr>
<td>PHYS00.300</td>
<td>Modern Physics</td>
</tr>
<tr>
<td></td>
<td>Approved Astronomy, Atmospheric Science or Geology course</td>
</tr>
<tr>
<td></td>
<td>Approved Career Track Course</td>
</tr>
<tr>
<td></td>
<td>Approved Career Track Course</td>
</tr>
</tbody>
</table>

Physics Specialization

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTR11.230</td>
<td>Astronomy and Astrophysics</td>
</tr>
<tr>
<td></td>
<td>Approved Physics Elective 300+ level</td>
</tr>
<tr>
<td></td>
<td>Approved Physics Elective 300+ level</td>
</tr>
<tr>
<td></td>
<td>Approved Physics Elective</td>
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</tbody>
</table>

Chemistry Specialization

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM07.201</td>
<td>Organic Chemistry II</td>
</tr>
<tr>
<td>CHEM08.400</td>
<td>Physical Chemistry I</td>
</tr>
<tr>
<td>CHEM07.348</td>
<td>Biochemistry</td>
</tr>
<tr>
<td></td>
<td>An approved Chemistry Elective</td>
</tr>
</tbody>
</table>

Free Electives

12-16 s.h.

Total credits in program

120 s.h.

BACHELOR OF ARTS IN PHYSICS
The B.A. Program in Physics provides students a flexible program in physics with enough room in general education and free electives to tailor it for their own needs. The degree is designed primarily for those students wishing to complete a double major or earn a minor (or two). Example career tracks include high school physics teaching, middle-school general science teaching, environmental science, marketing or sales representative for a technical industry, technical writing, medicine, or law.

General Education
All students must complete the University General Education requirements as described on page 35

Rowan Experience
All students must complete the Rowan Experience requirements as described on page 35

Required Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL09.369</td>
<td>Philosophy of Science (WI, M/G) (recommended only)</td>
</tr>
<tr>
<td>MATH01.130</td>
<td>Calculus I</td>
</tr>
<tr>
<td>MATH01.131</td>
<td>Calculus II</td>
</tr>
<tr>
<td>MATH01.230</td>
<td>Calculus III</td>
</tr>
<tr>
<td>CS01.104, or CS04.103</td>
<td>Intro. Sci. Prog. or Comp. Sci. &amp; Prog.</td>
</tr>
<tr>
<td>PHYS00.220</td>
<td>Introductory Mechanics</td>
</tr>
<tr>
<td>PHYS00.221</td>
<td>Introductory Thermodynamics, Fluids, Waves, &amp; Optics</td>
</tr>
<tr>
<td>PHYS00.222</td>
<td>Introductory Electricity &amp; Magnetism</td>
</tr>
<tr>
<td>PHYS00.300</td>
<td>Modern Physics</td>
</tr>
</tbody>
</table>

Two approved introductory level science courses, e.g. Chem I or Chem II

Physics Electives four courses (14 sh):
## MINOR IN ASTRONOMY

The Minor in Astronomy has been discontinued and no new students will be admitted into it. Students who declared this minor previously may complete it or may switch to the Concentration in Astronomy.

### Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTR11.200</td>
<td>Exploration of the Solar System</td>
</tr>
<tr>
<td>ASTR11.220</td>
<td>Observational Astronomy</td>
</tr>
<tr>
<td>ASTR11.230</td>
<td>Introduction to Astronomy &amp; Astrophysics</td>
</tr>
<tr>
<td>PHYS00.340</td>
<td>Optics and Light</td>
</tr>
</tbody>
</table>

Choice of one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTR11.301</td>
<td>Planetary Astronomy</td>
</tr>
<tr>
<td>ASTR11.302</td>
<td>Stellar Astrophysics</td>
</tr>
<tr>
<td>ASTR11.303</td>
<td>Galactic Astronomy &amp; Cosmology</td>
</tr>
</tbody>
</table>

Choice of one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>200+ ASTR course</td>
<td></td>
</tr>
<tr>
<td>300+ PHYS course</td>
<td></td>
</tr>
<tr>
<td>Approved math/science elective</td>
<td></td>
</tr>
</tbody>
</table>

## MINOR IN PHYSICS

A Physics Minor is available for any student desiring a more extensive introduction to the field and a taste of some more advanced topics in physics. A Physics Minor is particularly valuable for those majoring in Mathematics, Engineering, Computers Science or Chemistry.

### Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS00.220</td>
<td>Introductory Mechanics</td>
</tr>
<tr>
<td>PHYS00.221</td>
<td>Introductory Thermodynamics, Fluids, Waves, &amp; Optics</td>
</tr>
<tr>
<td>PHYS00.222</td>
<td>Introductory Electricity and Magnetism</td>
</tr>
<tr>
<td>PHYS00.300</td>
<td>Modern Physics</td>
</tr>
</tbody>
</table>

And any additional Physics course at or above the 300 level (excluding Physics Research courses)

## CONCENTRATION IN ASTRONOMY

An Astronomy Concentration is available to any student desiring a more advanced study in astronomy and astrophysics with the requisite quantitative skills and background. This concentration is especially useful for physics majors who are thinking about graduate work in astronomy or astrophysics, or motivated students who want an in-depth survey of modern astronomy.

### Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH01.131</td>
<td>Calculus II</td>
</tr>
<tr>
<td>PHYS00.222</td>
<td>Intro Electricity &amp; Magnetism</td>
</tr>
<tr>
<td>ASTR11.200</td>
<td>Exploration of the Solar System</td>
</tr>
<tr>
<td>ASTR11.220</td>
<td>Observational Astronomy</td>
</tr>
<tr>
<td>ASTR11.230</td>
<td>Introduction to Astronomy &amp; Astrophysics</td>
</tr>
</tbody>
</table>

Choice of one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTR11.301</td>
<td>Planetary Astronomy</td>
</tr>
<tr>
<td>ASTR11.302</td>
<td>Stellar Astrophysics</td>
</tr>
<tr>
<td>ASTR11.303</td>
<td>Galactic Astronomy &amp; Cosmology</td>
</tr>
</tbody>
</table>

## CONCENTRATION IN MATERIALS SCIENCE

The Concentration in Materials Science is available to several majors at Rowan and is recommended for Physics and Physical Science with Physics or Chemistry Specialization majors intending to attend graduate school in a materials related field or expecting to directly enter the workforce. In addition to your usual major courses, a student seeking this concentration must elect to take Interdisciplinary Materials Science (INTR01.486...3 s.h.) and two addition materials related courses outside their major. (Abbreviated lists depending on major are provided below. These courses were selected since you likely have the prerequisites for these courses in your major. Many other courses contain a materials science component and can be selected with the help of your advisor.)

If your major is Physics, select two courses from the following partial list:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM06.300</td>
<td>Advanced Inorganic Chemistry</td>
</tr>
<tr>
<td>CHEM07.405</td>
<td>Introduction to Polymer Chemistry</td>
</tr>
<tr>
<td>ECE09.413</td>
<td>Principles of Nondestructive Evaluation</td>
</tr>
</tbody>
</table>
If your major is Physical Science/Physics Specialization, select two courses from the following partial list:

- PHYS00.430 Statistical Physics
- PHYS00.440 Advanced Laboratory
- CHEM06.300 Advanced Inorganic Chemistry
- CHEM07.405 Introduction to Polymer Chemistry
- ECE09.413 Principles of Nondestructive Evaluation
- CHE06.468 Principles of Electrochemical Engineering
- CHEM08.400 Physical Chemistry I
- CHE06.474 Fundamentals of Particle Technology

If your major is Physical Science/Chemistry Specialization, select two courses from the following partial list:

- CHEM06.300 Advanced Inorganic Chemistry
- CHEM07.405 Introduction to Polymer Chemistry
- ECE09.413 Principles of Nondestructive Evaluation
- CHE06.468 Principles of Electrochemical Engineering
- CHE06.474 Fundamentals of Particle Technology
CHEM06.100  Chemistry I  4 s.h.
CHEM06.101  Chemistry II  4 s.h.
BIOL01.205  Foundations of Biology for Biomedical Sciences  4 s.h.
BIOL01.206  Foundations of Biology for Biomedical Sciences II  4 s.h.

B.S. Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH01.131</td>
<td>Calculus II</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>MATH01.230</td>
<td>Calculus III</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>CHEM07.200</td>
<td>Organic Chemistry I</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>CHEM07.203</td>
<td>Organic Chemistry II for Biomedical Sciences</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>PHYS00.220</td>
<td>Intro to Mechanics</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>PHYS00.221</td>
<td>Intro to Thermo, Fluids, Waves, Optics</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>PHYS00.222</td>
<td>Intro to Electricity and Magnetism</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>PHYS00.300</td>
<td>Modern Physics</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>PHYS00.330</td>
<td>Mathematical Physics</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>PHYS00.320</td>
<td>Electricity and Magnetism I</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>BMS01.315</td>
<td>Instrumentation for Biomedical Sciences</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>PHYS00.360</td>
<td>Biophysics I</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>PHYS00.371</td>
<td>Biophysics II</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>PHYS00.475</td>
<td>Radiation Physics</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>PHYS00.340</td>
<td>Optics and Light</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>or CHEM07.348</td>
<td>Biochemistry</td>
<td>4 s.h.</td>
</tr>
</tbody>
</table>

Choose one of the following (3-4 s.h.): Bioinformatics & Modeling, Genetics of Pathogens, Molecular Pharmacology, PHYS00.325 Electric Circuits, PHYS00.340 Optics and Light, CHEM07.348 Biochemistry PHYS 00451 Biophysics Research I (2 s.h.) *CMB courses taken as part of the accelerated M.S. program (13-14 s.h.)

3.5 + 1.5 GRADUATE PROGRAM REQUIREMENTS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMB00.702</td>
<td>Molecular Biology of the Cell*</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>CMB00.801</td>
<td>Bioethics in Science and Medicine*</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>CMB00.802</td>
<td>Experimental Design*</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>CMB00.803</td>
<td>Scientific Writing*</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>CMB00.804</td>
<td>Critical Readings in Cell &amp; Molecular Biology*</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>CMB00.682</td>
<td>Lab rotation C – M.S. CMB*</td>
<td>1 s.h.</td>
</tr>
<tr>
<td>CMB00.683</td>
<td>Lab rotation D – M.S. CMB*</td>
<td>1 s.h.</td>
</tr>
<tr>
<td>CMB00.690</td>
<td>Thesis Research/M.S.</td>
<td>5 s.h.</td>
</tr>
<tr>
<td>CMB00.699</td>
<td>M.S. Thesis Continuation (5 s.h. for two semesters – no tuition, only fee</td>
<td>5 s.h.</td>
</tr>
<tr>
<td>CMB00.809</td>
<td>Department Seminar Series (1 s.h. for 3 semesters)</td>
<td>3 s.h.</td>
</tr>
</tbody>
</table>

Alternate Focus Courses: (choose two of the following)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMB00.805</td>
<td>Cell Culture and Stem Cells</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>CMB00.806</td>
<td>Graduate Genetics</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>CMB00.808</td>
<td>Molecular Oncology</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>CMB00.810</td>
<td>Biomolecular Interactions</td>
<td>2 s.h.</td>
</tr>
</tbody>
</table>

Total Required Credits for the Entire 3.5 + 1.5 Program 142-143 s.h.

Requirements for Admission:
Applicants to the accelerated program will submit application materials by January 15 of the spring semester of their third year (nominally “junior” year). Applications will be reviewed by the GSBS admissions committee, and students will be notified during the spring semester. Application for admission requires:

- A minimum overall GPA of 3.0 in undergraduate coursework
- A complete online GSBS application including personal statement
- A letter of nomination/recommendation from a Biophysics faculty sponsor in the Department of Physics & Astronomy
- Official GRE General Exam score

Requirements for Graduation:
To graduate from the accelerated B.S./M.S. dual degree program in Biophysics and Cell & Molecular Biology, students must meet the following requirements:

- Completion of all requirements for the 3.5+1.5 B.S. in Biophysics
- Completion of all requirements for the Accelerated M.S. in Cell and Molecular Biology
- Maintain satisfactory progress through the program.

Student Status:
Students enrolled in the accelerated B.S./M.S. Program will pay undergraduate fees for all courses until they have reached the required number of credits as part of the "3.5" years (i.e., 107 credits). Beyond this, students will pay graduate tuition for graduate courses. Students will not be allowed to take GSBS graduate courses at the undergraduate rate. Students must maintain full-time student status during the entire 5-year program.

Students will be expected to maintain satisfactory progress through the program. Satisfactory progress will be defined by the following parameters:

- Completion of the required Cell and Molecular Biology courses at the end of fourth year of study.
- Earning at least a grade of B in all graduate courses taken during that period.
- Any student who fails to maintain satisfactory progress as described above will be placed on probation within the program for one semester—then if performance does not improve such that the next semester course has all grades above B, the student will be dropped from the graduate program. If the student has not already earned the B.S. in Biophysics, he/she will be re-admitted into the B.S. subject to the requirements of that program.
- During probation periods, students will be required to attend tutoring sessions and meet with a faculty member in the Biophysics degree program bi-monthly to discuss any potential problems or barriers to improved academic performance.
- Students with extenuating circumstances may request an exception to this requirement by obtaining written approval of the GSBS Executive Council and the Undergraduate Advisor, and other approvals if needed under University policy.

Contingency for Students who do not Complete M.S program:

Students who enter the accelerated M.S. program but do not maintain satisfactory progress or opt-out of the M.S. degree will be allowed to apply up to 15 credits of Cell and Molecular Biology coursework credits as toward the Biophysics B.S. degree. If the student opts out before 15 credits have been completed in the Cell and Molecular Biology program, any remaining credits to make up the required 120 credits for the undergraduate B.S. Biophysics degree will be taken using traditional coursework at the Glassboro campus.

**Accelerated Dual Degree (3 + 4 program): B.S. in Biophysics and M.D. degree**

**Overview**

The Department of Physics & Astronomy and the Cooper Medical School of Rowan University (CMSRU) offer a B.S. in Biophysics and a M.D. degree, respectively. This accelerated program allows high-achieving Biophysics majors to obtain the B.S. and M.D. in a seven-year period, rather than the traditional period of eight years if both degrees were completed separately. The program is a 3 + 4 arrangement where students begin M.D. courses in their 4th year at Rowan University.

**3 + 4 UNDERGRADUATE PROGRAM REQUIREMENTS**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP01.101</td>
<td>College Composition I</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>COMP01.102</td>
<td>College Composition II</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>CMS04.205</td>
<td>Public Speaking</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>PHIL09.341</td>
<td>Biomedical Ethics</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>or PHIL09.369</td>
<td>Philosophy of Science</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>BIOL01.205</td>
<td>Foundations of Biology for Biomedical Sciences</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>BIOL01.206</td>
<td>Foundations of Biology for Biomedical Sciences II</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>MATH01.130</td>
<td>Calculus I</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>CHEM06.100</td>
<td>Chemistry I</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>CHEM06.101</td>
<td>Chemistry II</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>BMS01.315</td>
<td>Instrumentation for Biomedical Sciences</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>PHYS00.220</td>
<td>Intro to Mechanics</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>PHYS00.221</td>
<td>Intro to Thermo, Fluids, Waves, Optics</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>PHYS00.222</td>
<td>Intro to Electricity and Magnetism</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>PHYS00.300</td>
<td>Modern Physics</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>PHYS00.330</td>
<td>Mathematical Physics</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>PHYS00.320</td>
<td>Electricity and Magnetism I</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>BMS01.315</td>
<td>Instrumentation for Biomedical Sciences</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>PHYS00.360</td>
<td>Biophysics I</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>PHYS00.371</td>
<td>Biophysics II</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>PHYS00.475</td>
<td>Radiation Physics</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>PHYS00.340</td>
<td>Optics and Light</td>
<td>4 s.h.</td>
</tr>
</tbody>
</table>
Choose one of the following (4 s.h.): Bioinformatics & Modeling, Genetics of Pathogens, Molecular Pharmacology, PHYS00.325 Electric Circuits, CHEM07.348 Biochemistry *CMSRU courses in the first year of M.D. program (17 s.h.): Fundamentals, Scholar's Workshop, Infectious Diseases

3+4 M.D. PROGRAM REQUIREMENTS Requirements for the M.D. degree are set forth in the CMSRU Student Handbook.

Additional Program Requirements: Students are required to maintain a minimum cumulative grade point average of 3.6 in all course work and a minimum grade point average of 3.6 in the science courses required for admission to CMSRU. Students must take part in one of the summer Premedical Urban Leaders Summer Enrichment PULSE programs at CMSRU or participate in forty hours of approved community service prior to entering their third undergraduate year. This service will be directed to underserved populations and is non-medical. The Health Professions Advisor (HPA), or designee on the Glassboro campus will serve as the supervisor for the service activity and provide verification that the service obligations have been completed.

Students accepted into the 3+4 Program will be admitted to CMSRU contingent upon the following:

- Completion of all general curriculum requirements at Rowan University.
- A minimum of 75% of the credits needed for a Baccalaureate degree completed before beginning the medical school phase of the Program.
- All prerequisite courses required for admission to CMSRU as specified in the CMSRU Handbook.
- Completion of requirements of the designated Rowan University major unless the major department agrees to provide credit for certain medical courses taken during the first year of medical school at CMSRU.
- A cumulative science grade point average of 3.60 or better.
- No final grade of “D”, “F” or “I” in any prerequisite course required for admission to CMSRU as indicated in the CMSRU Handbook.
- All students will be required to take the Medical College Admissions Test (MCAT) and obtain a score at or greater than the 70th percentile.
- Students in the Program will be required to participate in one summer Premedical Urban Leader Summer Enrichment Program “PULSE” program at CMSRU or an equivalent service experience as outlined above.
- Students must remain free of any citations for behavioral issues or academic integrity violations especially surrounding professionalism through their undergraduate education.
- CMSRU may refuse admission to any student applicant who does not meet the above requirements. Students may be required to decelerate or withdraw from the combined Program for academic or other reasons.

Eligibility and Admissions:

High school seniors who qualify for admission to Rowan University are eligible for admission to the 3+4 program. There are no restrictions on State of residency, but admission is limited to citizens or permanent residents of the United States. The high school grade point average and rank-in-class, along with letters of recommendation from high school teachers, will be of primary importance in evaluating an applicant’s credentials. Applicants are required to submit scores of the College Board Scholastic Aptitude Tests (SAT) Verbal and Mathematical components or the American College Testing (ACT). Applicants are expected to demonstrate knowledge of, and activity resonant with, the mission of CMSRU.

Students who self-identify that they wish to be part of this Program will formally apply to the Health Professions Advisor (HPA) at Rowan University upon acceptance to Rowan University. They will be given all the requirements of the program by the HPA. There will be an application form made available to the HPA through CMSRU that needs to be completed and sent by the HPA to the Director of Admissions at CMSRU. Qualified applicants will be scheduled for interview by members of a subcommittee of the CMSRU Admissions Committee. These interviews will be held on the CMSRU campus and at a date and time that will allow student notification prior to any final decision date for matriculation to Rowan University.

Student Status: Tuition for the first three (3) years of study at Rowan University, including summer courses, if any, will be the same as the tuition charged to undergraduate Rowan University students. Tuition during the four (4) years of study at CMSRU will be the same as the tuition charged to students enrolled in the regular curriculum at CMSRU.

Students who satisfactorily complete the appropriate courses in the first year at CMSRU, in addition to all other Rowan University requirements, will receive a B.S. in Biophysics degree.

If, after the first semester of the medical first year, the student fails to meet the required CMSRU standards of performance and competency, CMSRU shall notify Rowan University. Representatives from Rowan University and CMSRU will meet with the student. If, after meeting with the student, CMSRU concludes that the student should not continue in the medical school, the student shall be dismissed from the B.S./M.D. Program. In consultation with the Biophysics coordinator, the B.S. in Biophysics degree may be completed.

Accelerated Dual Degree (3 + 4 program): B.S. in Biophysics and D.O. degree

Overview

The Department of Physics & Astronomy and the Rowan University School of Osteopathic Medicine (RowanSOM) offer a B.S. in Biophysics and a D.O. degree, respectively. This accelerated program allows high-achieving Biophysics majors to
obtain the B.S. and D.O. in a seven-year period, rather than the traditional period of eight years if both degrees were completed separately. The program is a 3 + 4 arrangement where students begin D.O. courses in their 4th year at Rowan University.

3 + 4 UNDERGRADUATE PROGRAM REQUIREMENTS

3 + 4 UNDERGRADUATE PROGRAM REQUIREMENTS

122 sh

General Education (all courses are three credits unless noted otherwise) 44 credits

COMP01.101 College Composition I
COMP01.102 College Composition II
CMS04.205 Public Speaking

Two courses from the Social and Behavioral Sciences Bank

PHIL09.341 Biomedical Ethics
or PHIL09.369 Philosophy of Science

One course from the History, Humanities, and Language Bank

One course from Arts and Creative Experience Bank

MATH01.130 Calculus I 4 s.h.
CHEM06.100 Chemistry I 4 s.h.
CHEM06.101 Chemistry II 4 s.h.
BIOL01.205 Foundations of Biology for Biomedical Sciences 4 s.h.
BIOL01.206 Foundations of Biology for Biomedical Sciences II 4 s.h.

B.S. Program Requirements 78 credits

MATH01.131 Calculus II 4 s.h.
MATH01.230 Calculus III 4 s.h.
CHEM07.200 Organic Chemistry I 4 s.h.
CHEM07.203 Organic Chemistry II for Biomedical Sciences 4 s.h.
PHYS00.220 Intro to Mechanics 4 s.h.
PHYS00.221 Intro to Thermo, Fluids, Waves, Optics 4 s.h.
PHYS00.222 Intro to Electricity and Magnetism 4 s.h.
PHYS00.300 Modern Physics 4 s.h.
PHYS00.330 Mathematical Physics 3 s.h.
PHYS00.320 Electricity and Magnetism I 4 s.h.
BMS01.315 Instrumentation for Biomedical Sciences 4 s.h.
PHYS00.360 Biophysics I 4 s.h.
PHYS00.371 Biophysics II 3 s.h.
PHYS00.475 Radiation Physics 3 s.h.
PHYS00.340 Optics and Light 4 s.h.

Choose one of the following (4 s.h.): Bioinformatics & Modeling, Genetics of Pathogens, Molecular Pharmacology, PHYS00.325 Electric Circuits, CHEM07.348 Biochemistry *RowanSOM courses in the first year of D.O. program (17 s.h.): Biochemistry/Human Genetics, Medical Physiology, Histology, Microbiology/Immunology

3 + 4 D.O. PROGRAM REQUIREMENTS

Requirements for the D.O. degree are set forth in the RowanSOM Education Handbook.

Additional Program Requirements:

Students are required to maintain a minimum cumulative grade point average of 3.6 in all course work and a minimum grade point average of 3.6 in the science courses required for admission to RowanSOM. Students must also take the Medical College Admissions Test (MCAT) and score a minimum of 27. Students in the accelerated BS/DO Program will be strongly encouraged to construct an undergraduate degree plan that incorporates experiences involving community outreach and service, as well as the premedical sciences.

Students accepted into the 3+4 Program, to be qualified for transition to RowanSOM, shall have met all of the following criteria:

* Completion of all general curriculum requirements at Rowan University
* A minimum of 75% of the credits needed for a Baccalaureate degree
* Completion of all prerequisite courses required for admission to RowanSOM as specified in the RowanSOM Education Handbook
* A cumulative grade point average of 3.60 or better.
* No final grade of “D”, “F” or “I” in any prerequisite course required for admission to RowanSOM as indicated in the RowanSOM Education Handbook
* A minimum score of 8 on each section of the Medical College Admissions Test or a total minimum total score of 27
* Recommendation by the Rowan University Premed Advisor based on a majority approval of the Rowan University Program Admissions Committee
* Satisfactory interviews with the Program Admissions Committees at Rowan University and RowanSOM

Students in the 3+4 program will be required to visit the RowanSOM campus to participate in all of the activities listed below during their three undergraduate years:
- OMM demonstrations (including a shadow experience at the OMM clinic
- Lecture presentation on research opportunities at RowanSOM
- Tour of the Clinical Education and Assessment Center
- Mini skills workshop focusing on elementary doctoring skills, specifically interpersonal skills and basic history taking
- Anatomy lecture and lab
- Brown Bag Sessions with Associate Dean for Academic Affairs and or designee

Eligibility and Admissions:

High school seniors who qualify for admission to Rowan University are eligible for admission to the 3+4 program. There are no restrictions on State of residency, but admission is limited to citizens or permanent residents of the United States. The high school grade point average and rank-in-class, along with letters of recommendation from high school teachers, will be of primary importance in evaluating an applicant's credentials. Applicants are required to submit scores of the College Board Scholastic Aptitude Tests (SAT) Verbal and Mathematical components or the American College Testing (ACT). Applicants are expected to demonstrate knowledge of, and activity resonant with, the mission of RowanSOM.

After preliminary evaluation of applications by the Rowan University Admissions Office, the Joint Admissions Committee, composed of representatives from the premedical faculty of Rowan University and the Admissions Committee of RowanSOM, will decide which applicants to invite for interview at Rowan University and RowanSOM. Interviews at RowanSOM will be conducted by a member of the RowanSOM Admissions Committee.

Applicants not invited for an interview, or not selected for admission to the 3+4 program, shall be notified of decisions as early as possible and shall be considered for regular admission to Rowan University. First year students at Rowan University who are not accepted into the program may continue their undergraduate course of study and would be eligible to apply for the 4+4 program in their Sophomore year at Rowan University.

Student Status:

Students will be eligible admission to the D.O. portion of the program after the Rowan University Coordinator of Premedical Programs has certified that the candidate has met all basic prerequisite requirements, after completion of the MCAT, and after a successful interview with the RowanSOM Admissions Committee. Students apply for an admissions decision to RowanSOM no later than October 1 of the 3rd year, but preferably by August 15 before their 3rd year. Acceptance of such candidates is based on meeting or surpassing the requirements listed above.

Tuition for the first three (3) years of study at Rowan University, including summer courses, if any, will be the same tuition as charged to undergraduate Rowan University students. Tuition during the four (4) years of study at RowanSOM will be the same as the tuition charged to students enrolled in the regular curriculum at RowanSOM.

Students who satisfactorily complete the appropriate courses in the first year at RowanSOM, in addition to all other undergraduate degree requirements, will receive a B.S. in Biophysics degree.

If, after the first semester of the medical first year, the student fails to meet the required RowanSOM standards of performance and competency, representatives from Rowan University and RowanSOM will meet with the student. If, after meeting with the student, RowanSOM concludes that the student should not continue in the medical school, the student shall be dismissed from the B.S./D.O. Program. In consultation with the Biophysics coordinator, the B.S. in Biophysics degree may be completed.

Department of Psychology

MaryLouise Kerwin
Department Head
Robinson Hall
856.256.4870
psychadvising@rowan.edu

The objectives of the Psychology Department are to provide its students with the opportunity to appreciate psychology as an academic science, to fulfill their professional ambitions, to develop integrity, to understand and appreciate diversity and multiculturalism in all that they learn and practice, and to learn the skills and values that will equip them to benefit others. Within the climate of a close knit academic community of learners and teachers, the Department offers courses and programs of study in psychology that are designed to give students the academic skills and knowledge they will need for reasoned inquiry, for the pursuit of advanced study, for a socially responsible service-oriented profession, for the development of a better understanding of social relationships and events, and for greater self understanding.

All Psychology majors are expected to meet with their psychology department advisor at least once a semester. The purpose of these meetings is to discuss course selection, progress toward graduation requirements, academic planning, graduate school plans, and career plans.

Psychology majors may take up to 10% of their credit hours pass/no credit, including 6 s.h. in Psychology (students may not take Psychology of Scientific Thinking, Research Methods in Psychology, Statistics in Psychology, Behavioral Assessment and Measurement, Applied Behavior Analysis, Professional Issues in Applied Behavior Analysis, or Advanced Research pass/no credit).
BACHELOR OF ARTS IN PSYCHOLOGY
Department of Psychology
Robinson Hall
856.256.4870
psychadvising@rowan.edu

General Education
All students must complete the University General Education requirements as described on page 33

Rowan Experience
All students must complete the Rowan Experience requirements as described on page 35

Required Courses
Students must take 3 credits of Mathematics in the Science and Mathematics General Education bank and this course will count as fulfilling 3 credits in the Science and Mathematics GE requirement.

Students must take one of the BIO courses listed below:

- BIOL01.113: General Biology: Human Focus
- or BIOL01.104: Biology I: Diversity, Evolution & Adaptation

(also counts as the Laboratory Science course in the Science and Mathematics General Education requirement, 4 s.h.)

Students are required to take 3 additional credits from the Science and Mathematics General Education list (3 s.h.)

Six additional credits from the Social and Behavioral Sciences General Education List of which 3 credits must be in Anthropology (ANTH) (6 s.h.)

Six additional credits from the History/Humanities and Language General Education List of which 3 credits are in Philosophy (PHIL) (6 s.h.)

Required Psychology Courses

- PSY01.107: Essentials of Psychology
- PSY01.106: The Psychology of Scientific Thinking
- PSY07.201: Research Methods in Psychology (prerequisite PSY01.106)
- PSY07.202: Statistics in Psychology (prerequisite PSY07.201 & STAT02.260)

(This course also fulfills the Rowan Experience Writing Intensive requirement.)

- PSY02.257: Psychology as a Profession and Practice
- PSY09.218: Lifespan Development
- PSY02.310: Learning and Behavior
- or PSY01.327: Cognitive Psychology
- PSY05.206: Social Psychology (M/G)
- or PSY01.230: Psychology of Personality
- PSY10.315: Physiological Psychology
- or PSY01.326: Perception
- PSY03.200: Abnormal Psychology
- or PSY09.305: Developmental Psychopathology

Three additional s.h. of approved psychology electives from list below.

Psychology Electives List

Specialized Core Courses

- PSY01.105: Psychology of Ethnic Identity and Community in America
- PSY01.200: Psychology of Women and Cultural Experience
- PSY01.235: African-American Psychology
- PSY01.305: Psychology and Law
- PSY01.310: Psychology of Racism and Ethnocentrism
- PSY01.316: Behavioral Assessment and Measurement
- PSY01.329: Health Psychology
- PSY01.423: Seminar in Psychology (various topics)
- PSY01.429: History and Systems in Psychology
- PSY02.305: Applied Behavior Analysis
- PSY03.205: Intake and Interviewing Skills in Psychology
- PSY05.205: Environmental Psychology
- PSY05.310: Psychology of Human Sexuality
- PSY05.402: Psychology of Conflict and Conflict Resolution
PSY05.410 Community Psychology
PSY06.300 Psychological Tests and Measurement
PSY08.215 Consumer Psychology
PSY08.220 Personnel Psychology
PSY08.310 Industrial/Organizational Psychology
PSY22.215 Educational Psychology

Independent Study and Field Experience
PSY01.419 Independent Study in Psychology
PSY01.422 Field Experience in Psychology

Additional Coursework in Basic Core Areas

PSY01.230 Psychology of Personality
PSY01.326 Perception
PSY01.327 Cognitive Psychology
PSY02.310 Learning and Behavior
PSY03.200 Abnormal Psychology
PSY05.206 Social Psychology (M/G)
PSY09.305 Developmental Psychopathology
PSY10.315 Physiological Psychology

Nonprogram electives 12 s.h.
Free electives 29 s.h.

Total Credits in Program: 120 s.h.

BACHELOR OF SCIENCE IN PSYCHOLOGICAL SCIENCE
Department of Psychology
Robinson Hall
856.256.4870
psychadvising@rowan.edu

General Education
All students must complete the University General Education requirements as described on page 33

Rowan Experience
All students must complete the Rowan Experience requirements as described on page 35

Required Courses

MATH01.125 Calculus Techniques and Applications
(or BIOL01.113 General Biology: Human Focus
BIOL01.104 Biology I: Diversity, Evolution & Adaptation

Six-eight additional credits in the Science or Math General Education Course of which 3-4 credits MUST be a science
Three credits in the Social and Behavioral Sciences General Education bank must be in Anthropology (ANTH)
Six additional credits in the History/Humanities and Language General Education List of which 3 credits must be in
Philosophy (PHIL) (6 s.h.)

Required Psychology Courses

PSY01.107 Essentials of Psychology
PSY01.106 The Psychology of Scientific Thinking
PSY07.201 Research Methods in Psychology (prerequisite PSY01.106)
PSY07.202 Statistics in Psychology (prerequisite PSY07.201 & STAT02.260)
PSY01.420 Advanced Research I (prerequisite minimum grade of a B in
MATH01.122, PSY01.106, PSY07.201, & PSY02.257, and completion of
PSY07.202, & COMPO1.112 OR HONR01.112)

(This course also fulfills the Rowan Experience Writing Intensive requirement.)

PSY01.421 Advanced Research II (prerequisite minimum grade of a B in
PSY01.420)
PSY02.257 Psychology as a Profession and Practice
PSY09.218 Lifespan Development
PSY02.310 Learning and Behavior
PSY01.327 Cognitive Psychology
PSY10.315 Physiological Psychology
PSY01.326 Perception
PSY05.206 Social Psychology (M/G)
or PSY01.230 Psychology of Personality
PSY03.200 Abnormal Psychology
or PSY09.305 Developmental Psychopathology
18 additional s.h. of approved psychology electives.

Psychology Electives List

PSY01.105 Psychology of Ethnic Identity and Community in America
PSY01.200 Psychology of Women and Cultural Experience
PSY01.235 African-American Psychology
PSY01.305 Psychology and Law
PSY01.310 Psychology of Racism and Ethnocentrism
PSY01.316 Behavioral Assessment and Measurement
PSY01.329 Health Psychology
PSY01.423 Seminar in Psychology (various topics)
PSY01.429 History and Systems in Psychology
PSY02.305 Applied Behavior Analysis
PSY03.205 Intake and Interviewing Skills in Psychology
PSY05.205 Environmental Psychology
PSY05.310 Psychology of Human Sexuality
PSY05.402 Psychology of Conflict and Conflict Resolution
PSY05.410 Community Psychology
PSY06.300 Psychological Tests and Measurement
PSY08.215 Consumer Psychology
PSY08.220 Personnel Psychology
PSY08.310 Industrial/Organizational Psychology
PSY22.215 Educational Psychology
PSY01.419 Independent Study in Psychology
PSY01.422 Field Experience in Psychology
PSY01.230 Psychology of Personality
PSY01.326 Perception
PSY01.327 Cognitive Psychology
PSY02.310 Learning and Behavior
PSY03.200 Abnormal Psychology
PSY05.206 Social Psychology (M/G)
PSY09.305 Developmental Psychopathology
PSY10.315 Physiological Psychology
PSY10.380 Cognitive Neuroscience

Nonprogram electives 9 s.h.
Free electives 12 s.h.
Total Credits in Program: 120 s.h.

MINOR IN PSYCHOLOGY
Psychology Department
Robinson Hall
856.256.4870
psychadvising@rowan.edu

The Department offers a 21 s.h. minor in Psychology. The program is designed for students desiring a substantial background in Psychology while majoring in another field. The minor is designed to allow students the flexibility to choose courses that will further their career goals. Minors may transfer a maximum of 6 s.h. in Psychology courses from other institutions.

Required Courses:

PSY01.107 Essentials of Psychology 3 s.h.

Electives:

Two 300/400 level Psychology courses 6 s.h.
Three Psychology courses of any level 9 s.h.

Total Credits in Minor: 18 s.h.

SPECIALIZATION IN BEHAVIORAL SERVICES FOR CHILDREN AND THEIR FAMILIES
Bethany Raiff
Advisor
Robinson Hall
856.256.4500 x3115
raiff@rowan.edu
The Specialization in Behavioral Services for Children and their Families is designed to train Psychology majors to provide effective services for children with behavior problems and/or developmental disabilities. The specialization curriculum emphasizes learning theory, the application of behavioral principles, knowledge of types of problems and issues for which children may need services, interviewing techniques, and supervised experience working with children and their families in the community. Upon completion of the specialization and additional supervised experience students are eligible to apply to become a Board Certified assistant Behavior Analyst (BCaBA). This specialization is available only to matriculated Psychology majors; however, other students may take courses within the specialization. Students are encouraged to apply for the specialization as early as possible. In addition to the requirements for the Psychology major specialization students must take the following courses:

- **PSY02.310** Learning and Behavior (prerequisite PSY 01.107 OR Matriculation in the Post-Baccalaureate Certificate in Applied Behavior Analysis)
- **PSY02.305** Applied Behavior Analysis (prerequisite PSY 01.107 OR Matriculation in the Post-Baccalaureate Certificate in Applied Behavior Analysis)
- **PSY01.316** Behavioral Assessment and Measurement (prerequisite PSY 01.107 OR Matriculation in the Post-Baccalaureate Certificate in Applied Behavior Analysis)
- **PSY09.305** Developmental Psychopathology
- **PSY01.424** Professional Issues in Applied Behavior Analysis (prerequisites PSY 02.310 and PSY 01.316; co-requisite PSY 02.305)

**CONCENTRATION IN NEUROSCIENCE (WITH DEPARTMENT OF BIOLOGICAL SCIENCES)**

Gerald Hough
Advisor
Robinson Hall
856.256.4500 x3404
hough@rowan.edu

This concentration is designed for students interested in the study of how the brain and the rest of the nervous system function and the different effects it can have on the body and/or mind. Within this concentration, students have the ability to focus primarily on biologically-oriented fields such as molecular, structural, and chemical neuroscience, which focuses on the physical structures and neurotransmitters that the nervous system uses to communicate. Students also have the option to choose a more psychology-oriented direction that covers how the brain and nervous system influence feelings, thoughts, behaviors, and how an organism processes information. Students interested in the Concentration in Neuroscience should submit a letter of application to the Program Coordinator in the Fall of their Sophomore year and take PSY 10.315 Physiological Psychology during their sophomore year.

**Requirements**

- **PSY10.315** Physiological Psychology (grade of B+ or higher)
- **PSY10.380** Cognitive Neuroscience (prerequisite PSY10.315 grade of B+ or better)
  - or **BIOL10.381** Cellular/Molecular Neuroscience (prerequisite PSY10.315 grade of B+ or better)

Three upper level electives in Biological Sciences and Psychology (at least 1 from each department) (9-11 credits)

**Research Experience**

Students enrolled in the Concentration in Neuroscience must complete a research requirement that is approved by the Program Coordinator. The research requirement for the Concentration in Neuroscience allows students to pursue their interests and career goals in this field of study. Working closely with the student, the Program Coordinator will place students with faculty (including those from Rowan’s medical schools) and researchers in the community, who will directly involve students in their research. To complete this requirement, students should register for one of the following courses:

- **PSY01.422** Field Experience
  - or **PSY01.419** Independent Study in Psychology
  - or **BIOL01.475** Biology Lab/Field Research
The Math/Science specialization of the Liberal Studies major is an interdisciplinary program in mathematics, biological science, earth science, chemistry, computer science, physics, and philosophy. The specialization is structured to offer students introductory, synthesizing, and culminating experiences, as is recommended by the Association of American Colleges and Universities. The specialization requires both lower and upper level courses that build on the University's general education and Rowan experience requirements.

**General Education**
All students must complete the University General Education Requirements as described on page 33

**Rowan Experience**
All students must complete the Rowan Experience requirements as described on page 35

**Required Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM05.102</td>
<td>Chemistry of Everyday Life</td>
</tr>
<tr>
<td>PHYS00.150</td>
<td>Physics of Everyday Life</td>
</tr>
<tr>
<td>PHIL09.110</td>
<td>Logic of Everyday Reasoning</td>
</tr>
<tr>
<td>GEOG16.131</td>
<td>Principles of Earth Science</td>
</tr>
<tr>
<td>BIOL01.105</td>
<td>Essentials of Biology</td>
</tr>
<tr>
<td>MATH03.150</td>
<td>Discrete Math</td>
</tr>
<tr>
<td>MATH01.201</td>
<td>Structures of Math</td>
</tr>
<tr>
<td>CS01.200</td>
<td>Computing Environments</td>
</tr>
<tr>
<td>STAT02.260</td>
<td>Statistics I</td>
</tr>
<tr>
<td>ASTR11.200</td>
<td>Exploration of the Solar System</td>
</tr>
<tr>
<td>MATH03.305</td>
<td>Patterns in Nature I: Visual Geometry</td>
</tr>
<tr>
<td>MATH03.315</td>
<td>Patterns in Nature II: Projects in Calculus</td>
</tr>
<tr>
<td>CHEM05.301</td>
<td>Chemistry of the Environment</td>
</tr>
<tr>
<td>BIOL20.401</td>
<td>Principles of Ecology</td>
</tr>
<tr>
<td>INTR02.492</td>
<td>Math/Science Senior Seminar</td>
</tr>
</tbody>
</table>

**Total Credits in Program**

120 s.h.
School of Earth and Environment

Kenneth J. Lacovara
Dean and Professor, School of Earth and Environment
Director, Rowan University Fossil Park
600 Whitney Ave.
856.256.5244
lacovara@rowan.edu

Eddie Guerra
Dean's Fellow
600 Whitney Ave.
856.256.4323
guerra@rowan.edu

Heather Simmons
Associate Director for External Affairs
Rowan University Fossil Park
856.256.5259
simmonshp@rowan.edu

Eric Milou
Director
Rowan University STEM Center
milou@rowan.edu

About the School

There is a great need for qualified professionals to address the most dramatic global challenges, including environmental sustainability, energy, and climate change. The School of Earth and Environment at Rowan University will play a role in developing solutions in these areas by cultivating faculty research and preparing students for careers in the geosciences and environmental sciences. Students graduating from the School enjoy unparalleled opportunities to integrate classroom learning with hands-on experiences and will be superbly prepared for careers in industry, government agencies, professional studies, or graduate studies in related disciplines.

The Rowan University Fossil Park, a unique world-class reservoir of ancient ecosystems near the Glassboro campus, is a living laboratory and resource for education, research, and outreach. The Fossil Park offers students unparalleled opportunities for hands-on learning experiences and prominent research in paleontology. Because of the appeal of the Fossil Park and the importance of geosciences and environmental sciences to STEM outreach, the School coordinates with the Rowan University STEM Center to provide K-12 STEM outreach for the region.

Departments

The School consists of the Department of Geography and the Environment and the Department of Geology. The Department of Environmental Science will be established in the near future.

Programs Offered

The School offers the following undergraduate degrees: B.A. in Geography, the B.S. in Geographic Information Systems (GIS), the B.S. in Planning, and the B.A. in Environmental Studies. Starting fall 2017, the school will offer the B.S. in Geology and the B.A. in Geology. Minors are offered in Geography, GIS, Planning, and Environmental Studies.

Department of Geology

Harold C. Connolly Jr.
Chair and Professor
317K Robinson Hall
connollyh@rowan.edu

Geology is the study of the Earth system, the materials of which the Earth is made, the origin and evolution of those materials, the processes acting upon them (both external and interior), and the origin and evolution of its organisms and ecosystems. Geology investigates the relationship of how all components of the Earth interact within the Earth System. Lessons learned about the Earth system through geology are also applied to explore the origin and evolution of other bodies in the Solar System. Central to geology is the study of how rocky bodies like the Earth have changed over time.
The Department will begin offering two undergraduate majors starting fall 2017: the B.S. in Geology and the B.A. in Geology.

**BACHELOR OF SCIENCE IN GEOLOGY**

The B.S. in Geology is a physical science major composed of foundation courses in biology, chemistry, physics, and mathematics; core courses in geology; and electives in geoscience, applied geology, or paleontology. The program is designed to prepare students to immediately enter positions in the geoscience workforce in consulting firms or government agencies; pursue professional studies; or undertake graduate studies in geoscience disciplines.

An important consideration for students seeking employment in industry is their ability to pass the Professional Geologist (PG) exam, after four to six years of work experience. Twenty-eight states now require a PG license for the submission of certain proposals and to sign off on reports and certifications submitted to environmental agencies. The B.S. curriculum is designed to provide students with the background necessary to succeed on this exam.

The curriculum for this major is currently under development. Below is the proposed breakdown of course categories.

**Required Courses**

- General education: 43 s.h.
- Foundation courses (science/math): 20 s.h.
- Geology Core Courses: 47 s.h.
- Geology Electives: 16 s.h.

**Total Semester Hours:** 126 s.h.

**BACHELOR OF ARTS IN GEOLOGY**

The B.A. in Geology is a physical science major composed of foundation courses in biology, chemistry, physics, and mathematics; core courses in geology; and electives in geology or related disciplines. The elective course choices in this program make it easier to pursue related minors or concentrations. The program is designed to prepare students to immediately enter positions in the geoscience workforce in consulting firms or government agencies; pursue professional studies; or undertake graduate studies.

The curriculum for this major is currently under development. Below is the proposed breakdown of course categories.

**Required Courses**

- General education: 42 s.h.
- Foundation courses (science/math): 12 s.h.
- Geology Core Courses: 41 s.h.
- Electives: 25 s.h.

**Total Semester Hours:** 120 s.h.

**Department of Geography and Environment**

**Patrick Crumrine**  
**Interim Chair**  
**Robinson Hall**  
**856.256.4500 ext. 3123**  
**crumrine@rowan.edu**

The mission of the Department of Geography and Environment is teaching, research and outreach that focus on understanding the globalized world, protecting the environment, and building a sustainable future. The Department offers several programs, including four baccalaureate degree programs, four minors, five concentrations and two CUGS. The programs include a BA and minor in Geography, a BA and minor in Environmental Studies, a BS and minor in Sustainable and Community Planning, and a BS and minor in Geographic Information Science. Concentrations include Geoscience, Environmental Science, Applied Geographic Knowledge and Skills (GeoEducation), Geographic Inquiries into Global Issues and Sustainable Built Environments. All of these programs integrate theory and practice, blending both academic and applied facets of geography, environmental studies, planning, and geospatial technologies.

The Department houses the Geospatial Research Laboratory (GeoLab), including three computer labs with high level GIS and remote sensing software, high resolution plotters and scanners, and survey-quality global positioning system (GPS) receivers. Students also have full access to these labs in which they can pursue class projects and research, often working directly with faculty members.
All of our programs require an internship, which provides valuable real-world experience and offers our majors a significant advantage in finding employment upon graduation. Our graduates have a strong track record in well-paying and engaging careers that make a significant impact: teaching elementary or secondary school, working in environmental consulting and remediation firms, as planners or as GIS specialists in various government agencies, as environmental protection specialists, or by continuing their education at the graduate level.

Many of our courses are available as online or hybrid (partially online) options.

**BACHELOR OF ARTS IN GEOGRAPHY**

John Hasse  
Program Coordinator  
Robinson Hall  
856.256.4812  
hasse@rowan.edu

The discipline of geography focuses on understanding the world across scales from local to global. It is an integrative science that explores the spatial relationships and functional systems of the natural and human world. The geography major at Rowan maximizes flexibility so that students can design a program of study that meets individual interests and career goals. Geography students complete a common core of 22 s.h. worth of courses and then complete an additional 18+ s.h. of course credit within a specialty area (one of the minors or concentrations offered in the department).

**General Education**  
All students must complete the University General Education requirements as described on page 33

**Rowan Experience**  
All students must complete the Rowan Experience requirements as described on page 35

**Common Core: Required**  
22 s.h.

Take two of the three following courses:
- GEOG16.100 Earth, People and Environment
- GEOG16.110 Cultural Geography
- GEOG16.140 World Regional Geography

Take the following five courses:
- GEOG16.160 Intro to the Mapping and Geographic Information Sciences
- GEOG16.290 The History & Methods of Modern Geography
- GEOG16.130 Earth Sciences Lab
- GEOG16.490 Senior Seminar in Geography - WI
- GEOG16.390 Geography Research Clinic/Studio or Internship (note: course waived for education dual majors)

**Geography Program Electives**  
18-24 s.h.

Majors must take 6 additional courses offered within the department selected in consultation with the program coordinator. It is highly recommended that these 6 courses are chosen to fulfill one of the concentrations or minors in the department including Concentration in Applied Geographic Knowledge and Skills (for coordinate education dual majors), Concentration in Geoscience, Concentration in Geographic Inquires in Global Issues, Minor in GIS, Minor in Planning, or Minor in Environmental Studies.

**Free Electives**  
31 s.h.

**Total Credits for Graduation**  
120 s.h.

Note: Coordinate Education-Geography dual majors must use their 18 s.h. of geography program electives to fulfill the requirements for the Concentration in Applied Geographic Knowledge and Skills (see below). Also, Coordinate Education-Geography dual majors can use their student teaching experience in place of GEOG16.390 Geography Research Clinic/Internship. Geography BA majors cannot pursue a double major with BS Planning or BS GIS.

**BACHELOR OF ARTS IN ENVIRONMENTAL STUDIES**

Jordan P. Howell  
Program Coordinator  
Robinson Hall  
856.256.4831  
howellj@rowan.edu

The interdisciplinary Bachelor of Arts in Environmental Studies achieves both breadth and focus in its curriculum in order to respond to the growing need for well-rounded, well-trained environmental experts in industry, government, and education. Environmental problems are priority issues of national and global concern. Basic coursework in biology, chemistry, ethics, geography and social sciences, as well as the application of basic science and research methodology to environmental issues are the strengths of the program. The program emphasizes the interdisciplinary aspects of the environment, providing graduates with the necessary background for a variety of environmental positions, as well as placement as strong candidates for graduate programs in environmental sciences. In addition to courses within the Department of Geography and Environment, the program draws an interdisciplinary set of courses from the Departments...
of Biological Sciences, Chemistry and Biochemistry, Philosophy and Religion, Physics and Astronomy, and Sociology. The major has a requirement of 28 s.h. in a common core, including an internship and Senior Seminar project.

General Education  
All students must complete the University General Education requirements as described on page 33

Rowan Experience  
All students must complete the Rowan Experience requirements as described on page 35

Program Requirements  
- STAT02.260 Statistics I
- PHYS00.150 Physics of Everyday Life
- ANTH02.202 Cultural Anthropology
- ANTH02.221 or Human Variation
- ECON04.101 Macroeconomics
- GEOG16.100 Earth, People and Environment (MG)
- or GEOG16.110 Cultural Geography (MG)
- or GEOG16.140 World Regional Geography (MG)
- PHIL09.369 Philosophy of Science (WI)

Scientific Foundations  
- CHEM05.102 Chemistry of Everyday Life *
- BIOL01.112 General Biology Environmental Focus*

Social Science Foundations  
- GEOG16.160 Introduction to the Mapping and Geographic Information Science *
- SOC08.120 Intro to Sociology *

Common Core  
- ENST94.101 Environmental Studies - Physical Perspectives *
- ENST94.102 Environmental Studies - Social Perspectives *
- ENST94.301 Environmental Ethics *
- ENST94.321 Field Methods and Research Design for Environmental Studies *
- SOC08.400 Environment Policy and Society *
- PLAN31.280 Intro to Planning & Environmental Design *
- GEOG16.260 Geographic Information Systems (GIS) I *
- ENST94.401 Senior Seminar in Environmental Studies I *
- GEOG16.390 Geography Research Clinic/Studio (Internship Experience) *

Environmental Studies Electives  
Majors must take 6 additional courses in consultation with the program coordinator. These courses generally come from the courses offered in the department (see course banks below) but can come from any department provided that they have a connection to environmental issues and tie into the environmental career specialty interests of the student. It is highly recommended that these 6 courses are chosen to fulfill one of the concentrations or minors in the department including Minor in Geography, Minor in GIS, Minor in Planning, Concentration in Environmental Science, Concentration in Geoscience, or Concentration in Geographic Inquires in Global Issues. A minor or concentration in other programs such as Biological Science or Chemistry is also an option.

Free Electives  
Chosen with the help of advisor and with consideration for future educational and career plans.

Program Total  
120 s.h.

Environmental Studies Requirements  
2.00 overall G.P.A.
2.5 Major G.P.A.
Environmental Studies Core Courses must receive a ‘C’ or better (classes marked with a *)

BACHELOR OF SCIENCE IN COMMUNITY AND ENVIRONMENTAL PLANNING
John Hasse  
Program Coordinator  
Robinson Hall  
856.256.4812  
hasse@rowan.edu

The Bachelor of Science in Community and Environmental Planning major is a professional degree program that prepares students for positions in local, state, and federal agencies, private companies, planning departments, engineering firms, and many others as well as graduate education in planning. The program introduces students to the diversity of the planning
profession while providing an understanding of the broader purpose of planning and the opportunity to focus on practice and application through research and studio credits. It is intended to serve high-achieving students interested in advanced careers in the diverse and dynamic field of planning. The program at Rowan has a special focus on sustainable community design, land conservation and the specific planning practices and challenges of the region.

General Education 31 s.h.
All students must complete the University General Education requirements as described on page 33

Rowan Experience 18 s.h.
All students must complete the Rowan Experience requirements as described on page 35

Introductory Geography Requirements 6 s.h.

MUST TAKE

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 16.100</td>
<td>Earth, People and Environment</td>
</tr>
<tr>
<td>GEOG 16.110</td>
<td>Cultural Geography</td>
</tr>
<tr>
<td>GEOG 16.140</td>
<td>World Regional Geography</td>
</tr>
</tbody>
</table>

AND Take one of the two following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 16.110</td>
<td>Cultural Geography</td>
</tr>
<tr>
<td>GEOG 16.140</td>
<td>World Regional Geography</td>
</tr>
</tbody>
</table>

Geography Core:
Take the following four courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 16.160</td>
<td>Introduction to Mapping and Geographic Information Sciences *</td>
</tr>
<tr>
<td>GEOG 16.290</td>
<td>History and Methods of Modern Geography*</td>
</tr>
<tr>
<td>GEOG 16.490</td>
<td>Undergraduate Research Seminar in Geography-WI (Senior Seminar)*</td>
</tr>
<tr>
<td>GEOG 16.390</td>
<td>Geography Research Clinic/Studio or Internship 3 s.h.</td>
</tr>
</tbody>
</table>

Planning Core: must complete the following seven courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLAN 31.280</td>
<td>Introduction to Planning and Environmental Design *</td>
</tr>
<tr>
<td>GEOG 16.302</td>
<td>Urban Geography*</td>
</tr>
<tr>
<td>PLAN 31.383</td>
<td>Metropolitan &amp; Regional Planning *</td>
</tr>
<tr>
<td>PLAN 31.386</td>
<td>Land Use and Conservation *</td>
</tr>
<tr>
<td>PLAN 31.385</td>
<td>New Jersey Planning Practice *</td>
</tr>
<tr>
<td>PLAN 31.389</td>
<td>Environmental / Sustainable Planning *</td>
</tr>
<tr>
<td>PLAN 31.496</td>
<td>Community Planning &amp; Site Design *</td>
</tr>
</tbody>
</table>

Program Electives 12 s.h.
Must complete four additional courses (12 s.h.) from the Planning or GIS elective banks (see below) chosen in consultation with the Planning Advisor.*

Planning Specialization 12+ s.h.
Choose 4 elective specialization classes (12 s.h.) in consultation with the Planning Program Coordinator. It is highly recommended that courses chosen contribute to completing a minor or concentration such as GIS Minor, Geoscience Concentration or Environmental Studies Minor.

Free Electives 6 s.h.
Program Total 120 s.h.

Graduation Requirements (minimum)

B.S. COMMUNITY AND ENVIRONMENTAL PLANNING
2.00 Overall G.P.A.
2.5 Major G.P.A.
BS Community and Environmental Planning majors must complete all Planning Courses with a ‘C’ or better (classes marked with *).

BACHELOR OF SCIENCE IN GEOGRAPHIC INFORMATION SCIENCE (GIS)
Zachary Christman
Program Coordinator
Robinson Hall
856.256.4810
christmanz@rowan.edu

The Bachelor of Science in Geographic Information Science (B.S.GIS) major is a professional degree program that prepares students for a career in Geospatial Technologies, a rapidly growing technology industry. Graduates of our program are well-prepared for positions in research laboratories, local, state, and federal agencies, private companies, planning departments, engineering firms, and many others. Our students are also excellently prepared for pursuing advanced graduate degree programs. The B.S. GIS program is highly technical providing students with in-depth skills in GIS analysis and programming. It is intended to serve high-achieving students interested in advanced careers in Geospatial Technologies. The program at Rowan has a special focus on web-based mapping, environmental sustainability and the emerging field of geodesign which coordinates well with our planning offerings.
General Education 31 s.h.
All students must complete the University General Education requirements as described on page 33

Rowan Experience 18 s.h.
All students must complete the Rowan Experience requirements as described on page 35

Introductory Geography Requirements 6 s.h.
**MUST TAKE**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG16.100</td>
<td>Earth, People and Environment</td>
</tr>
<tr>
<td>GEOG16.110</td>
<td>Cultural Geography</td>
</tr>
<tr>
<td>GEOG16.140</td>
<td>World Regional Geography</td>
</tr>
</tbody>
</table>

**AND one of the following two courses:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG16.110</td>
<td>Cultural Geography</td>
</tr>
<tr>
<td>GEOG16.140</td>
<td>World Regional Geography</td>
</tr>
</tbody>
</table>

Geography Core 12 s.h.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG16.160</td>
<td>Introduction to Mapping and Geographic Information Sciences *</td>
</tr>
<tr>
<td>GEOG16.260</td>
<td>GIS I *</td>
</tr>
<tr>
<td>GEOG16.290</td>
<td>History and Methods of Modern Geography *</td>
</tr>
<tr>
<td>GEOG16.490</td>
<td>Undergraduate Research Seminar in Geography-WI (Senior Seminar)*</td>
</tr>
<tr>
<td>GEOG16.300</td>
<td>Geography Research Clinic/Studio or Internship</td>
</tr>
<tr>
<td>GEOG16.290</td>
<td>History and Methods of Modern Geography *</td>
</tr>
<tr>
<td>GEOG16.490</td>
<td>Undergraduate Research Seminar in Geography-WI (Senior Seminar)*</td>
</tr>
<tr>
<td>GEOG16.300</td>
<td>Geography Research Clinic/Studio or Internship</td>
</tr>
</tbody>
</table>

Quantitative Courses (6-8 s.h.)

*Take one of the following sets of two courses*

**Set 1:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS01.102</td>
<td>Introduction to Programming</td>
</tr>
<tr>
<td>CS04.103</td>
<td>Computer Science and Programming</td>
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**Set 2:**

<table>
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<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>MATH01.130</td>
<td>Calculus I</td>
</tr>
<tr>
<td>MATH01.131</td>
<td>Calculus II</td>
</tr>
</tbody>
</table>

**Set 3:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT02.260</td>
<td>Statistics I</td>
</tr>
<tr>
<td>STAT02.261</td>
<td>Statistics II</td>
</tr>
</tbody>
</table>

GIS Core Requirements 18 s.h.

*Must take the following six courses*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG16.260</td>
<td>GIS I *</td>
</tr>
<tr>
<td>GEOG16.300</td>
<td>GIS II *</td>
</tr>
<tr>
<td>GEOG16.305</td>
<td>Geospatial Modeling *</td>
</tr>
<tr>
<td>GEOG16.261</td>
<td>Cartography *</td>
</tr>
<tr>
<td>GEOG16.375</td>
<td>Remote Sensing of the Environment *</td>
</tr>
<tr>
<td>GEOG16.350</td>
<td>Quantitative Methods in Geography *</td>
</tr>
</tbody>
</table>

GIS Core Electives 6 s.h.

Must complete two additional courses (6 s.h.) from the GIS bank or alternate courses with a clear connection to GIS chosen in consultation with the GIS advisor.

GIS Elective Specialization 12 s.h.

Choose 4 classes in consultation with the GIS advisor. In order to gain a focused specialization, it is highly recommended that courses chosen contribute to completing a minor or concentration. Some of the fields which make excellent compliments to a BS in GIS include but are not limited to the following: Computer Science Minor, Economics Minor, Environmental Studies Minor, Geoscience Concentration, Law Justice Minor, Planning Minor, Urban Studies Concentration, MIS Minor.

Free Electives 18 s.h.

Program Total 121-123 s.h.

Graduation Requirements (minimum)

B.S. GIS

2.00 Overall G.P.A.

2.5 Major G.P.A.

GIS BS majors must complete all GIS Courses with a ‘C’ or better (classes marked with *).

MINOR IN GEOGRAPHY

Total Credits 18-19 s.h.

The Minor in Geography requires students to take two of the following introductory courses (6-7 s.h.):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG16.100</td>
<td>Earth, People, and Environment (M/G)</td>
</tr>
<tr>
<td>GEOG16.130</td>
<td>Earth Sciences Lab (Lab) 4 s.h.</td>
</tr>
<tr>
<td>GEOG16.110</td>
<td>Cultural Geography (M/G)</td>
</tr>
<tr>
<td>GEOG16.140</td>
<td>World Regional Geography (M/G)</td>
</tr>
<tr>
<td>GEOG16.160</td>
<td>Intro to Mapping and Geographic Information Sciences</td>
</tr>
</tbody>
</table>
Students then select four (4) additional geography courses selected in consultation with the minor advisor.

**MINOR IN ENVIRONMENTAL STUDIES**

Total Credits 19 s.h.

**Fundamental core** 6 s.h.

- ENST94.101 Environmental Studies - Physical Perspectives 3 s.h.
- ENST94.102 Environmental Studies - Social Perspectives 3 s.h.

**Scientific Foundations** 4 s.h.

- CHEM05.102 Chemistry of Everyday Life 4 s.h.
- BIOL01.112 General Biology Environmental Focus 4 s.h.

**Social Science Foundations** 3 s.h.

*Take one of the following two courses:*

- GEOG16.160 Introduction to the Mapping and Geographic Information Science 3 s.h.
- SOC08.120 Intro to Sociology 3 s.h.

**Program Electives: Select two of the following courses:**

- ENST94.301 Environmental Ethics 3 s.h.
- ENST94.302 Technology & the Environment 3 s.h.
- SOC08.400 Environment Policy and Society 3 s.h.
- PLAN31.280 Introduction to Planning and Environmental Design 3 s.h.

**MINOR IN PLANNING**

Total Credits 18 s.h.

The Minor in Planning requires students to take one of the following introductory courses (3 s.h.):

- GEOG16.100 Earth, People and Environment (M/G)
- GEOG16.110 Cultural Geography (M/G)
- GEOG16.140 World Regional Geography (M/G)

*Must take the following course:*

- PLAN31.280 Introduction to Planning & Environmental Design

Students then select any four (4) other courses from the Planning Bank in consultation with an advisor.

**MINOR IN GEOGRAPHIC INFORMATION SYSTEMS**

Total Credits 18 s.h.

The Minor in GIS requires students to take one of the following introductory courses (3 s.h.):

- GEOG16.100 Earth, People and Environment (M/G)
- GEOG16.110 Cultural Geography (M/G)
- GEOG16.140 World Regional Geography (M/G)

*Must take the following two courses:*

- GEOG16.160 Introduction to Mapping and GIS

Students then select any three (9 s.h.) courses from the Geospatial Techniques Bank in consultation with an advisor.

**CONCENTRATION IN APPLIED GEOGRAPHIC KNOWLEDGE AND SKILLS (GeoEducation)**

Total Credits 18 s.h.

(replaces previous coordinate education dual major track) Take the following courses (9 s.h.):

- GEOG16.355 Foundations in Geographic Knowledge 3 s.h.
- GEOG16.241 Geography of New Jersey 3 s.h.
- GEOG16.304 Population Geography 3 s.h.

*Take at least one (1) course in the Regional Geography course bank.
*Take any two other geography courses in consultation with the Geoed advisor.

Note: For dual majors on track for teacher certification, the Applied Geographic Knowledge and Skills concentration will layer on top of the base geography BA program requirements fulfilling the 18 s.h. of program elective credits. Coordinate education majors are allowed to use their student teaching experience to fulfill the GEOG16.390 requirement for geography.

**CONCENTRATION IN GEOSCIENCE**

Total Credits 20 s.h.

Students must take one of the following introductory courses (3 s.h.):

- GEOG16.100 Earth, People and Environment (M/G)
GEOG16.110  Cultural Geography (M/G)  
GEOG16.140  World Regional Geography (M/G)  

Must take the following two lab courses (8 s.h.)  
GEOG16.330  Geology I  
GEOG16.130  Earth Sciences Lab  
4 s.h.

Then select three (3) courses from the Geosciences Course bank in consultation with the Geoscience advisor.

CONCENTRATION IN GEOGRAPHIC INQUIRIES INTO GLOBAL ISSUES  
Total Credits  18 s.h.  
Must take:  
GEOG16.140  World Regional Geography (M/G)  
• Select any two courses from the Geographic Studies Bank (note: courses selected cannot double count for fulfilling geography core requirements)  
• Select any two courses from the Regional Bank  
• Select any one other Geography course in consultation with the Concentration advisor.  
• Note: (A study abroad experience, field course, or internship related to global issues is strongly recommended and can be used to fulfill the above requirements with prior approval, but is not required at this time. Foreign Language courses are also highly recommended for this concentration.)

CONCENTRATION IN ENVIRONMENTAL SCIENCE  
Total Credits  26 s.h.  
Required:  
BIOL01.106  Biology 2: Concepts in Genetics  
BIOL01.203  Biology 3: Introduction to Cell Biology  
BIOL01.204  Biology 4: Global Ecology  
CHEM06.101  Chemistry II  
GEOG16.330  Geology I  

Select one additional course in consultation with the environmental program coordinator related to the student’s chosen environmental focus area.  
Note: If this concentration is taken by Environmental Studies majors, they should replace BIOL01.112 Biology Environmental Focus with BIOL01.104 Biology 1 and CHEM05.102 Chemistry of Everyday Life with CHEM06.100 Chemistry I.

CONCENTRATION IN SUSTAINABLE BUILT ENVIRONMENTS  
Total Credits  21-22 s.h.  
Required:  
GEOG16.160  Introduction to Mapping and Geographic Information Sciences  3 s.h.  
PLAN31.280  Introduction to Planning and Environmental Design  3 s.h.  
PLAN31.389  Environmental/Sustainable Planning  3 s.h.  
CEE08.436  Sustainable Technologies for the Built Environment  3 s.h.  
CEE08.437  Green Buildings  3 s.h.  

Students must choose 2 additional courses from the Sustainable Built Environment course bank below or alternate courses approved in consultation with an advisor:  
PLAN31.384  Water Resources Planning  3 s.h.  
PLAN31.386  Land Use and Conservation  3 s.h.  
PLAN31.486  Community Planning & Site Design  3 s.h.  
ENST94.302  Technology & the Environment  3 s.h.  
ENST94.400  Environmental Impact Assessment  3 s.h.  
GEOG16.361  Geovisualization  3 s.h.  
GEOG16.390  Geo Research Clinic (variable s.h. value)  
CEE08.311  Environmental Engineering I  3 s.h.  
CEE08.312  Sustainable Civil and Environmental Engineering  3 s.h.  
CEE08.342  Water Resources Engineering  3 s.h.  
CEE08.412  Environmental Treatment Process Principles  3 s.h.  
CEE08.432  Pollutant Fate I Transport Principles  3 s.h.  
CEE08.422  Site Remediation Engineering Principles  3 s.h.  
CEE08.433  Principles of Integrated Solid Waste Management  3 s.h.
CERTIFICATE OF UNDERGRADUATE STUDY IN GEOGRAPHIC INFORMATION SYSTEMS AND SCIENCE (GIS)
Zachary Christman
Coordinator
Robinson Hall
856.256.4810
christmanz@rowan.edu

Geospatial and mapping technologies have been important throughout history but have become indispensible during the past several decades. This CUGS in GIS provides a foundation in GIS education and geospatial science to a wide range of students, and provides a means of enhancing the resumes of students of various majors with a GIS certificate indicating to employers their readiness to perform and support GIS activities. This Certificate of Undergraduate Study (CUG) in GIS is intended to expose students in disciplines such as business, engineering, political science, psychology, communication, the natural sciences, and education to key concepts, practices, and techniques in GIS and their application to geospatial/environmental problems. We believe that engineering students in particular will benefit from this CUGS since they are often interested gaining GIS credentials but are unable to complete all 18 credits necessary for the GIS minor.

Certificate of Undergraduate Study in GIS 12 s.h.

The curriculum is as follows:
1. Students must take GEOG16.160 – Intro. to Mapping and GIS (3 s.h.)
2. Students must take GEOG16.260 – Foundations of GIS (3 s.h.)
3. In consultation with an advisor, students choose any two of the department’s Geospatial Bank courses (6 s.h.) which include: GEOG16.261 (Cartography); GEOG16.350 (Quantitative Methods in Geography); GEOG16.360 (Applications of GIS); GEOG16.361 (Geovisualization); GEOG16.365 (Geospatial Modeling); GEOG16.370 (Remote Sensing / Air Photo Interpretation); GEOG16.375 (Remote Sensing of the Environment); GEOG16.462 (Web Mapping and GIS Services)

To be awarded the CUGS in GIS, students must complete all courses required for the CUGS in GIS with at least a 2.0 average. This CUGS is restricted to students not enrolled in the BS GIS and GIS Minor programs.

CERTIFICATE OF UNDERGRADUATE STUDY IN SUSTAINABLE URBANISM
Jen Kitson
Coordinator
Robinson Hall
856.256.4817
kitson@rowan.edu

Two global imperatives make knowledge of sustainable urbanism a critical topic in the 21st century: first, the majority of the world’s population is now urban; and second, the cumulative effects of urban life are generating the most pressing global environmental problems facing humanity. Cities, in short, are both the cause of major environmental problems and the solution. With our population expected to read 9.6 billion by 2050, humanity’s future is hinged upon our ability make cities sustainable: the capacity to meet the needs of the present, without compromising the needs of future generations. To support humanity in the 21st century, we must re-think the processes of urban environments in regards to both their built form and social practices. This Certificate of Undergraduate Study (CUGS) emphasizes the social and place-based dimensions of sustainability, from issues of social equity to the role of communication technologies and aesthetics. Students in disciplines such as business, engineering, political science, psychology, communication, the natural sciences, and education will be exposed to key concepts, practices, and technologies in sustainability and their application to urban environments. This certificate in sustainable urbanism will position students from diverse disciplines for employment in the burgeoning green economy.

Certificate of Undergraduate Study in Sustainable Urbanism 12 s.h.

The curriculum for the CUGS in Sustainable Urbanism is as follows:
1. Students must take PLAN31.280 – Intro. to Planning and Environmental Design (3 s.h.)
2. Students must take any three courses from the following list (9 s.h.): ENST94.102 (Environmental Studies Social Perspectives); ENST94.302 (Technology and the Environment); GEOG16.302 (Urban Geography); GEOG16.301 (Economic Geography); GEOG16.304 (Population Geography); GEOG16.312 (Cultural Landscapes); PLAN31.389 (Environmental/Sustainable Planning); PLAN31.486 (Community Planning & Design).

To be awarded the CUGS in Sustainable Urbanism, students must complete all courses required for the CUGS in Sustainable Urbanism with at least a 2.0 average. This CUGS is restricted to students not enrolled in the BS Sustainable and Community Planning or Planning Minor programs.
Geography & Environment Course Banks

COURSE BANKS Geographic Studies Bank

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG16.100</td>
<td>Earth, People &amp; Environment</td>
</tr>
<tr>
<td>GEOG16.110</td>
<td>Cultural Geography</td>
</tr>
<tr>
<td>GEOG16.140</td>
<td>World Regional Geography</td>
</tr>
<tr>
<td>GEOG16.240</td>
<td>Geography of the US and Canada</td>
</tr>
<tr>
<td>GEOG16.250</td>
<td>Selected Topics in Geography &amp; Environment</td>
</tr>
<tr>
<td>GEOG16.290</td>
<td>History and Methods of Modern Geography</td>
</tr>
<tr>
<td>GEOG16.301</td>
<td>Economic Geography</td>
</tr>
<tr>
<td>GEOG16.302</td>
<td>Urban Geography</td>
</tr>
<tr>
<td>GEOG16.303</td>
<td>Political Geography</td>
</tr>
<tr>
<td>GEOG16.304</td>
<td>Population Geography</td>
</tr>
<tr>
<td>GEOG16.312</td>
<td>Cultural Landscapes</td>
</tr>
<tr>
<td>GEOG16.391</td>
<td>Directed Geographic Field Experiences</td>
</tr>
<tr>
<td>GEOG16.490</td>
<td>Senior Research Seminar in Geography</td>
</tr>
<tr>
<td>GEOG16.491</td>
<td>Independent Study</td>
</tr>
<tr>
<td>GEOG16.553</td>
<td>Workshop in Geography (graduate level)</td>
</tr>
<tr>
<td>GEOG16.591</td>
<td>Independent Study (graduate level)</td>
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</tbody>
</table>

Regional Geography Bank

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG16.140</td>
<td>World Regional Geography</td>
</tr>
<tr>
<td>GEOG16.240</td>
<td>Geography of the United States and Canada</td>
</tr>
<tr>
<td>GEOG16.241</td>
<td>Geography of New Jersey</td>
</tr>
<tr>
<td>GEOG16.342</td>
<td>Geography of Europe</td>
</tr>
<tr>
<td>GEOG16.343</td>
<td>Geography of Asia</td>
</tr>
<tr>
<td>GEOG16.344</td>
<td>Geography of Latin America</td>
</tr>
<tr>
<td>GEOG16.345</td>
<td>Geography of Africa</td>
</tr>
<tr>
<td>GEOG16.346</td>
<td>Geography of the C.I.S. (former Soviet Union)</td>
</tr>
<tr>
<td>GEOG16.347</td>
<td>Geography of the Middle East</td>
</tr>
</tbody>
</table>

Geosciences Bank

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG16.100</td>
<td>Earth, People &amp; Environment</td>
</tr>
<tr>
<td>GEOG16.130</td>
<td>Earth Sciences Lab 4 s.h.</td>
</tr>
<tr>
<td>GEOG16.330</td>
<td>Geology I 4 s.h.</td>
</tr>
<tr>
<td>GEOG16.331</td>
<td>Geology of the National Parks</td>
</tr>
<tr>
<td>GEOG16.332</td>
<td>Geomorphology</td>
</tr>
<tr>
<td>GEOG16.334</td>
<td>The Geoscience of Natural Disasters</td>
</tr>
<tr>
<td>GEOG16.335</td>
<td>Field Studies in Geography</td>
</tr>
<tr>
<td>GEOG16.338</td>
<td>Climatology</td>
</tr>
<tr>
<td>GEOG16.370</td>
<td>Remote Sensing/Air Photo Interpretation</td>
</tr>
<tr>
<td>GEOG16.340</td>
<td>Geology II 4 s.h.</td>
</tr>
<tr>
<td>GEOG16.351</td>
<td>Principles of Earth Science</td>
</tr>
<tr>
<td>GEOG16.133</td>
<td>Meteorology 4 s.h.</td>
</tr>
</tbody>
</table>

Geospatial Techniques Bank

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG16.160</td>
<td>Introduction to Mapping and GIS</td>
</tr>
<tr>
<td>GEOG16.260</td>
<td>Geographic Information Systems I</td>
</tr>
<tr>
<td>GEOG16.261</td>
<td>Cartography</td>
</tr>
<tr>
<td>GEOG16.350</td>
<td>Quantitative Methods in Geography</td>
</tr>
<tr>
<td>GEOG16.360</td>
<td>Geographic Information Systems II</td>
</tr>
<tr>
<td>GEOG16.361</td>
<td>Geovisualization</td>
</tr>
<tr>
<td>GEOG16.365</td>
<td>Geospatial Modeling</td>
</tr>
<tr>
<td>GEOG16.370</td>
<td>Remote Sensing/Air Photo Interpretation</td>
</tr>
<tr>
<td>GEOG16.371</td>
<td>Remote Sensing II</td>
</tr>
<tr>
<td>GEOG16.375</td>
<td>Remote Sensing of the Environment</td>
</tr>
<tr>
<td>GEOG16.460</td>
<td>GEO INFO SYS</td>
</tr>
<tr>
<td>GEOG16.462</td>
<td>Web Based GIS Mapping</td>
</tr>
<tr>
<td>GEOG16.505</td>
<td>GIS Topics and Applications (graduate level)</td>
</tr>
</tbody>
</table>

Planning Bank

<table>
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<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG16.160</td>
<td>Introduction to Mapping and GIS</td>
</tr>
<tr>
<td>PLAN31.280</td>
<td>Introduction to Planning &amp; Environmental Design</td>
</tr>
<tr>
<td>PLAN31.380</td>
<td>City Planning I</td>
</tr>
<tr>
<td>PLAN31.383</td>
<td>Metropolitan/Regional Planning</td>
</tr>
<tr>
<td>PLAN31.384</td>
<td>Water Resources Planning</td>
</tr>
<tr>
<td>PLAN31.386</td>
<td>Land Use and Conservation</td>
</tr>
<tr>
<td>PLAN31.387</td>
<td>New Jersey Planning Practice</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
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<tr>
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<td>------------------------------------------------------------------</td>
</tr>
<tr>
<td>PLAN31.389</td>
<td>Environmental/Sustainable Planning</td>
</tr>
<tr>
<td>PLAN31.486</td>
<td>Community Planning and Site Design</td>
</tr>
<tr>
<td>GEOG16.301</td>
<td>Economic Geography</td>
</tr>
<tr>
<td>GEOG16.302</td>
<td>Urban Geography</td>
</tr>
<tr>
<td>GEOG16.304</td>
<td>Population Geography</td>
</tr>
<tr>
<td>GEOG16.307</td>
<td>Geography of Transportation</td>
</tr>
<tr>
<td>GEOG16.335</td>
<td>Field Studies in Geography</td>
</tr>
<tr>
<td>GEOG16.361</td>
<td>Geovisualization</td>
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<td>GEOG16.370</td>
<td>Remote Sensing/Air Photo Interpretation</td>
</tr>
<tr>
<td>ENST94.400</td>
<td>Environmental Impact Assessment</td>
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</tbody>
</table>

**Environmental Bank**

<table>
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<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>ENST94.101</td>
<td>Environmental Studies - Physical Perspectives</td>
</tr>
<tr>
<td>ENST94.102</td>
<td>Environmental Studies - Social Perspectives</td>
</tr>
<tr>
<td>ENST94.301</td>
<td>Environmental Ethics</td>
</tr>
<tr>
<td>ENST94.321</td>
<td>Field Methods and Research Design for Environmental Studies</td>
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<tr>
<td>ENST94.400</td>
<td>Environmental Impact Assessment</td>
</tr>
<tr>
<td>ENST94.401</td>
<td>Senior Seminar in Environmental Studies I</td>
</tr>
</tbody>
</table>
School of Health Professions

Karen Magee-Sauer
Dean
Robinson Hall
856.256.4850
sauer@rowan.edu

About the School
The School of Health Professions provides rigorous academic training, exceptional clinical and internship experiences, and interprofessional opportunities for students interested in careers in nursing and health-related careers. Our students learn from an accomplished faculty in a collaborative environment and gain hands-on training both on and off campus.

Departments
The School of Health Professions consists of two departments: Health & Exercise Science and Nursing.

Programs Offered
The Department of Health & Exercise Science offers degrees in Athletic Training, Health Promotion & Wellness Management, Nutrition, and Health & Physical Education (certification). At the undergraduate level, the Department of Nursing offers an RN-BSN degree and MSN programs in Clinical Nurse Leader and Nurse Practitioner. Programs in Nursing are offered through Rowan Global Learning & Partnerships.

Department of Health and Exercise Science
Robert Sterner
Chair
Herman D. James Hall
856.256.4500 x3767
sterner@rowan.edu

The Department of Health and Exercise Science prepares professionals who can assume leadership roles in school, community, medical and corporate settings. Student majors are persons interested in working with people of varying ages in the areas of health, wellness, human movement, exercise science, health education, physical education, and athletic training. Career opportunities include: teaching health and physical education (Pre-K-12) in public and private school environments; coaching school and recreational athletic teams; managing health promotion programs in community, corporate and medical settings, providing medical treatment and injury rehabilitation for athletes in various arenas, and working in allied health care settings.

The Department of Health and Exercise Science offers undergraduate majors in three related fields:

The Bachelors of Arts in Education with Specialization in Health and Physical Education (129 s.h.) prepares teacher candidates for positions from preschool through high school. This nationally accredited program combines instruction in both Health Education and Physical Education. Successful candidates become dually certified Pre-K-12 Health and Physical Education teachers by the New Jersey State Department of Education.

The Bachelors of Arts in Health and Exercise Science (122 s.h.) is a nationally accredited program that offers a specialization in Health Promotion and Wellness Management (HPWM). HPWM students often go on to work in private fitness facilities, Corporate Health and Wellness Centers, and private and non-profit community and public health programs.

The Bachelors of Science in Athletic Training (125 s.h.) is a nationally accredited program, which prepares students to become Certified Athletic Trainers. Successful graduates go on to work as Athletic Trainers in various professional settings including public schools, colleges, medical centers, industrial, military and professional sport settings. This program will no longer be offered to incoming freshman as of fall 2016. The new program is the Master of Science in Athletic Training, which will be available to incoming Freshmen in fall 2016.

The B.S. in Nutrition with a specialization in Dietetics (127 s.h.) will provide the foundation for students to pursue a M.S. in Nutrition and Dietetics to become Registered Dietitians. The professional phase of study (junior and senior year in the program) is currently seeking national accreditation candidacy as part of a Coordinated Program in Dietetics from Accreditation Council for Education in Nutrition and Dietetics (ACEND).

The B.S. in Nutrition with an Exercise Science specialization (123 s.h.) prepares graduates to work as nutrition educators, counselors and exercise specialists, combining two essential areas of expertise as they serve clients in hospital, worksite, community and school-based wellness and fitness programs.

The Bachelor of Science in Human Performance in Clinical Settings (120 s.h.) prepares students interested in careers related to the field of Exercise Science. These include: Corporate Fitness, Hospital Based Fitness and Wellness Centers, Community Based Fitness Centers, Strength and Conditioning along with other Exercise Science related fields. Students develop the knowledge, skills, and disposition to successfully promote improvements in health, fitness, and performance for
a variety of populations. Graduates will be prepared to earn national certifications through the American College of Sports Medicine, the National Strength and Conditioning Association, the National Academy of Sports Medicine, the International Society of Sports Nutrition and many others. In addition, they will also be uniquely prepared to succeed in graduate programs in physical therapy, occupational therapy, physician assistant programs, cardiac rehabilitation, and other allied health professions.

All students complete courses in General Education, and core and an academic specialization for their major. The upper-level specialization courses are specific and unique to the professional preparation of the student. The number of semester hours varies for each specialization as indicated above.

The Department has a two-level admission and retention policy. Students seeking admission into Health and Exercise Science programs must meet the admission standards established for all Rowan University students. In order to be admitted into and continue with any major a student must demonstrate an above-average academic ability and be involved in professional-related activities. Each of the three majors offered within the department provide students with numerous experiences and opportunities to grow professionally.

The philosophy of the department is to extend the classroom knowledge and theory into field experience settings. Students in the Health and Physical Education Teacher Certification major will complete field experiences in both elementary and secondary settings at different educational levels including teaching children with special needs. Health Promotion and Fitness Management internships are completed in corporate wellness facilities, community health agencies, and hospital-based wellness and rehabilitation centers. Athletic Training students work with on-campus, high school and possibly professional sport teams.

Department of Nursing
MaryEllen Santucci
Chair
Enterprise Center
Office 341
856.256.5142
santucci@rowan.edu

The Department of Nursing is an academic department within the College of Science and Mathematics that collaborates with Global Learning & Partnerships of Rowan University to deliver nursing programs in a manner that accommodates the busy schedules of working and aspiring nurses. This is accomplished by combining online coursework with face-to-face classes and labs to provide a balance of convenient scheduling and access to our expert nursing faculty.

BACHELOR OF SCIENCE IN NURSING (RN TO BSN)

The Bachelor of Science Degree in Nursing is offered jointly by the Rowan University School of Health Professions and the Division of Global Learning & Partnerships. It is designed to give additional professional education at the baccalaureate level to practicing nurses. The BSN degree prepares registered nurses to work in the ever-expanding field of nursing. This degree allows nurses to augment their knowledge base and thus enhance their careers. The Bachelor of Science Degree also acts as a stepping stone for the nurse who wishes to pursue a Master of Science Degree in Nursing with six graduate nursing credits included in the program curriculum. The program is designed as a part-time program to accommodate professionals’ schedules while still completing the degree in a timely manner.

RN-to-BSN Curriculum

The complete curriculum includes 121 credits: 31 credits in the RN-to-BSN major and 90 credits of general education courses required by Rowan University for graduation from any bachelor’s degree program. Students graduating from an Accreditation Commission for Education in Nursing (ACEN) associate degree or diploma program are awarded 30 pre-licensure nursing credits upon matriculation into the program. Students transfer credits for coursework completed prior to admission to the program. Degree candidates are encouraged to plan a course of study that meets both the programmatic criteria as well as courses that meet their individual needs and interests.

- Students may transfer up to 90 credits in general education requirements
- Students must fulfill the general education requirements of Rowan University, either through the transfer of credits or completion of courses at Rowan University.
- Additional coursework may be required, depending on the amount of credits transferred to Rowan University.
- Program must be completed on a part-time basis. There is not a full-time option available.

Course of Study

Rowan University requires 121 credits taken within approved general education and major coursework in order to graduate with a Bachelor’s degree. To obtain the BSN all students complete the following coursework:

- 31 credits in the major sequence
- 60 credits in general education requirements
- 30 credits awarded for pre-licensure nursing coursework

General Education
60 general education credits required/transfer credits and remaining coursework to be determined by the Nursing Department

**Basic Admission Requirements**
- Graduation from an Accreditation Commission for Education in Nursing (ACEN) associate degree or diploma program
- One official transcript from all colleges attended
- Minimum cumulative GPA of 2.5
- Current licensure or eligibility to be licensed as a Registered Nurse (RN) in the State of New Jersey
- Current CPR Card
- Current Professional Resume
- Malpractice Insurance
- List of Courses in Progress (if applicable)

**General Education**
All students must complete the University General Education requirements as described on page 33

**Rowan Experience**
All students must complete the Rowan Experience requirements as described on page 35

**Nursing Concentration**

- **NURS03.303** Comprehensive Health Assessment 3 s.h.
- **NURS03.304** Nursing Informatics 3 s.h.
- **NURS03.404** Research, Applications in Nursing Practice 3 s.h.
- **NURS03.401** Community Health Nursing 6 s.h.
- **NURS03.405** Healthcare Policy & Finance 3 s.h.
- **NURS03.403** Nursing Care Delivery Systems 4 s.h.
- **NURS05.504** Advanced Pathophysiology (Graduate Course)* 3 s.h.
- **NURS05.505** Advanced Pharmacology (Graduate Course)* 3 s.h.
- **NURS03.309** Ethics in Healthcare 3 s.h.

**General Education Requirements**
60 S.H.

**Pre-Licensure Nursing Courses in Transfer**
30 S.H.

Consult an academic advisor for policies relating to awarding of prior nursing credit

**Program Total**
121 s.h.

**BACHELOR OF ARTS IN EDUCATION, SPECIALIZATION IN HEALTH AND PHYSICAL EDUCATION**

Dr. Richard Fopeano
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Melvin Pinckney
Advisor
Herman D. James Hall
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pinckney@rowan.edu

**General Education**
All students must complete the University General Education requirements as described on page 33

**Rowan Experience**
All students must complete the Rowan Experience Requirements as described on page 35

**Required Courses**
To complete the program, students must have a minimum of 3.0 overall GPA, 3.0 GPA in the specialization/professional courses. Core Academic Skills for Educators exam must be successfully completed in order to enter Professional Coursework (HPE courses) beyond HPE00.286. Candidates must pass the Health and Physical Education Praxis II exam prior to entry into clinical field experiences. No grades less than a C- will be counted toward graduation.

- **STAT02.100** Elementary Statistics I 3 s.h.
- **NUT00.200** Basic Nutrition 3 s.h.
- **HTEL00.327** Consumer Health Decisions 3 s.h.
- **HESO0.109** Adventure/Experiential Learning 2 s.h.
- **SOC08.120** Introduction to Sociology 3 s.h.
PSY09.209  Child Development  3 s.h.
\textit{or} PSY09.210  Adolescent Development  3 s.h.
PSY01.107  Essential Psychology  3 s.h.
PHYS00.150  Physics of Everyday Life  4 s.h.
\textit{or} BIOL01.113  General Biol Human Focus  3 s.h.
\textit{or} CHEM05.102  Chemistry of Everyday Life  3 s.h.
THD08.135  Elements of Dance  3 s.h.
EDUC01.270  Teaching in Learning Communities I  2/3 s.h.
HPE00.286  Teaching in Learning Communities II  3 s.h.
READ30.280  Teaching Reading and Writing in the Content Areas  3 s.h.
FND52.150  History of American Education  3 s.h.
SPED08.130  Human Exceptionalities  3 s.h.
FND52.230  Characteristics of Knowledge Acquisition  3 s.h.
HES00.116  Safety, First Aid & Basic Understanding of Athletic Injury  3 s.h.
HES00.272  Technology & Assessment HES  3 s.h.
HES00.241  Structure Function of the Human Body I (or A&P I)  3 s.h.
HES00.242  Structure Function of the Human Body II (or A&P II)  3 s.h.
HPE00.240  Motor Development and Motor Learning  3 s.h.
HES00.343  Kinesiology  3 s.h.
HES00.344  Exercise Physiology  3 s.h.
HPE00.252  Foundations of Fitness  3 s.h.
HPE00.310  Teaching Concepts of Physical Education  3 s.h.
HPE00.316  Teaching Concepts of Secondary Physical Education I  3 s.h.
HPE00.320  Teaching Concepts Secondary Physical Education II  3 s.h.
HPE00.325  Teaching Concepts HED I  3 s.h.
HPE00.326  Teaching Concepts HED II  3 s.h.
HPE00.453  School Health Program Planning  2 s.h.
HPE00.456  Teaching Concepts Elementary PE  3 s.h.
HPE00.452  Teaching Concepts of Adapted PE  3 s.h.
HPE00.450  K-12 Curriculum/Instruction  3 s.h.
HPE00.392  Field experience in Teaching Health and Physical Education  1 s.h.
HPE00.461  Clinical Practice Secondary HPE  5 s.h.
HPE00.460  Clinical Practice Elementary HPE  5 s.h.
HPE00.465  Clinical Practice Seminar in HPE  2 s.h.
\textbf{Total Semester Hours}  129 s.h.

\textbf{Required Courses for Freshmen Starting in Fall 2016}

To complete the program, students must have a minimum of 3.0 overall GPA, 3.0 GPA in the specialization/professional courses. Core Academic Skills for Educators exam must be successfully completed in order to enter Professional Coursework (HPE courses) beyond HPE 00.286. Candidates must pass the Health and Physical Education Praxis II exam prior to entry into clinical field experiences. No grades less than a C - will be counted toward graduation.

\textbf{Required Courses}

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT02.100</td>
<td>Elementary Statistics I</td>
<td>3 s.h.</td>
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<tr>
<td>SOC08.120</td>
<td>Introduction to Sociology</td>
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<tr>
<td>PSY09.209</td>
<td>Child Development</td>
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<td>3 s.h.</td>
</tr>
<tr>
<td>PSY01.107</td>
<td>Essential Psychology</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>PHYS00.150</td>
<td>Physics of Everyday Life</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>\textit{or} BIOL01.113</td>
<td>General Biol Human Focus</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>\textit{or} CHEM05.102</td>
<td>Chemistry of Everyday Life</td>
<td>3 s.h.</td>
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<tr>
<td>THD08.135</td>
<td>Elements of Dance</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>INCL02.210</td>
<td>Principles &amp; Pedagogies in the Inclusive Classroom</td>
<td>2 s.h.</td>
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<tr>
<td>HPE02.210</td>
<td>Principles &amp; Pedagogies in the Inclusive Classroom - Seminar</td>
<td>1 s.h.</td>
</tr>
<tr>
<td>HPE00.286</td>
<td>Teaching in Learning Communities II</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>READ30.280</td>
<td>Teaching Reading and Writing in the Content Areas</td>
<td>3 s.h.</td>
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<td>Safety, First Aid BSC UNDR of Athletic Injury</td>
<td>3 s.h.</td>
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<td>Technology &amp; Assessment HES</td>
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<tr>
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<td>Structure Function of the Human Body I (or A&amp;P I)</td>
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<td>HES00.242</td>
<td>Structure Function of the Human Body II (or A&amp;P II)</td>
<td>3 s.h.</td>
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<td>HPE00.240</td>
<td>Motor Development and Motor Learning</td>
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</tr>
<tr>
<td>HES00.343</td>
<td>Kinesiology</td>
<td>3 s.h.</td>
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</tbody>
</table>
HES00.344  Exercise Physiology  3 s.h.
HPE00.352  Foundations of Fitness  3 s.h.
HPE00.316  Teaching Concepts of Dance in Physical Education  3 s.h.
HPE00.310  Teaching Concepts of Secondary Physical Education I  3 s.h.
HPE00.320  Teaching Concepts Secondary Physical Education II  3 s.h.
HPE00.325  Teaching Concepts HED I  3 s.h.
HPE00.326  Teaching Concepts HED II  3 s.h.
HPE00.453  School Health Program Planning  2 s.h.
HPE00.336  Teaching Concepts Elementary PE  3 s.h.
HPE00.452  Teaching Concepts of Adapted PE  3 s.h.
HPE00.450  K-12 Curriculum/Instruction  3 s.h.
HPE00.392  Practicum in Health and Physical Education  1 s.h.
HPE00.458  Residency I HPE - Elementary  1 s.h.
HPE00.459  Residency I HPE - Secondary  1 s.h.
HPE00.465  Senior Seminar A - HPE  1 s.h.
HPE00.460  Residency II HPE - Elementary  4 s.h.
HPE00.461  Residency II HPE - Secondary  4 s.h.
HPE00.466  Senior Seminar B - HPE  1 s.h.

Total Semester Hours 129 s.h.

BACHELOR OF ARTS IN HEALTH & EXERCISE SCIENCE: HEALTH PROMOTION & WELLNESS
MANAGEMENT SPECIALIZATION

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General Education
All students must complete the University General Education requirements as described on page 33

Rowan Experience
All students must complete the Rowan Experience Requirements as described on page 35

Required Courses
To complete the program, students must have a minimum of 2.00 overall GPA, 2.00 GPA in the specialization.

PHYS00.150  Physics  4 s.h.
 or BIOL01.113  General Biol Human Focus
 or CHEM05.102  Chemistry of Everyday Life
 or HLT00.317  Consumer Health Decisions  3 s.h.
 or HLT00.262  Drugs, Alcohol & Tobacco  3 s.h.
 HLT00.192  Contemporary Health I  3 s.h.
 or HLT00.262  Drugs, Alcohol & Tobacco  3 s.h.
 or PSY05.310  Human Sexuality  3 s.h.
 or HES00.241  Structure/Function I or Anatomy & Physiology I  3/4 s.h.
 or HES00.242  Structure/Function II or Anatomy & Physiology II  3/4 s.h.
The undergraduate Athletic Training Program will no longer be offered to incoming Freshmen starting in Fall 2016 because the Athletic Training Program is transitioning to a Master's Degree. The Athletic Training Program at Rowan University is a rigorous and intense program designed to prepare students to take the Board of Certification, Inc Exam and to become competent Athletic trainers. A major objective of this program is to prepare graduates to enter a variety of employment settings and to render care to a wide spectrum of individuals engaged in physical activity. The technical standards set forth by the Athletic Training Program establish the essential qualities considered necessary for students admitted to this program to achieve the knowledge, skills, and competencies of an entry-level certified athletic trainer, as well as meet the expectations for the Commission on Accreditation of Athletic Training Education (CAATE).

The following abilities and expectations must be met by all students admitted to the Athletic Training Program. In the event a student is unable to fulfill these technical standards, with or without reasonable accommodation, the student will not be admitted into the program.

Compliance with the program’s technical standards does not guarantee a student's eligibility for Athletic Training Program or the Board of Certification (BOC, Inc.) exam.

Candidates for selection to the Athletic Training Program must demonstrate:

1. The capacity to assimilate, analyze, synthesize, integrate concepts and problem solve to formulate assessment and therapeutic judgments and to be able to distinguish deviations from the norm
2. Sufficient postural and neuromuscular control, sensory function, and coordination to perform appropriate physical examinations using accepted techniques; and accurately, safely and efficiently use equipment and materials during the assessment and treatment of patients
3. The ability to communicate effectively and sensitively with patients and colleagues, including individuals from different cultural and social backgrounds; this includes, but is not limited to, the ability to establish rapport with patients and communicate judgments and treatment information effectively. Students must be able to understand and speak the English language at a level consistent with competent professional practice
4. The ability to record the physical examination results and a treatment plan clearly and accurately
5. The capacity to maintain composure and continue to function well during periods of high stress
6. The perseverance, diligence and commitment to complete the athletic training education program as outlined and sequenced
7. Flexibility and the ability to adjust to changing situations and uncertainty in clinical situations
8. Affective skills and appropriate demeanor and rapport that relate to professional education and quality patient care

**General Education**
All students must complete the University General Education requirements as described on page 33

**Rowan Experience**
All students must complete the Rowan Experience Requirements as described on page 35

**Required Courses**
To complete the program, students must have a minimum of 2.0 overall GPA and 3.0 GPA in the Athletic Training major. No grades less than a C in any Athletic Training major course will be counted toward graduation. Please see the following links for more information:
- Pre-requisites for Application to the Athletic Training Program's Professional Phase
- Professional Phase Application Procedures
- Final Acceptance Criteria for Professional Phase Application
- Athletic Training Program's Retention Criteria
- Athletic Training Program's Exit (Graduation) Requirements

Please follow Rowan University transfer policy when applying for acceptance to Rowan University. Once accepted into Rowan University, the Athletic Training Program has an additional transfer policy. Please refer to the following: Athletic Training Program's Transfer Policy

Below is the curriculum for those that have been enrolled in the Athletic Training Program since Fall 15. Those enrolled in the Athletic Training major since Fall 2016 will use the MSAT curriculum.

<table>
<thead>
<tr>
<th>Course Code</th>
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<td>PSY01.107</td>
<td>Essentials of Psychology</td>
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<td>PSY09.210</td>
<td>Adolescent Development</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>PHYS00.150</td>
<td>Physics for Everyday Life</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>or PHYS00.210</td>
<td>Physics I</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>BIOL01.113</td>
<td>General Bio Human Focus</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>or BIOL01.104</td>
<td>Bio I</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>HLT00.192</td>
<td>Contemporary Health I</td>
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<tr>
<td>HLT00.193</td>
<td>Contemporary Health II</td>
<td>3 s.h.</td>
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<tr>
<td>BIOL01.210</td>
<td>Anatomy and Physiology I</td>
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</tr>
<tr>
<td>BIOL01.212</td>
<td>Anatomy and Physiology II</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>ATR00.147</td>
<td>Applied Biomechanics</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ATR00.105</td>
<td>Introduction to Athletic Training</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ATR00.218</td>
<td>Prevention and Care of Orthopedic Injuries</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ATR00.219</td>
<td>Pathology &amp; Evaluation of Orthopedic Injuries I</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ATR00.238</td>
<td>Pathology &amp; Evaluation of Orthopedic Injuries I - Lab</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>ATR00.220</td>
<td>Pathology &amp; Evaluation of Orthopedic Injuries II</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ATR00.239</td>
<td>Pathology &amp; Evaluation of Orthopedic Injuries II - Lab</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>NUT00.200</td>
<td>Basic Nutrition</td>
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</tr>
<tr>
<td>NUT00.415</td>
<td>Nutrition For Fitness</td>
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</tr>
<tr>
<td>ATR00.334</td>
<td>Advanced Emergency Care</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HES00.345</td>
<td>Exercise Physiology with Lab</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>ATR00.475</td>
<td>Therapeutic Modalities</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ATR00.477</td>
<td>Therapeutic Modalities - Lab</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>ATR00.478</td>
<td>Therapeutic Exercise</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ATR00.476</td>
<td>Therapeutic Exercise - Lab</td>
<td>2 s.h.</td>
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<tr>
<td>HES00.401</td>
<td>Exercise Prescription</td>
<td>3 s.h.</td>
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<tr>
<td>ATR00.338</td>
<td>Clinical Techniques in Athletic Training I</td>
<td>2 s.h.</td>
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<tr>
<td>ATR00.339</td>
<td>Clinical Techniques in Athletic Training II</td>
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<tr>
<td>ATR00.340</td>
<td>Clinical Techniques in Athletic Training III</td>
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<tr>
<td>ATR00.341</td>
<td>Clinical Techniques in Athletic Training IV</td>
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<td>ATR00.338</td>
<td>Residency in Athletic Training I</td>
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<tr>
<td>ATR00.359</td>
<td>Residency in Athletic Training II</td>
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<tr>
<td>ATR00.360</td>
<td>Residency in Athletic Training III</td>
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<tr>
<td>ATR00.361</td>
<td>Residency in Athletic Training IV</td>
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<tr>
<td>ATR00.479</td>
<td>General Medicine/Pharmacology</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ATR00.405</td>
<td>Organization &amp; Administration of Athletic Training</td>
<td>3 s.h.</td>
</tr>
</tbody>
</table>
All Fall 2016 freshmen will be enrolled in the Pre-Preprofessional Phase of the Master’s in Athletic Training Program. Please see Future MSAT website page for Pre-requisites for Application to the Athletic Training Program’s Professional Phase, Professional Phase Application Procedures, Final Acceptance Criteria for Professional Phase Application, Athletic Training Program’s Retention Criteria and Athletic Training Program’s Exit (Graduation) Requirements.

Please follow Rowan University transfer policy when applying for acceptance to Rowan University. Once accepted into Rowan University, the Athletic Training Program has an additional transfer policy. Please refer to the following: Athletic Training Program’s Transfer Policy

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<tr>
<td>BIOL01.113</td>
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<td>BIOL01.104</td>
<td>Bio I</td>
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<tr>
<td>BIOL01.210</td>
<td>Anatomy and Physiology I</td>
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<td>HES00.345</td>
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<td>ATR00.347</td>
<td>Applied Biomechanics</td>
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<td>Introduction to Athletic Training</td>
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<td>Therapeutic Modalities</td>
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<tr>
<td>ATR00.447</td>
<td>Therapeutic Modalities – Lab</td>
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<td>ATR00.578</td>
<td>Therapeutic Exercises</td>
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<td>Therapeutic Exercise – Lab</td>
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<td>ATR00.479</td>
<td>Pharmacology and General Medicine</td>
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<td>ATR00.495</td>
<td>Organization and Administration in Athletic Training</td>
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<td>ATR00.477</td>
<td>Psychosocial Aspects of Physical Activity</td>
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<td>ATR00.318</td>
<td>Clinical Techniques in Athletic Training I</td>
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<tr>
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</tr>
<tr>
<td>ATR00.340</td>
<td>Clinical Techniques in Athletic Training III</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>ATR00.341</td>
<td>Clinical Techniques in Athletic Training IV</td>
<td>2 s.h.</td>
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<tr>
<td>ATR00.338</td>
<td>Residency in Athletic Training I</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ATR00.359</td>
<td>Residency in Athletic Training II</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ATR00.360</td>
<td>Residency in Athletic Training III</td>
<td>3 s.h.</td>
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<tr>
<td>ATR00.361</td>
<td>Residency in Athletic Training IV</td>
<td>3 s.h.</td>
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<tr>
<td>STAT02.350</td>
<td>Applied Statistical Analysis in Athletic Training</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ATR00.305</td>
<td>Research Methods in Athletic Training</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ATR00.410</td>
<td>Advanced Topics in Clinical Evaluation through Cadaver Anatomy</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ATR00.520</td>
<td>Advanced Rehabilitation Techniques: An Evidence-Based Approach to Rehabilitation</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ATR00.440</td>
<td>Fellowship in Athletic Training I</td>
<td>5 s.h.</td>
</tr>
<tr>
<td>ATR00.441</td>
<td>Fellowship in Athletic Training II</td>
<td>5 s.h.</td>
</tr>
<tr>
<td>ATR00.460</td>
<td>Thesis I</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>ATR00.461</td>
<td>Thesis II</td>
<td>4 s.h.</td>
</tr>
</tbody>
</table>

**Total Semester Hours: 148 s.h.**
BACHELOR OF SCIENCE IN NUTRITION
Dr. Qian Jia
Program Coordinator
Herman D. James Hall
856.256.4785
jia@rowan.edu

Ms. Jeanine Dowd
Advisor
Herman D. James Hall
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dowd@rowan.edu

General Education
All students must complete the University General Education requirements as described on 33

Rowan Experience
All students must complete the Rowan Experience Requirements as described on 35

Required Courses
To complete the program, students must have a minimum of 2.00 overall GPA, 2.00 GPA in the specialization.
To be accepted and maintain their standing into the professional phase of the program with Dietetics specialization, students must maintain an overall GPA of 3.0 as well as GPA of 3.0 in major courses.

Core Requirements in the Major
- HES00.272 Technology and Assessment in HES 3 s.h.
- HPW00.350 Health Behavior 3 s.h.
- HES00.301 Research Methods in HES 3 s.h.
- NUT00.230 Intro to Nutrition Professions 3 s.h.
- NUT00.210 Macronutrients 3 s.h.
- NUT00.220 Micronutrients 3 s.h.
- NUT00.300 Lifecycle Nutrition 3 s.h.
- NUT00.310 Management of Food and Nutritional Services 3 s.h.
- NUT00.415 Nutrition for Fitness 3 s.h.
- NUT00.420 Contemporary Issues Nutrition 3 s.h.

Total Core Course Requirement 30 s.h.

Exercise Science Specialization Requirements
- BIOL01.113 Biology Human Focus 4 s.h.
- HES00.343 Kinesiology 3 s.h.
- HES00.345 Exercise Physiology w/Lab 4 s.h.
- HLT00.192 Contemporary Health I 3 s.h.
- HESys.343 Safety, First Aid and Prevention 3 s.h.
- HES00.401 Exercise Prescription 3 s.h.
- HES00.329 Personal Training Techniques Lab 1 s.h.
- HES00.412 Exercise for Special Populations 3 s.h.
- HPW00.340 Program Plan and Leadership in Heal Promo & Wellness 3 s.h.
- HES00.481 Senior Internship in HES 9 s.h.

TOTAL Exercise Science Specialization 36 s.h.

Free Electives (for Exercise Science Track only) 15 s.h.

Dietetics Specialization Requirements
- CHEM06.101 Chemistry II 4 s.h.
- CHEM07.200 Organic Chemistry I 4 s.h.
- BIOL01.205 Foundations in Biology for Biomedical Sciences 1 4 s.h.
- BIOL01.206 Foundations in Biology for Biomedical Sciences 2 4 s.h.
- ANTH02.215 Medical Anthropology (M/G) 3 s.h.
- CHEM07.348 Biochemistry 4 s.h.
- BIOL11.330 Microbiology 4 s.h.
- PSY01.107 Essentials of Psychology 3 s.h.
- NUT00.320 Techniques of Food Preparation 3 s.h.
- NUT00.330 Nutrition Therapy 1 3 s.h.
- NUT00.340 Nutrition Therapy 2 3 s.h.
- NUT00.350 Nutrition Education for Diverse Populations 3 s.h.
NUT00.400 Quantity Food Production 3 s.h.
NUT00.410 Policy Issues in Dietetics Practice 3 s.h.
NUT00.425 Principles of Food Science 3 s.h.
or NUT00.525 Advanced Principles of Food Science (graduate) 3 s.h.

TOTAL Dietetics specialization 55 s.h.

Non-program courses that can fulfill General Education requirements:

Science and Mathematics
- CHEM06.100 Chemistry I 4 s.h.
- STAT02.100 Elementary Statistics 3 s.h.

Social and Behavioral Sciences
- HLT00.327 Consumer Health Decisions 3 s.h.
- ECON04.101 Macroeconomics 3 s.h.

General Education Electives
- BIOL10.210 Anatomy & Physiology I 4 s.h.
- BIOL10.212 Anatomy & Physiology II 4 s.h.
- NUT00.200 Basic Nutrition 3 s.h.

PROGRAM TOTAL SEMESTER HOURS
Exercise Science Track (30 Core, 36 Specialization, 15 credits Free Electives, 42 Gen. Ed.) 123 Credits
Dietetics Track (30 Core, 55 Specialization, 0 Free Electives, 42 Gen. Ed.) 127 Credits

BACHELOR OF SCIENCE IN HUMAN PERFORMANCE IN CLINICAL SETTINGS
Dr. Gregory Biren
Program Coordinator
Herman D. James Hall
856.256.4500 ext. 3728
biren@rowan.edu

Jeanine Dowd
Advisor
Herman D. James Hall
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dowd@rowan.edu

Laurie Dwyer
Advisor
Herman D. James Hall
856.256.5835
dwyer@rowan.edu

General Education
All students must complete the University General Education requirements as described on page 33

Rowan Experience
All students must complete the Rowan Experience Requirements as described on page 35

Required Courses
To complete the program, students must have a minimum 2.00 overall GPA, 2.00 GPA in the major.

- BIOL10.210 Anatomy and Physiology I 4 s.h.
- BIOL10.212 Anatomy and Physiology II 4 s.h.
- BIOL01.104 Biology 1: Diversity, Evolution, & Adaptation 4 s.h.
- BIOL01.106 Biology 2: Concepts in Genetics 4 s.h.
- HES00.105 Foundations of Human Performance in Clinical Settings 3 s.h.
- HES00.243 Motor Control and Learning 3 s.h.
- CHEM06.100 Chemistry I 4 s.h.
- HES00.343 Kinesiology 3 s.h.
- HES00.345 Exercise Physiology with Lab 4 s.h.
- NUT00.200 Basic Nutrition 3 s.h.
- NUT00.343 Nutrition for Fitness 3 s.h.
- HES00.345 Exercise Physiology with Lab 4 s.h.
- HPW00.350 Health Behavior Theory and Counseling 3 s.h.
- HES00.361 Research Methods in Health and Exercise Science 3 s.h.
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<td>HLT00.327</td>
<td>Consumer Health Decisions</td>
<td>3 s.h.</td>
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<tr>
<td>HES00.401</td>
<td>Exercise Prescription</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HES00.412</td>
<td>Exercise For Special Populations</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HES00.329</td>
<td>Lab/Personal Training Techniques</td>
<td>1 s.h.</td>
</tr>
<tr>
<td>HPW00.360</td>
<td>Facility &amp; Program Management in Wellness</td>
<td>3 s.h.</td>
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<tr>
<td>HES00.348</td>
<td>Human Disease and Epidemiology in HES</td>
<td>3 s.h.</td>
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<tr>
<td>HES00.412</td>
<td>EKG Interpretation and Basic Pharmacology in HES</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>ATR00.347</td>
<td>Applied Biomechanics</td>
<td>3 s.h.</td>
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<tr>
<td>HES00.413</td>
<td>Senior Seminar in HPCS</td>
<td>3 s.h.</td>
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<tr>
<td>HPW00.483</td>
<td>Senior Internship in Health &amp; Exercise Science</td>
<td>9 s.h.</td>
</tr>
</tbody>
</table>

Total Semester Hours: 120 s.h.

**BACHELOR OF ARTS IN COMMUNITY HEALTH ADVOCACY AND EDUCATION**

Dr. Shari Willis  
Program Coordinator  
Herman D. James Hall  
856.256.4500 ext. 3702  
williss@rowan.edu  

Alicia Groatman  
Advisor  
Herman D. James Hall  
856.256.4735  
groatman@rowan.edu

**General Education**  
All students must complete the University General Education requirements as described on page 33

**Rowan Experience**  
All students must complete the Rowan Experience Requirements as described on page 35

**Required Courses**  
To complete the program, students must have a minimum of 2.00 overall GPA, 2.00 GPA in the specialization.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>BIOL01.113</td>
<td>General Biol Human Focus</td>
<td>4 s.h.</td>
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<tr>
<td>HLT00.200</td>
<td>Community and Public Health</td>
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<tr>
<td>HLT00.262</td>
<td>Drugs, Alcohol &amp; Tobacco</td>
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<td>BIOL01.210</td>
<td>Anatomy &amp; Physiology I</td>
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<td>BIOL01.212</td>
<td>Anatomy &amp; Physiology II</td>
<td>4 s.h.</td>
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<tr>
<td>ANTH02.215</td>
<td>Medical Anthropology</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HES00.116</td>
<td>Safety, First Aid &amp; Basic Understanding of Athletic Injury</td>
<td>3 s.h.</td>
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<tr>
<td>NUT00.200</td>
<td>Basic Nutrition</td>
<td>3 s.h.</td>
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<td>HES00.272</td>
<td>Technology &amp; Assessment HES</td>
<td>3 s.h.</td>
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<tr>
<td>HLT00.245</td>
<td>US Health Care Systems</td>
<td>3 s.h.</td>
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<td>HLT00.301</td>
<td>Health and Diverse Populations</td>
<td>3 s.h.</td>
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<td>PSY05.310</td>
<td>Human Sexuality</td>
<td>3 s.h.</td>
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<tr>
<td>HLT00.170</td>
<td>Stress Management</td>
<td>3 s.h.</td>
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<tr>
<td>HPW00.350</td>
<td>Health Behavior Theory and Counseling</td>
<td>3 s.h.</td>
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<tr>
<td>HLT00.302</td>
<td>Global Health</td>
<td>3 s.h.</td>
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<tr>
<td>HLT00.304</td>
<td>Grant Writing in HES</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HLT00.303</td>
<td>Environmental Issues and Health</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HPW00.340</td>
<td>Prog. Planning &amp; Leadership in Health Prom. &amp; Wellness</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HES00.348</td>
<td>Human Disease and Epidemiology</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HLT00.145</td>
<td>US Health Care Policy, Ethics and Advocacy</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HLT00.300</td>
<td>Implementation and Assessment in Public Health</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HES00.401</td>
<td>Research Methods in HES</td>
<td>3 s.h.</td>
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<tr>
<td>HLT00.415</td>
<td>Public Health Methods and Interventions</td>
<td>3 s.h.</td>
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<td>HLT00.410</td>
<td>Senior Seminar in CHAE</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HES00.483</td>
<td>Senior Internship in HES</td>
<td>9 s.h.</td>
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</tbody>
</table>

Total Semester Hours: 120 s.h.
Faculty List

Department of Accounting and Finance
Chung, Shifei(1997)  Professor
  B.S., National Taiwan University; M.S., University of Wisconsin-Madison; CPA; Ph.D., University of Memphis
Fabrico-Basile, Tracey(2012)  Instructor
  B.S., Rowan University (Glassboro State College); M.S.I.T., Widener University
Folkinshteyn, Daniel(2011)  Assistant Professor
  B.A. Yale; MS, MBA, Ph.D Temple University
Hughes, Diane(1987)  Associate Professor
  B.A., Rutgers College; M.B.A., Long Island University; J.D., Rutgers University
Isik, Ihsan(2001)  Professor
  B.S., Middle East Technical University; M.S., Texas Tech University, M.A., Ph.D., University of New Orleans
Kyj, Larissa(1992)  Professor
  B.A., Fordham; M.A., Ph.D., Columbia University; CPA; CMA
Marmon, Richard(1986)  Associate Professor
  B.S., Glassboro State College (Rowan); M.B.A., LaSalle University; J.D., Widener University; CPA; CMA; LL.M., Villanova University
Meric, Gulser(1987)  Professor
  B.A., Ankara University; M.S., Ph.D., Lehigh University
Romeo, George(1979)  Professor
  B.S., Rider College; M.S., Loyola College; Ph.D., Drexel University; CPA
Scarpa, Robert(2013)  Instructor
  B.S., St. Joseph’s University; M.B.A., Drexel University
Uygur, Ozge(2010)  Associate Professor
  B.S., Middle East Technical University; Ph.D, Temple University
Wang, Jia(2007)  Associate Professor
  B.S., Tsinghua University: M.S., Ph.D., University of Massachusetts-Amherst
Weidman, Stephanie M.(1995)  Professor
  B.S., University of Delaware; M.B.A., Duke; Ph.D., Drexel University; CMA
Welsh, Carol(1983)  Associate Professor
  B.S., M.B.A., Drexel University; Ed.D., University of Delaware; CPA, CIA
Zhang, Mei(2009)  Associate Professor
  B.A., M.S., Tsinghua University-China; Ph.D., University of Maryland

Department of Art
Adams, Markham Keith(2006)  Associate Professor
  B.A., Barry University; M.A., New York University; M.F.A., Rutgers University, Mason Gross School of the Arts
Adelson, Fred(1974)  Professor
  B.A., Univ. of Massachusetts; M.A., M.Phil., Ph.D., Columbia University
Almon, Amanda(2014)  Assistant Professor
  B.F.A. Medical Illustration, Rochester Institute of Technology; M.F.A Biomedical Visualization, University of Michigan Ann Arbor; C.M.I.
Appelson, Herbert(1967)  Professor
  B.A., Brooklyn College; M.S., M.F.A., Univ. of Wisconsin; Ed.D., Columbia University
Bowman, Susan (2002)  
*Professor*  
*B.F.A., San Francisco Art Institute; M.F.A., Rutgers University, Mason Gross School of the Arts, M.P.S. Pratt Institute*  

Conradi, Janet (2009)  
*Professor*  
*B.A., M.A., Iowa State University*  

*Associate Professor*  
*B.S., University of Wisconsin; M.F.A., Arizona State University*  

Graziano, Jane E. (1999)  
*Professor*  
*B.S., University of Illinois; M.A., Rowan College; Ed.D., Teachers College, Columbia University*  

*Professor*  
*B.A., M.A., Ohio State University; Ph.D., Temple University Tyler School of the Arts*  

Ohanian, Nancy L. (1992)  
*Professor*  
*B.F.A., Layton School of Art and Design; M.F.A., Pratt Institute*  

Thomas, Skeffington N. (1997)  
*Professor*  
*B.A., Lewis and Clark College; M.F.A., Southern Illinois University*  

Wang, Tingting (2012)  
*Assistant Professor*  
*Bachelor of Linguistics, Central South University, China; MFA, Chinese Art & Art History, Hunan Normal University, China; Ph.D., Art Education, Department of Curriculum & Instruction, Indiana University, Bloomington*  

### Department of Biological Sciences  

Albaugh, Mary (2016)  
*Associate Professor*  
*B.S., King's College; Ph.D., University of Houston*  

Bealor, Matthew (2010)  
*Instructor*  
*B.S., California State University; M.S., San Diego State University; Ph.D., University of Colorado*  

Carone, Benjamin (2016)  
*Assistant Professor*  
*B.S., Ph.D., University of Connecticut*  

Crumrine, Patrick (2006)  
*Associate Professor*  
*B.S., Plattsburgh State University; Ph.D., University of Kentucky*  

Grove, Michael W. (2001)  
*Associate Professor*  
*B.S., The Ohio State University; Ph.D., University of South Carolina*  

Hecht, Gregory B. (1995)  
*Associate Professor*  
*B.A., University of Rochester; M.A., Ph.D., Princeton University*  

*Professor*  
*B.S., Fordham University; M.S., Ph.D., University of Massachusetts*  

Hough, Gerald (2003)  
*Associate Professor*  
*B.S., Purdue University; M.S., Ph.D., The Ohio State University*  

Iftode, Cristina (2001)  
*Associate Professor*  
*B.S., M.S., University of Bucharest; M.S., Ph.D., New York University-Medical Center*  

Krufta, Alison (2003)  
*Associate Professor*  
*B.S., College of William and Mary; Ph.D., University of Wisconsin-Madison*  

Krummenacher, Claude (2014)  
*Assistant Professor*  
*B.S., Ph.D. University of Lausanne, Switzerland*  

O'Brien, Terry (2000)  
*Associate Professor*  
*B.S., M.S., University of Iowa; Ph.D. University of California - Berkeley*  

Richmond, Courtney E. (2001)  
*Professor*  
*B.A., Swarthmore College; Ph.D., University of South Carolina*  

---

**Note:** The above text contains a list of faculty members along with their academic backgrounds and titles. This information is sourced from the ROWAN UNIVERSITY UNDERGRADUATE CATALOG 2016-2017.
Faculty List

Soto, Ileana (2015)  
Assistant Professor  
B.S., Ph.D., University of Puerto Rico

Tahamont, Maria (1993)  
Professor  
B.A., Rowan University; M.S.Ed., Ph.D., Southern Illinois University

Vojvodic, Svetlana (2014)  
Assistant Professor  
B.A., M.Sc. University of South Alabama; Ph.D. University of Copenhagen

Department of Biomedical and Translational Sciences

Bausch, Suzanne (2016)  
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B.A., Metropolitan State College; Ph.D., University of Washington

Department of Biomedical Engineering

Beachley, Vince (2014)  
Assistant Professor  
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Byrne, Mark (2014)  
Professor and Department Head  
B.S., Carnegie Mellon University; M.S., Ph.D., Purdue University

Galie, Peter (2015)  
Assistant Professor  
BSE - Princeton University; MS Rensselaer Polytechnic; PhD - University of Michigan

Shim, Jiwook Shephen (2016)  
Assistant Professor  
B.S, Hankuk University of Foreign Studies, MS, Ph.D. University of Missouri

Stachle, Mary M. (2010)  
Associate Professor  
B.S., The Johns Hopkins University; Ph.D., University of Delaware

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Dahm, Kevin D. (1999)  
Professor  
B.S., Worcester Polytechnic; Ph.D., Massachusetts Institute of Technology

Gephardt, Zenaida Otero (1980)  
Associate Professor  
B.S., Northwestern University; M.S., Ph.D., University of Delaware

Professor  
B.S., University of Illinois, Champaign-Urbana; Ph.D., University of Delaware

Newell, James (1998)  
Professor  
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Savelski, Mariano J. (1999)  
Professor and Department Head  
B.S., University of Buenos Aires; M.S., University of Tulsa; Ph.D., University of Oklahoma

Slater, C. Stewart (1995)  
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B.S., M.S., M. Ph., Ph.D., Rutgers University

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Vernengo, Jennifer (2009)  
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Caputo, Greg (2007)  
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Grinias, James (2016)  
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Hickman, Mark (2012)  
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A.B., Bowdoin College; Ph.D. Harvard University
Jonnalagadda, Subash (2008)
B.Sc., Pondicherry University; M.Sc., University of Hyderabad; Ph.D., Purdue University
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Keck, Thomas (2014)
B.S., University of Southern California; Ph.D., Oregon Health & Science University
Assistant Professor

Moura-Letts, Gustavo (2013)
B.S., Universidad Peruana; Ph.D., University of Pittsburgh
Assistant Professor

Mugweru, Amos (2006)
B.S., Jomo Kenyatta University of Agriculture and Technology; Ph.D., University of Connecticut
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Nazer, Behrooz (2013)
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Instructor

Perez, Lark (2012)
B.S., Long Island University; Ph.D., Yale University
Assistant Professor

Ramanujachary, Kandalam V. (1994)
B.S., Andhra University; M.S., Andhra University; Ph.D., Indian Institute of Technology
Professor

Supplee, Carolyn (2014)
B.A., Goucher College; M.S., Ph.D., The Ohio State University
Instructor

Vaden, Timothy (2010)
B.S., Midwestern State University; Ph.D., University of Illinois
Assistant Professor

Wu, Chun (2013)
B.S., Xiamen University; Ph.D., University of Delaware
Assistant Professor

Yang, Catherine (1995)
B.S., Zhejiang University; M.S., Ph.D., Tufts University
Professor

Yu, Lei (2008)
B.S., M.S., Jilin University; Ph.D., Changchun Institute of Applied Chemistry
Associate Professor

**Department of Civil and Environmental Engineering**

Lomboy, Gilson (2016)
BS - Mapua Institute of Technology; ME - Asian Institute; PhD AIT / Iowa State University
Assistant Professor

**Department of Civil and Environmental Engineering**

Bhavsar, Parth (2014)
B.S., Center for Environmental Planning and Technology, India; M.S., Clemson University; Ph.D., Clemson University
Assistant Professor

B.S., M.S., Ph.D., Purdue University
Associate Professor

B.S., State University of New York, Syracuse, NY; M.S., University of Connecticut; Ph.D., University of Iowa
Assistant Professor

Dusseau, Ralph A. (1995)
B.S., M.S., Ph.D., Michigan State University
Professor

B.S., M.S., Ph.D., Duke University
Professor

Jahan, Kauser (1996)
B.S., Engineering University, Bangladesh; M.S., University of Arkansas; Ph.D., University of Minnesota
Professor

Mehta, Yusuf A. (2001)
B.S., University of Bombay, India; M.S., University of Oklahoma; Ph.D., Pennsylvania State University
Professor

Nazari, Rouzbeh (2014)
B.S., Isfahan University of Technology, Iran; M.S., City University of New York; Ph.D., City University of New York
Assistant Professor
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riddell, William</td>
<td>Associate Professor</td>
<td>B.S., University of Massachusetts-Amherst; Ph.D., Cornell University</td>
</tr>
<tr>
<td>Sukumaran, Beena</td>
<td>Professor and Department Head</td>
<td>B.S., Trivandrum Engineering College, India; M.S., Auburn University; Ph.D. Purdue University</td>
</tr>
<tr>
<td>Albone, Kenneth</td>
<td>Associate Professor</td>
<td>B.S. Lake Superior State College; M.A., Miami University; Ph.D., Bowling Green State</td>
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<tr>
<td>Benavidez, Harriet</td>
<td>Instructor</td>
<td>B.A., Purdue University; M.A., University of Hawaii</td>
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<tr>
<td>Cypher, Joy M.</td>
<td>Associate Professor</td>
<td>B.A., Loyola University, Chicago; M.A., Ph.D., Purdue University</td>
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<tr>
<td>Feaster, John</td>
<td>Associate Professor</td>
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**Department of Law and Justice Studies**

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**Department of Law and Justice Studies**

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ROWAN UNIVERSITY UNDERGRADUATE CATALOG 2016-2017
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**Department of Music**

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*Assistant Professor*  
*M.A., Syracuse University*

**Department of Radio/Television/Film**

Bierman, Joseph (1988)  
*Associate Professor*  
*B.A., Rowan University; M.F.A., New York University; Ph.D., Regent University*

Biesen, Sheri Chinen (2001)  
*Assistant Professor*  
*B.A., M.A., University of Southern California; Ph.D., The University of Texas*

*Professor*  
*B.F.A., West Virginia University; M.Ed., Temple University*

David Bianculli (2009)  
*Associate Professor*  
*B.S., M.A., University of Florida*

Donovan, Mike (1972)  
*Professor*  
*B.A., Jersey City State College; M.A., New York University*

Mason, Jonathan (2010)  
*Assistant Professor*  
*B.A., University of Miami; M.F.A., Columbia University*

Nicolae, Diana (2006)  
*Associate Professor*  
*B.A., Bucharest University; M.F.A., University of North Carolina - Greensboro*

Olshefski, Jonathan (2010)  
*Assistant Professor*  
*B.A., M.F.A., Temple University*

Politz, Keir (2015)  
*Assistant Professor*  
*B.A., College of Holy Cross; M.F.A., Columbia University*

**Department of Science, Technology, Engineering, Art and Mathematics (STEAM)**

*Associate Professor*  
*B.S., M.A., American University of Beirut; Ph.D., University of Illinois Urbana-Champaign*

Fopeano, Richard J. (1992)  
*Associate Professor*  
*B.S., State University of New York; M.A., Ball State University; Ph.D., Temple University*

Graziano, Jane E. (1999)  
*Professor*  
*B.S., University of Illinois; M.A., Rowan University; Ed.D, Teachers College, Columbia University*

Kuo, Yu Chun (2015)  
*Assistant Professor*  
*B.S., M.S. National Taiwan University; Ph.D., Utah State University*

Levinowitz, Lili (1989)  
*Professor*  
*B.M, Westminster Choir College; M.M., Ph.D., Temple University*

Perry, Jill Ann (2001)  
*Associate Professor*  
*B.S., M.Ed., University of Florida; Ph.D., University of Central Florida*

Weiman, Robert (2012)  
*Assistant Professor*  
*B.A. Williams College; M.A. City University of New York; Ph.D. Univ. of Delaware*

**Department of Sociology and Anthropology**

*Professor*  
*B.A., University of San Diego; M.A., Ph.D., University of Pennsylvania*
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Qualifications</th>
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</thead>
<tbody>
<tr>
<td>Gallant, Mary J. (1992)</td>
<td>Associate Professor</td>
<td>B.A., M.A., University of Missouri; Ph.D., University of Minnesota</td>
</tr>
<tr>
<td>Hartman, Harriet J. (1996)</td>
<td>Professor</td>
<td>B.A., University of California at Los Angeles; M.A., University of Michigan; Ph.D., Hebrew University of Jerusalem</td>
</tr>
<tr>
<td>Hill, Jane (2013)</td>
<td>Instructor</td>
<td>B.A. University of Mississippi, M.A. University of Memphis (Anthropology), M.A. University of Memphis (Art History-Egyptology) Ph.D., University of Pennsylvania</td>
</tr>
<tr>
<td>Hutter, Mark (1974)</td>
<td>Professor</td>
<td>B.A., M.A., Brooklyn College; Ph.D., University of Minnesota</td>
</tr>
<tr>
<td>Joy, Sandra (2003)</td>
<td>Professor</td>
<td>B.A., Christopher Newport University; M.S.W., Norfolk State University; M.A., Ph.D., Temple University</td>
</tr>
<tr>
<td>Kasserman, David (1973)</td>
<td>Associate Professor</td>
<td>B.A., Indiana University; M.A., Ph.D., University of Pennsylvania</td>
</tr>
<tr>
<td>Li, Yuhui (1992)</td>
<td>Professor</td>
<td>B.A., Sichuan Foreign Languages Institute, China; M.A., Ohio University; Ph.D., Ohio State University</td>
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<tr>
<td>Miller, DeMonde S. (1997)</td>
<td>Professor</td>
<td>B.A., Northeast Louisiana University; M.S., Ph.D., Mississippi State University</td>
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<tr>
<td>Rosado, Maria (1993)</td>
<td>Professor</td>
<td>B.A., M.A., Ph.D., Rutgers University</td>
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<tr>
<td>Sommo, Anthony J. (1992)</td>
<td>Assistant Professor</td>
<td>B.A., M.A., Ph.D., University of Connecticut; M.S.W., Syracuse University</td>
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<td>Bazemore, Dawn Marie (2016)</td>
<td>Assistant Professor</td>
<td>B.F.A., SUNY Purchase; M.F.A. Hollins University</td>
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<tr>
<td>Fusco, Thomas A. (1999)</td>
<td>Associate Professor</td>
<td>B.A., University of Massachusetts; M.F.A., Boston University</td>
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<td>Hostetter, Anthony (2012)</td>
<td>Instructor</td>
<td>B.F.A., Virginia Commonwealth University; M.F.A. Penn State; Ph.D., University of Missouri</td>
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<td>Hostetter, Elisabeth (2000)</td>
<td>Professor</td>
<td>B.F.A., Virginia Commonwealth University; M.A., University of Texas; Ph.D., University of Missouri</td>
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<td>Roche, Christopher (2014)</td>
<td>Assistant Professor</td>
<td>B.A. Catholic University; M.F.A. Ohio State University; Ph.D., Ohio State University</td>
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<td>Savadove, Lane (2007)</td>
<td>Professor</td>
<td>B.A., Haverford College; M.F.A., Columbia University</td>
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<td>Block, Ronald (2003)</td>
<td>Associate Professor</td>
<td>B.A., University of Nebraska; M.A., M.S., Syracuse University</td>
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<tr>
<td>Courtney, Jennifer (2004)</td>
<td>Associate Professor</td>
<td>B.A., Duquesne University; M.A., Western Michigan; Ph.D., Purdue University</td>
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</tbody>
</table>
Faculty List

Del Russo, Celeste (2015)  
Assistant Professor  
B.A., Wheaton College; M.A., University of New Orleans; M.Sc., University of Oxford; Ph.D., University of Arizona

Fillenwarth, Gracemarie (2016)  
Assistant Professor  
B.A., King’s College; M.A. Virginia Tech; Ph.D., Purdue University

Han, Aiguo (1993)  
Associate Professor  
B.A., Xian Foreign Language University; M.A., Ph.D., Indiana University of Pennsylvania

Harvey, Roberta K. (1998)  
Associate Professor  
B.S., B.A., M.A., University of North Dakota; Ph.D., University of Wisconsin-Milwaukee

Herberg, Erin V. (2000)  
Assistant Professor  
B.S., B.A., Western Carolina University; M.A., Ph.D., Georgia State University

Hornbacher, Mary (2016)  
Assistant Professor  
B.A. New College of California

Jahn-Clough, Lisa (2010)  
Associate Professor  
B.A., Hampshire College, M.F.A. Emerson College

Kopp, Andrew (2009)  
Associate Professor  
B.A., University of South Florida; M.A., Ph.D., University of Arizona

Martin, Deb (2003)  
Associate Professor  
B.S., Western Michigan University, M.A., Ph.D., Texas Woman’s University

Maxson, Jeffrey N. (1994)  
Associate Professor  
B.A., Yale University, M.A., Ph.D., University of California at Berkeley

Reed, Amy (2012)  
Assistant Professor  
B.A., B.S., The Ohio State University; M.A., University of Dayton; Ph.D., Virginia Tech University

Shapiro, Rachael (2015)  
Assistant Professor  
B.A., SUNY Plattsburgh; M.A., Washington State University; Ph.D., Syracuse University

Tole, Jennifer (2014)  
Instructor  
B.A., Ph.D., Temple University

Tweedie, Sanford M. (1994)  
Professor  
B.A., University of Michigan; M.A., Eastern Michigan University; Ph.D., University of Wisconsin-Milwaukee

Woodworth, Amy (2013)  
Assistant Professor  
B.A., New York University; M.A., Rutgers University at Newark; Ph.D., Temple University

ExEED

Bodnar, Cheryl()  
Assistant Professor  
Ph.D. University of Calgary

Farrell, Stephanie (1998)  
Department Head  
B.S., University of Pennsylvania; M.S., Stevens Institute of Technology; Ph.D., New Jersey Institute of Technology

Harvey, Roberta (1989)  
Associate Professor  
B.A., M.A., University of North Dakota; Ph.D., University of Wisconsin-Milwaukee

Hixson, Cory (2016)  
Assistant Professor  
BS in Engineering Science Penn State University, MS in Industrial and Systems Engineering Virginia Tech
# Nomenclature of Courses

## Course Information

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<tr>
<th>Abbreviation</th>
<th>Course Name</th>
<th>Department</th>
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<td>Advertising</td>
<td>Public Relations and Advertising</td>
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<td>African Languages</td>
<td>Foreign Languages and Literature</td>
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<td>Africana Studies</td>
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<td>Chemistry and Biochemistry</td>
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<td>Composition</td>
<td>Writing Arts</td>
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<td>CRWR</td>
<td>Creative Writing</td>
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<td>DPEM</td>
<td>Disaster Planning and Emergency Preparedness</td>
<td>Sociology</td>
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<td>ECE</td>
<td>Electrical and Computer Engineering</td>
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<td>Early Childhood Education</td>
<td>Teacher Education</td>
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<td>Economics</td>
<td>Political Science and Economics</td>
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<td>EDSU</td>
<td>Educational Supervision</td>
<td>Educational Leadership</td>
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<td>EDUC</td>
<td>Education</td>
<td>Teacher Education or Foundations</td>
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<td>EDPA</td>
<td>Public Administration Education</td>
<td>Political Science and Economics</td>
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<td>Elementary Education</td>
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<td>Engineering</td>
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<td>ENST</td>
<td>Environmental Studies</td>
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<td>ENT</td>
<td>Entrepreneurship</td>
<td>Management and Entrepreneurship</td>
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<td>FIN</td>
<td>Finance</td>
<td>Accounting and Finance</td>
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<td>FNDS</td>
<td>Foundations of Education</td>
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<td>FREN</td>
<td>French</td>
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<td>GEOG</td>
<td>Geography</td>
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<td>German</td>
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<td>HES</td>
<td>Health &amp; Exercise Science</td>
<td>Health &amp; Exercise Science</td>
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<td>HIST</td>
<td>History</td>
<td>History</td>
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<tr>
<td>HLT</td>
<td>Health</td>
<td>Health &amp; Exercise Science</td>
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<td>HONR</td>
<td>Honors</td>
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<tr>
<td>HPE</td>
<td>Health &amp; Physical Education</td>
<td>STEAM or Health &amp; Exercise Science</td>
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<td>HPW</td>
<td>Health Promotion &amp; Wellness</td>
<td>Health &amp; Exercise Science</td>
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<td>HRM</td>
<td>Human Resources Management</td>
<td>Management and Entrepreneurship</td>
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<td>INAR</td>
<td>Industrial Arts</td>
<td>Health and Exercise Science</td>
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<td>INTR</td>
<td>Interdisciplinary</td>
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<td>JAPA</td>
<td>Japanese</td>
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<td>JRN</td>
<td>Journalism</td>
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<td>Latin</td>
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<td>LAWJ</td>
<td>Law and Justice Studies</td>
<td>Law and Justice Studies</td>
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<td>Nomenclature of Courses</td>
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<td>MGT  Management</td>
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<td>ME   Mechanical Engineering</td>
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<tr>
<td>MILS Military Science</td>
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<td>MIS  Management Information Systems</td>
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<td>MKT  Marketing</td>
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<td>MUS  Music</td>
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<tr>
<td>MUSG Music</td>
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<td>NURS Nursing</td>
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<td>NUT  Nutrition</td>
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<td>PHED Physical Education</td>
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<td>PHIL Philosophy</td>
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<td>PHYS Physics</td>
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<td>POSC Political Science</td>
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<td>PSY  Psychology</td>
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<td>PR   Public Relations</td>
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<td>READ Reading</td>
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<td>REL  Religion Studies</td>
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<td>RTF  Radio/TV/Film</td>
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<td>RUSS Russian</td>
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<td>SMED Subject Matter Education</td>
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<td>SNUR School Nursing</td>
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<td>SPAN Spanish</td>
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<td>STAT Statistics</td>
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<td>SPED Special Education</td>
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<td>SOC   Sociology</td>
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<td>SWHL Swahili</td>
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<td>THD  Theater/Dance</td>
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<td>WA   Writing Arts</td>
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<td>WLM  Wellness &amp; Lifestyle Mgmt</td>
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</table>

Management and Entrepreneurship
Management and Business Information Systems
Mechanical Engineering
Marketing and Business Information Systems
Music
Music
Nursing
Health and Exercise Science
Health and Exercise Science
Philosophy and Religion Studies
Physics and Astronomy
Political Science and Economics
Psychology
Public Relations and Advertising
Reading
Philosophy and Religion Studies
Radio/Television/Film
Foreign Languages and Literature
Various
Special Education Services and Instruction
Foreign Languages and Literature
Mathematics
Sociology and Anthropology
Foreign Languages and Literature
Theater and Dance
Writing Arts
Health and Exercise Science

General Education Course Listing

Following is an abridged list of approved General Education courses for the five areas of study. Courses that have at least one prerequisite are denoted with a ^.

Art
- ARHS03.130 Art Appreciation
- ARHS03.220 Modern Art
- ARHS03.310 History of American Art
- ART02.300 Workshop in Art
- ART39.330 General Photography

Communication
Writing Arts
- COMP01.105 Intensive College Composition I
- COMP01.111 College Composition I
- HONR01.111 Honors Writing Arts: College Composition I
- COMP01.112 College Composition II
- HONR01.112 Honors Writing Arts: College Composition II
- CMS04.205 Public Speaking

Science and Mathematics
Students must take at least one math course (MATH) and at least one laboratory-based science course (LAB).

Biological Sciences
- BIOL01.100 Biology I (LAB)
- BIOL01.101 Biology II (LAB)
- BIOL01.104 Biology 1: Diversity Evolution and Adaptation (LAB)
- BIOL01.106 Biology 2: Concepts in Genetics (LAB)
- BIOL01.110 Human Biology
- BIOL01.112 Biology: Environ. Focus (LAB)
- BIOL01.113 Biology: Human Focus (LAB)
- BIOL01.115 General Biology: Plants and People (LAB)
- BIOL20.100 Human Anatomy & Physiology I (LAB)
- BIOL20.100 Introduction to Natural Resources
- BIOL20.150 Human Ecology: Evolution Approach M/G

Chemistry and Biochemistry
- CHEM05.102 Chemistry of Everyday Life (LAB)
- CHEM06.100 Chemistry I (LAB)
- CHEM06.101 Chemistry II (LAB)
- CHEM06.105 Advanced College Chemistry I (LAB)
- CHEM06.106 Advanced College Chemistry II (LAB)

Computer Science
- CS01.102 Introduction to Programming
- CS01.104 Introduction to Scientific Programming
- CS01.190 Introduction to Computer Game Modeling
- CS01.200^ Computing Environments
- CS01.210^ Introduction to Computer Networks and Data Communications
- CS04.103 Computer Science and Programming
- CS04.110^ Introduction to Programming Using Robots
- CS04.140 Enterprise Computing I

Electrical and Computer Engineering
- ECE09.204 Clinical and Medical Technology in Today’s Medicine (Lab)

Geography
- GEOG16.330 Geology I (LAB)
- GEOG16.130 Earth Sciences Lab I
- GEOG16.131 Principles of Earth Science
- GEOG16.133 Meteorology (LAB)
<table>
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<tr>
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<tr>
<td>Health and Exercise Science</td>
<td>INAR06.200</td>
<td>Basic Nutrition</td>
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<td>or</td>
<td>NUT00.200</td>
<td>Basic Nutrition</td>
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<td>Interdisciplinary</td>
<td>INTR01.132</td>
<td>Biology, History and the Fate Human Societies (RS)</td>
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<td>INTR01.138</td>
<td>Issues in Sustainable Development (RS)</td>
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<td>INTR01.140</td>
<td>Diverse Approaches to Environmental Literature (RS)</td>
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<td>INTR01.144</td>
<td>Human Ecology: An Evolutionary Approach (RS)</td>
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<td>INTR01.148</td>
<td>Environmental Ethics: Through the Lens of Diversity (RS)</td>
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<td>INTR01.200</td>
<td>Issues in Women's Health</td>
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<td>HONR05.285</td>
<td>Honors Natural Sciences (H)(Lab 4cr.)</td>
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<td>Marketing/MIS</td>
<td>MIS02.150</td>
<td>Integrated Business Software Tools</td>
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<td>Mathematics</td>
<td>MATH01.115</td>
<td>Contemporary Mathematics</td>
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<td>MATH01.122</td>
<td>Pre-calculus Mathematics</td>
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<td>MATH01.123</td>
<td>College Algebra</td>
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<td>MATH01.130</td>
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<td>Physics of Sound and Music (LAB)</td>
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**Health and Exercise Science**

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<td>HPED00.240</td>
<td>Motor Development and Motor Learning</td>
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**Interdisciplinary**

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<td>Introduction to the Social Sciences: Self, Society and Power</td>
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<td>Introduction to African American Studies (M/G)</td>
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<td>INTR01.130</td>
<td>Women and Gender in Perspective</td>
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<td>INTR01.132</td>
<td>Biology, History and The Fate of Human Societies (RS)</td>
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<td>INTR01.138</td>
<td>Issues in Sustainable Development (RS)</td>
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<td>Diverse Approaches to Environmental Literature (RS), LIT, M/G</td>
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<td>INTR01.142</td>
<td>Three Generations of Family Life: Diversity and Democracy Through Family (RS)</td>
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<td>Identity, Culture, and Democracy: Being An American (RS)</td>
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<td>Emotions in Organizations (RS)</td>
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<td>From Nancy Drew to Lara Croft-Historical and Critical Dimensions of Female Detective Genre (RS)</td>
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<td>Growing Up Female in 20th Century America (RS)</td>
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<td>The Leadership of Ideas (RS)</td>
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<td>INTR01.168</td>
<td>What’s Wrong With Normal? (RS)</td>
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<td>Law and Order (RS)</td>
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<td>INTR01.292</td>
<td>In Search for Democracy: The Quest for Civil Liberties (RS)</td>
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<td>Issues in Women's Health</td>
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**Law and Justice**

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<tr>
<td>LAWJ05.315</td>
<td>Criminal Justice and Social Conflict</td>
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**Management and Entrepreneurship**

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<td>HRM98.337</td>
<td>LEGAL ASPECTS HR MGT-WI</td>
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<td>MKT AND THE BUS ENVIRONMT-RS</td>
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**Political Science**

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<td>Introduction to Government Politics (M/G)</td>
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<td>POSCo7.110</td>
<td>American Government</td>
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<td>POSCo7.230</td>
<td>Comparative Political Systems (M/G)</td>
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<td>American Constitutional Law</td>
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<td>Contemporary World Problems (M/G)</td>
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**Psychology**

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<td>Essentials of Psychology</td>
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<td>Child Development</td>
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**Sociology and Anthropology**

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<td>Introduction to Archaeology (M/G)</td>
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<td>ANTH02.210</td>
<td>Natives of South America (M/G)</td>
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<td>ANTH02.215</td>
<td>Medical Anthropology (M/G)</td>
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<td>Human Variation (M/G)</td>
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<td>Human Evolution (M/G)</td>
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<td>Indians of North America (M/G)</td>
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<td>ANTH02.312</td>
<td>Anthropological Perspectives in Physical Growth &amp; Develop (M/G)</td>
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<td>Comparative Cultures (M/G)</td>
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<td>The Family (M/G)</td>
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<td>Social Problems</td>
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<td>Sociology of Minority Groups (M/G)</td>
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<td>SOCo8.399^</td>
<td>Sociology of the Holocaust (M/G, WI)</td>
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<td>SPED08.130</td>
<td>Human Exceptionality</td>
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### History, Humanities and Language

#### Communication Studies

- CMS04.225^ Semantics
- CMS04.226^ Semantics (WI)
- CMS04.325 Linguistics

#### English

- ENGL02.110 Readings in British Literature (LIT)
- ENGL02.112 Readings in Asian Literature (LIT, M/G)
- ENGL02.113 Readings in U.S. Literature (LIT)
- ENGL02.116 Readings in Non Western Literature (LIT, M/G)
- ENGL02.123 Experiencing Literature (LIT)
- ENGL02.151 Readings in Shakespeare (LIT)

#### Foreign Languages and Literature

- ZULU16.101 Zulu I
- ZULU16.102 Zulu II
- ARAB12.101 Elementary Arabic I
- ARAB12.102 Elementary Arabic II
- CHIN07.101 Elementary Chinese I
- CHIN07.102 Elementary Chinese II
- CHIN07.201 Intermediate Chinese I
- CHIN07.211^ Intermediate Chinese II
- FREN02.101 Elementary French I
- FREN02.102 Elementary French II
- FREN02.201 Intermediate French I
- GERM03.101 Elementary German I
- GERM03.102 Elementary German II
- GERM03.201 Intermediate German I
- GERM03.211 Intermediate German II
- ITAL04.101 Elementary Italian I
- ITAL04.102 Elementary Italian II
- LAT09.101 Elementary Latin I
- LAT09.102 Elementary Latin II
- JAPA08.101 Elementary Japanese I
- JAPA08.102 Elementary Japanese II
- JAPA08.201 Intermediate Japanese I
- JAPA08.211 Intermediate Japanese II
- SPAN05.101 Spanish I
- SPAN05.102 Spanish II
- SPAN05.104 Accelerated Business Spanish I
- SPAN05.106 Accelerated Business Spanish II
- SPAN05.201 Spanish III
- SPAN05.211 Spanish Reading and Conversation
- SPAN05.212^ Spanish Reading and Composition (WI)
- SPAN05.312^ Spanish for Business
- RUSS06.101 Elementary Russian I
- RUSS06.102 Elementary Russian II
- RUSS06.345 Russian Literature in Translation
- SWHL17.101 Elementary Swahili I
- SWHL17.102 Elementary Swahili II

#### Foundations of Education

- FNDS21.150 History of American Education

#### History

- HIST05.100 Western Civilization to 1660
- HIST05.101 Western Civilization since 1660
- HIST05.120 World History since 1500 (M/G)
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<td>U.S. History since 1865</td>
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<td>African-American History to 1865</td>
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<td>HIST05.377</td>
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### Interdisciplinary

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<td>Readings in American Democracy (RS)</td>
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<td>Gateway to Asia (RS)</td>
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<td>Diverse Approaches to Environmental Literature (RS, LIT, M/G)</td>
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<td>Environmental Ethics: Through the Lens of Diversity (RS)</td>
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<td>Language, Rhetoric and Propaganda: The Weapons of the Cold War (RS)</td>
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<td>Freedom and Artistic Expression-20th Century America (RS)</td>
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<td>From Nancy Drew to Lara Croft-Historical and Critical Dimensions of Female Detective Genre (RS)</td>
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<td>Growing Up Female in 20th Century America (RS)</td>
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<td>Science Fiction as a Gateway to Human Diversity (RS)</td>
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<td>Songs of Praise and Protest (RS)</td>
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<td>Ethics and the Professions</td>
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<td>In Search of Democracy: The Quest for Civil Liberties (RS)</td>
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### Philosophy

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<td>World Philosophy I (WI, M/G)</td>
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### Reading

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### Religion

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<td>Religions of the World (M/G)</td>
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<td>Religion in America (M/G)</td>
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<td>Introduction to Buddhism (M/G)</td>
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<td>Introduction to the Bible (LIT)</td>
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<td>Introduction to Judaism (M/G)</td>
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### Theatre and Dance

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<tr>
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<td>History of Theatre from 1700-1956</td>
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THD07.440  Contemporary World Theatre (WI, LIT)
Rowan Experience Course Listing

An abridged list of approved courses that meet the Rowan Experience requirements are listed below. Courses that have at least one pre-requisite are denoted with an ^.

**Artistic and Creative Experience Courses (ACE)**

*Note*: Courses listed under (ACE) with LIT, RS, WI, or M/G designation also fulfill the Literature, Rowan Seminar, Writing Intensive, or Multicultural/Global requirement in addition to the ACE requirement. Typically, the (ACE) course fulfills an area of study currently listed in General Education as Artistic and Creative Experience.

### Art
- **ART02.300** Workshop in Art
- **ARHS03.130** Art Appreciation
- **ARHS03.220** Modern Art
- **ARHS03.310** History of American Art
- **ART39.330** General Photography
- **ART09.110** Experiencing Art

### Engineering
- **ECE09.100** Signals, Systems and Music

### Interdisciplinary
- **INTR01.152** Beyond Face Value: Critical Analysis of Texts & Image (RS)
- **INTR01.166** Rhetoric of Music (RS)
- **INTR01.172** Songs of Praise/Protest (RS)
- **INTR01.176** Historical Aesthetics of Suffering (RS)
- **HONR05.214** Honors Artistic and Creative Experience

### Music
- **MUS04.118** Music Fundamentals
- **MUS04.140** Wind Ensemble
- **MUS04.141** String Ensemble
- **MUS04.142** College Band
- **MUS04.143** Jazz Band
- **MUS04.144** Orchestra
- **MUS04.145** Lab Band
- **MUS04.146** Concert Choir
- **MUS04.147** Contemporary Music Ensemble
- **MUS04.148** Percussion Ensemble
- **MUS04.149** Guitar Ensemble
- **MUS04.150** Flute Ensemble
- **MUS04.151** Opera Company
- **MUS04.152** Saxophone Ensemble
- **MUS04.153** Clarinet Ensemble
- **MUS04.154** Women's Chorus
- **MUS04.155** Men's Chorus
- **MUSG06.100** Signals, Systems and Music
- **MUSG06.102** General Music History
- **MUSG06.109** Music Appreciation
- **MUSG06.115** Growth and Development of Jazz (M/G)
- **MUSG06.117** Expressing Music
- **MUSG06.214** Musical Styles and Forms I
- **MUSG06.215** Musical Styles and Forms II
- **MUSG06.335** Musical Styles and Forms III
- **MUSG06.447** Music in World Cultures: Asia and Oceania (M/G)
- **MUSG06.448** Music in World Cultures: Africa India, Near and Middle East (M/G)

### Radio, TV and Film
- **RTF03.270** Film History and Appreciation I
- **RTF03.271** Film History and Appreciation II
- **RTF03.273** The Movie Industry

### Theatre and Dance
- **THD07.130** Living Theatre
- **THD07.135** Oral Interpretation of Literature
- **THD07.195** Exploring Social Issues Through Theatre
- **THD07.215** Experiencing Acting
- **THD07.301** African, African - American Theatre: Intercultural Definitions
### Rowan Experience Course Listing

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>THD07.339</td>
<td>History of Theatre to 1700</td>
</tr>
<tr>
<td>THD07.340</td>
<td>History of Theatre from 1700-1956</td>
</tr>
<tr>
<td>THD07.440</td>
<td>Contemporary World Theatre (LIT, WI)</td>
</tr>
<tr>
<td>THD08.135</td>
<td>Elements of Dance</td>
</tr>
<tr>
<td>THD08.146</td>
<td>World Dance Forms</td>
</tr>
<tr>
<td>THD08.202</td>
<td>Fundamentals of Tap</td>
</tr>
<tr>
<td>THD08.236</td>
<td>Modern Dance I</td>
</tr>
<tr>
<td>THD08.246</td>
<td>Fundamentals of Ballet Dance</td>
</tr>
<tr>
<td>THD08.256</td>
<td>Fundamentals of Jazz Dance</td>
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<tr>
<td>THD08.311</td>
<td>African Influences in American Dance</td>
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<tr>
<td>THD08.315</td>
<td>Creative Dance for Children</td>
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<td>THD08.436</td>
<td>Dance History</td>
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#### Literature Courses (LIT)

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<th>Code</th>
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<tbody>
<tr>
<td>ENGL02.110</td>
<td>Readings in British Literature</td>
</tr>
<tr>
<td>ENGL02.112</td>
<td>Readings in Asian Literature (M/G)</td>
</tr>
<tr>
<td>ENGL02.113</td>
<td>Readings in U.S. Literature</td>
</tr>
<tr>
<td>ENGL02.116</td>
<td>Readings in Non Western Literature (M/G)</td>
</tr>
<tr>
<td>ENGL02.123</td>
<td>Experiencing Literature</td>
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<tr>
<td>ENGL02.151</td>
<td>Readings in Shakespeare</td>
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#### Foreign Language

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<tbody>
<tr>
<td>FREN02.100</td>
<td>Masterpieces of French Literature in Translation</td>
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<tr>
<td>GERM03.100</td>
<td>Masterpieces of German Literature in Translation</td>
</tr>
<tr>
<td>SPAN05.100</td>
<td>Masterpiece of Hispanic Literature in English Translation</td>
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#### Interdisciplinary

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<tr>
<th>Code</th>
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<tr>
<td>INTR01.140</td>
<td>Diverse Approaches to Environmental Lit (RS, M/G)</td>
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<tr>
<td>HONR05.217</td>
<td>Honors Literature (H)</td>
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#### Philosophy and Religion

<table>
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<tr>
<td>PHILO9.240</td>
<td>Philosophy and Society</td>
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<td>PHILO9.241</td>
<td>Philosophy and Society (WI)</td>
</tr>
<tr>
<td>PHILO9.250</td>
<td>Introduction to Ethics</td>
</tr>
<tr>
<td>PHILO9.251</td>
<td>Introduction to Ethics (WI)</td>
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<tr>
<td>PHILO9.310</td>
<td>Aesthetics</td>
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<tr>
<td>PHILO9.311</td>
<td>Aesthetics (WI)</td>
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<td>REL10.240</td>
<td>Introduction to the Bible</td>
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#### Theatre and Dance

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<tr>
<td>THD07.440</td>
<td>Contemporary World Theatre (ACE, WI)</td>
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#### Multicultural/Global (M/G)

The courses listed below all fulfill the requirement of one Multicultural/Global course:

#### Biological Sciences

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<tbody>
<tr>
<td>BIOL20.150</td>
<td>Human Ecology: Evolution Approach</td>
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#### Communication

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<tr>
<td>CMS04.360</td>
<td>Intercultural Communication</td>
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#### Economics

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<th>Code</th>
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<tbody>
<tr>
<td>ECON04.307</td>
<td>Economic Development</td>
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<tr>
<td>ECON04.320</td>
<td>Contemporary Economic Systems</td>
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#### English

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<th>Code</th>
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<tr>
<td>ENGL02.112</td>
<td>Readings in Asian Literature (LIT)</td>
</tr>
<tr>
<td>ENGL02.116</td>
<td>Readings in Non Western Literature (LIT)</td>
</tr>
<tr>
<td>ENGL02.216</td>
<td>African American Lit I</td>
</tr>
<tr>
<td>ENGL02.217</td>
<td>U.S. Literature of Latino and Hispanic Peoples</td>
</tr>
<tr>
<td>ENGL02.200</td>
<td>Women in Literature</td>
</tr>
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<td>ENGL02.338</td>
<td>Special Topics in Non-Western Literature</td>
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#### Foreign Languages and Literature

<table>
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<tr>
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<tbody>
<tr>
<td>SPAN05.250</td>
<td>Introduction to Anthropological Linguistics</td>
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<tr>
<td>SPAN05.324</td>
<td>Spanish American Civilization and Culture</td>
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#### Finance

<table>
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<tr>
<th>Code</th>
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<tbody>
<tr>
<td>FIN04.435</td>
<td>International Finance Management</td>
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### Geography and the Environment

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<th>Course Code</th>
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<tr>
<td>GEOG16.100</td>
<td>Earth, People and Environment</td>
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<tr>
<td>GEOG16.110</td>
<td>Cultural Geography</td>
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<td>GEOG16.140</td>
<td>World Regional Geography</td>
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<tr>
<td>GEOG16.301</td>
<td>Economic Geography</td>
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<td>GEOG16.303</td>
<td>Political Geography</td>
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<td>GEOG16.304</td>
<td>Population Geography</td>
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<tr>
<td>GEOG16.342</td>
<td>Geography of Europe</td>
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<td>GEOG16.343</td>
<td>Geography of Asia</td>
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<tr>
<td>GEOG16.344</td>
<td>Geography of Latin America</td>
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<td>GEOG16.346</td>
<td>Commonwealth of Independent States: Geography of U.S.S.R.</td>
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<td>GEOG16.347</td>
<td>Geography of Middle East</td>
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### History

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<td>HIST05.120</td>
<td>World History After 1500</td>
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<td>HIST05.425</td>
<td>History of Feminism</td>
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### Interdisciplinary

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<th>Course Code</th>
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<tbody>
<tr>
<td>AFST11.104</td>
<td>Introduction to African American Studies</td>
</tr>
<tr>
<td>INTR01.120</td>
<td>Biology, History and Human Societies</td>
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<tr>
<td>INTR01.140</td>
<td>Diverse Approaches to Environment Lit (RS, LIT)</td>
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### Law and Justice

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<th>Course Code</th>
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<tr>
<td>LAWJ05.401</td>
<td>Law and Human Rights</td>
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### Management of Management and Entrepreneurship

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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>MGT06.330</td>
<td>Managing International Business</td>
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### Marketing and Business Information Systems

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<th>Course Code</th>
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<tbody>
<tr>
<td>MKT09.379</td>
<td>International Marketing</td>
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### Music

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<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>MUSG06.115</td>
<td>Growth and Development of Jazz (ACE)</td>
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<tr>
<td>MUSG06.220</td>
<td>Singing Music of African-Americans</td>
</tr>
<tr>
<td>MUSG06.447</td>
<td>Music in World Cultures: Asia and Oceania (ACE)</td>
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<tr>
<td>MUSG06.448</td>
<td>Music in World Cultures: Africa India, Near and Middle East (ACE)</td>
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### Philosophy

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>PHIL09.120</td>
<td>Introduction to Philosophy</td>
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<tr>
<td>PHIL09.121^</td>
<td>Introduction to Philosophy</td>
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<tr>
<td>PHIL09.211</td>
<td>World Philosophy I</td>
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<td>PHIL09.213</td>
<td>World Philosophy II</td>
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<tr>
<td>PHIL09.328</td>
<td>Philosophy and Gender</td>
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<tr>
<td>PHIL09.330</td>
<td>Asian Thought</td>
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<tr>
<td>PHIL09.368</td>
<td>Philosophy of Science</td>
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<tr>
<td>PHIL09.369</td>
<td>Philosophy of Science</td>
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<tr>
<td>PHIL09.392</td>
<td>Contemporary Moral Problems</td>
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### Political Science

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<tr>
<td>POSC07.100</td>
<td>Introduction to Government Politics</td>
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<tr>
<td>POSC07.230</td>
<td>Comparative Political Systems</td>
</tr>
<tr>
<td>POSC07.321</td>
<td>Contemporary World Problems</td>
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### Psychology

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<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>PSY01.105^</td>
<td>Psychology of Ethnic Identity and Community in America</td>
</tr>
<tr>
<td>PSY01.200^</td>
<td>Psychology of Women &amp; Cultural Exp.</td>
</tr>
<tr>
<td>PSY01.235^</td>
<td>African American Psychology</td>
</tr>
<tr>
<td>PSY01.310^</td>
<td>Psychology of Racism &amp; Ethnocentrism</td>
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### Radio, TV and Film

<table>
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<th>Course Code</th>
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<tr>
<td>RTF03.294</td>
<td>Contemporary International Cinema</td>
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### Religion

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>REL10.200</td>
<td>Religions of the World</td>
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<tr>
<td>REL10.210</td>
<td>Religion in America</td>
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<tr>
<td>PHRE11.330</td>
<td>Introduction to Buddhism</td>
</tr>
<tr>
<td>REL10.301</td>
<td>Introduction to Judaism</td>
</tr>
<tr>
<td>REL10.320</td>
<td>Introduction to Christianity</td>
</tr>
<tr>
<td>REL10.230</td>
<td>Religions of Asia</td>
</tr>
<tr>
<td>PHRE11.330</td>
<td>Introduction to Daoism</td>
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### Sociology and Anthropology

<table>
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<tr>
<td>SOC08.220</td>
<td>The Family</td>
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### Rowan Experience Course Listing

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<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>SOC08.230</td>
<td>Sociology of Minority Groups</td>
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<tr>
<td>SOC08.327</td>
<td>Comparative Education in Sociological Perspective</td>
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<tr>
<td>SOC08.399</td>
<td>Sociology of the Holocaust</td>
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<td>ANTH02.202</td>
<td>Cultural Anthropology</td>
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<tr>
<td>ANTH02.203</td>
<td>Introduction to Archaeology</td>
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<tr>
<td>ANTH02.210</td>
<td>Natives of South America</td>
</tr>
<tr>
<td>ANTH02.215</td>
<td>Medical Anthropology</td>
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<td>ANTH02.250</td>
<td>Introduction to Anthropological Linguistics</td>
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<td>ANTH02.221</td>
<td>Human Variation</td>
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<td>ANTH02.301</td>
<td>Human Evolution</td>
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<tr>
<td>ANTH02.310</td>
<td>Indians of North America</td>
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<tr>
<td>ANTH02.312</td>
<td>Anthropological Perspectives in Physical Growth &amp; Develop</td>
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<tr>
<td>ANTH02.350</td>
<td>Comparative Cultures</td>
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</table>

**Public Speaking Courses (PS)**

*Note:* Currently, CMS 04.205 Public Speaking is typically included in the Communication Area of Study under General Education and ENG 01.202 Sophomore Engineering Clinic meets a major requirement for students majoring in Civil, Chemical, Electrical and Computer, and Mechanical Engineering.

**Communication Studies**

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**Engineering**

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<tr>
<td>ENGR01.202</td>
<td>Sophomore Engineering Clinic</td>
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**Rowan Seminar Courses (RS)**

Rowan Seminar courses are designed to enhance the first-year experience for freshmen at the university. Because the primary goal of Rowan Seminar is to ensure a smooth transition to the college environment from high school, this requirement is waived for transfer students who already have enough college experience to enter with Sophomore, Junior or Senior standing. Selected sections of introductory courses within majors as well as general education courses may be designated as Rowan Seminars. In addition, courses designed specifically to serve as Rowan Seminars are:

**Interdisciplinary**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>INTR01.132</td>
<td>Biology, History and The Fate of Human Societies</td>
</tr>
<tr>
<td>INTR01.138</td>
<td>Issues in Sustainable Development</td>
</tr>
<tr>
<td>INTR01.140</td>
<td>Diverse Approaches to Environmental Lit (LIT, M/G)</td>
</tr>
<tr>
<td>INTR01.144</td>
<td>Human Ecology: An Evolutionary Approach</td>
</tr>
<tr>
<td>INTR01.148</td>
<td>Environmental Ethics: Through the Lens of Diversity</td>
</tr>
<tr>
<td>INTR01.142</td>
<td>Three Generations of Family Life: Diversity and Democracy through Family</td>
</tr>
<tr>
<td>INTR01.146</td>
<td>Identity, Culture, and Democracy: Being An American</td>
</tr>
<tr>
<td>INTR01.152</td>
<td>Beyond Face Value: Critical Analysis of Texts and Image (ACE)</td>
</tr>
<tr>
<td>INTR01.154</td>
<td>Emotions in Organizations</td>
</tr>
<tr>
<td>INTR01.158</td>
<td>From Nancy Drew to Lara Croft-Historical and Critical Dimensions of Female Detective Genre</td>
</tr>
<tr>
<td>INTR01.160</td>
<td>Growing Up Female in 20th Century America</td>
</tr>
<tr>
<td>INTR01.162</td>
<td>The Leadership of Ideas</td>
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<tr>
<td>INTR01.166</td>
<td>Rhetoric of Music (ACE)</td>
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<td>INTR01.168</td>
<td>What’s Wrong With Normal?</td>
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<tr>
<td>INTR01.170</td>
<td>Law and Order</td>
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<tr>
<td>INTR01.172</td>
<td>Songs of Praise/Protest (ACE)</td>
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<tr>
<td>INTR01.176</td>
<td>Historical Aesthetics of Suffering</td>
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<tr>
<td>INTR01.178</td>
<td>In Search for Democracy: The Quest for Civil Liberties</td>
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**Writing Intensive Courses (WI)**

The following courses satisfy the requirement of one writing intensive course. The Writing Intensive requirement MUST be completed at Rowan University. The student has to have completed College Composition I and II before enrolling in any course designated as WI.

**Art**

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<th>Course Code</th>
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<tr>
<td>ARHS03.252</td>
<td>Concepts in Art: Criticism</td>
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**Biological Sciences**

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<td>BIOL01.440</td>
<td>Special Topics in Biological Sciences</td>
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**Chemistry and BioChemistry**

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<td>CHEM07.464*</td>
<td>Advanced Organic Chemistry I</td>
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**Communication Studies**

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<td>CMS04.211*</td>
<td>Mass Media and Their Influence (WI)</td>
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<tr>
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<tr>
<td>CMS04.241</td>
<td>Small Group Communication</td>
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<td>CMS04.226</td>
<td>Semantics</td>
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<td>CMS04.450</td>
<td>Seminar in Communication Studies</td>
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<tr>
<td>CS04.102</td>
<td>Software Engineering I (WI)</td>
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<tr>
<td>ECON04.492</td>
<td>Seminar in Economics</td>
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<td>ENGR01.101</td>
<td>Freshman Engineering Clinic I</td>
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<tr>
<td>ENGR01.402</td>
<td>Senior Engineering Clinic II (WI)</td>
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<td>ENGL02.393</td>
<td>English Seminar I</td>
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<td>ENGL02.394</td>
<td>English Seminar II</td>
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<tr>
<td>SPAN05.409</td>
<td>Advanced Spanish Grammar and Composition</td>
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<td>GEOG16.490</td>
<td>Research Seminar in Geography</td>
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<tr>
<td>HIST05.306</td>
<td>Introduction to Historical Methods</td>
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<tr>
<td>INTR01.266</td>
<td>Computers and Society</td>
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<tr>
<td>LAWI05.370</td>
<td>Theories of Crime and Criminality</td>
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<td>LAWI05.469</td>
<td>Seminar in Law/Justice</td>
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<td>AMST13.402</td>
<td>Senior Seminar in American Studies</td>
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<tr>
<td>MGT06.309</td>
<td>Organizational Behavior</td>
</tr>
<tr>
<td>HRM98.337</td>
<td>Legal Aspects of Human Resource Management</td>
</tr>
<tr>
<td>MIS02.333</td>
<td>E-Business: I.S. Perspective</td>
</tr>
<tr>
<td>MKT09.384</td>
<td>Research Methods in Marketing</td>
</tr>
<tr>
<td>MATH01.498</td>
<td>Mathematics Seminar</td>
</tr>
<tr>
<td>PHIL09.121</td>
<td>Introduction to Philosophy</td>
</tr>
<tr>
<td>PHIL09.211</td>
<td>World Philosophy I</td>
</tr>
<tr>
<td>PHIL09.213</td>
<td>World Philosophy II</td>
</tr>
<tr>
<td>PHIL09.225</td>
<td>Philosophy of Mind</td>
</tr>
<tr>
<td>PHIL09.244</td>
<td>Philosophy and Society (LIT)</td>
</tr>
<tr>
<td>PHIL09.251</td>
<td>Introduction to Ethics (LIT)</td>
</tr>
<tr>
<td>PHIL09.311</td>
<td>Aesthetics (LIT)</td>
</tr>
<tr>
<td>PHIL09.328</td>
<td>Philosophy and Gender</td>
</tr>
<tr>
<td>PHIL09.341</td>
<td>Biomedical Ethics</td>
</tr>
<tr>
<td>PHIL09.346</td>
<td>Feminist Ethics</td>
</tr>
<tr>
<td>PHIL09.369</td>
<td>Philosophy of Science</td>
</tr>
<tr>
<td>PHIL09.393</td>
<td>Contemporary Moral Problems</td>
</tr>
<tr>
<td>POSC07.303</td>
<td>Campaigns, Political Parties and Interest Groups</td>
</tr>
<tr>
<td>POSC07.489</td>
<td>Seminar in Political Science</td>
</tr>
<tr>
<td>PSY01.420</td>
<td>Advanced Research In Psychology</td>
</tr>
<tr>
<td>ADV04.434</td>
<td>Advertising Campaigns</td>
</tr>
<tr>
<td>PR06.353</td>
<td>Case Studies in Public Relations</td>
</tr>
<tr>
<td>PR06.454</td>
<td>Public Relations Planning</td>
</tr>
<tr>
<td>RTF03.433</td>
<td>TV Program Packaging</td>
</tr>
<tr>
<td>READ30.421</td>
<td>School Reading Problems</td>
</tr>
</tbody>
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## Sociology and Anthropology

- SOC08.325: Deviant Behavior and Social Control
- SOC08.326: Socialization of the Child Through Adolescence
- SOC08.399: Sociology of the Holocaust
- SOC08.494: Field Experience Seminar in Sociology

## Theatre and Dance

- THD07.440: Contemporary World Theatre (LIT, ACE)

## Writing Arts

- WA01.304: Writing with Style
- WA01.400: Writing for the Workplace
- WA01.408: Writing as Managers
- WA01.301: Writing, Research and Technology
- WA01.401: The Writer’s Mind
Course Descriptions

ACC 03200:  Accounting Mentorship  
Prerequisites: Any undergraduate or graduate business major or permission from instructor.
The Accounting Mentorship Program links College of Business students who are interested in an accounting career with working professionals in the field of accounting. Students enrolling in this course are matched with a mentor who is presently working in an area of accounting in which the student expresses an interest, (such as public accounting, corporate accounting, tax, government, forensic). Students and mentors communicate via email, phone and in-person meetings, in order for students to obtain a better understanding of the challenges and rewards of Accounting as a profession from those presently working as accounting practitioners. This enhanced understanding should help solidify the choice of profession and allow students to begin developing professional networking skills.

ACC 03210:  Principles Of Accounting I  
This course includes accounting theory and practice in the analysis of business transactions and the recording of business data; complete accounting cycle; interpretation of financial data for sole proprietorship, partnerships, corporations and public agencies.

ACC 03211:  Principles Of Accounting II  
Prerequisites: ACC 03210
This course includes accounting theory and practice applied to corporations and public agencies; budgeting and estimating; analysis and comparison of cost and financial data.

ACC 03300:  Supervised Internship In Accounting  
Prerequisites: ACC 03310 and 57 Credits Required
This course includes accounting field experience in government, industry or non-profit organizations. Interns are given assignments that prepare them for productive employment upon graduation. The learning process is monitored by an Accounting faculty member.

ACC 03310:  Intermediate Accounting I  
Prerequisites: ACC 03210 and ACC 03211 minimum grade of C in both courses, and 57 Earned Hours Required
This course includes a review of the accounting process, the preparation of each of the financial statements - i.e., Statement of Financial Position, Statement of Income, Statement of Changes in Owner’s Equity, and Statement of Cash Flows - and the specific principles related to the accounting for current assets, current liabilities and long-term liabilities. A special section is devoted to the time value of money as related to accounting.

ACC 03311:  Intermediate Accounting II  
Prerequisites: ACC 03310 with minimum grade of C- and 57 Credits Required
This course includes the accounting principles related to investments, operating assets, current and long-term liabilities and owner’s equity accounts. In addition, special topics cover accounting for leases, pensions and current value accounting.

ACC 03316:  Concepts In Federal Taxation  
Prerequisites: ACC 03310 and 57 Credits Required
This course presents an overview of the Federal Tax System in a conceptual framework with emphasis on transactions common to all entities. It exposes students to taxation and its interrelationship between individuals, corporations, partnerships and other business entities. Students will review recent tax legislation and will gain experience in research and preparation of tax returns in a manual and computerized environment.

ACC 03320:  Accounting Information Systems  
Prerequisites: ACC 03310 and (MIS 02234 or MIS 02210)
The course is designed to give the accounting student an introduction to the concepts and tools related to the use, development, and adaptation of computer-based accounting information systems. The course will emphasize information system analysis and design, internal controls, and technology of accounting systems. Students will gain hands-on experience with a commercial accounting software system throughout the course.

ACC 03326:  Cost Accounting  
Prerequisites: ACC 03210 and ACC 03211 minimum grade of C in both courses, and 57 hours required
This course deals with techniques and systems used for internal control. It views the cost accounting system as the connecting link between planning and control functions of management. Topics include: cost accumulation procedures; job order and process cost accounting cycles; variance analysis; maser and flexible budgets; cost-volume-profit analysis; and transfer pricing.
ACC 03328: Entrepreneurial Accounting 3 s.h.
Prerequisites: FIN 04300
This course provides students with the accounting and financial tools essential for effective decision-making in starting and managing small to mid-sized businesses. It focuses on the measurement and evaluation of financial performance, effective cash management techniques, internal control concepts, good decision-making for growth and long-term solvency of the business. A hands on, project based learning experience is emphasized to integrate the various financial tools and to assist student in applying what they learn.

ACC 03330: Selected Topics In Accounting 3 s.h.
Prerequisites: ACC 03310
Students will investigate new areas and developments in theory, research, and practice of accounting. Specialized topics will vary each semester. The topics will be determined by the department and the instructor teaching the course. Course activities include in-depth study of selected topics, case analysis, and research.

ACC 03405: Foundations Of Accounting 3 s.h.
This course presents an overview of accounting as an information system useful for decision making. It provides students with an understanding of the basic concepts of financial and managerial accounting from the perspective of a future user of accounting information.

ACC 03410: Auditing 3 s.h.
Prerequisites: ACC 03311 and STAT 02261
This course introduces students to the basic concepts underlying audit and assurance services and to demonstrate how to apply the concepts to these services. It studies the framework of an audit which includes pre-planning, planning, evidence gathering, considering and/or auditing internal control, performing various audit tests, audit completion, rendering audit opinions via audit reports, and the use of statistics and audit software in the auditing process. The course also includes the application of auditing principles and procedures through the use of audit software.

ACC 03416: Advanced Accounting 3 s.h.
Prerequisites: ACC 03311
This course covers concepts and accounting for business combinations, and specialized financial statement disclosures. It also covers the accounting for inter-company transfers, segment reporting, and interim reporting. It provides an overall review of generally accepted accounting principles in producing consolidated financial statements for the business and non-business organization.

ACC 03425: International Accounting 3 s.h.
Prerequisite: ACC 03311
This course provides students with the critical role of foreign and international business perspectives and prepares the student to understand and compare between the two most commonly applied accounting standards in the world, U.S. GAAP and IFRS. Topics covered will include: IFRS, foreign currency transaction, analysis of foreign financial statements, international taxation, and transfer pricing.

ACC 03428: Integrative Accounting Seminar 3 s.h.
Prerequisites: ACC 03311 or ACC 02311
This course provides an integrative experience in which students synthesize knowledge from the accounting content areas to interpret, evaluate, and analyze financial information in order to enhance planning and decision-making. The course uses case analyses to involve students in active rather than passive learning, and places emphasis on skills in analytical and critical thinking, technology, communication and teamwork. (Offered Spring Only)

ACC 03430: Individual Taxation 3 s.h.
Prerequisites: ACC 03311
Surveys the tax structure of the United States, emphasizing the Internal Revenue code and regulations that affect federal income tax liabilities of individuals. Basic tax research and preparation skills are a consistent theme throughout the course.

ACC 03431: Taxation Of Business Entities 3 s.h.
Prerequisite(s): ACC 03430 or ACC 03432 or ACC 03316
An introductory course in the Federal Income Taxation of business transactions relating to corporations, partnerships, LLCs and estates and trusts. Students will explore tax policy issues, apply basic tax research to specific case problems, prepare common IRS forms and schedules, and develop skills necessary for effective tax planning and its impact on business decisions.
ACC 03432:  Federal Taxation  
Prerequisite(s): ACC 03310  
This course introduces the principles of federal income tax as it relates to business transactions and decision making. Primary emphasis is on individual taxation with an overview of tax considerations and planning for business entities.

ACC 98300:  Law For Accountants  
Prerequisites: MGT 98242 and 57 Credits Required  
This course includes the study of the legal aspects of sales, liability, secured transactions, commercial paper and consumer credit.

FIN 04300:  Principles Of Finance  
Prerequisites: ACC 03211 and STAT 02260 or MATH 04101 and ECON 04101 and ECON 04102  
This course includes the following topics: financial goals; depreciation, taxation and cashflows; financing the firm via short-term, intermediate and long-term debt, and preferred and common stock; capital budgeting and leasing; dividend policy; business growth and contraction.

FIN 04327:  Selected Topics In Finance  
Prerequisites: FIN 04327, Required Credits: 57  
Students will investigate new areas and developments in theory, research, and practice in finance. Specialized topics will vary each semester. The topics will be determined by the department and the instructor teaching the course. Course activities include in-depth study of selected topics, case analysis, and research.

FIN 04330:  Finance Internship  
Prerequisites: FIN 04300  
This course concerns field experience in the finance discipline which includes commercial banking, investment banking, brokerage houses, corporations, government, and not-for-profit organizations. Trainees are given assignments that prepare them for productive employment upon graduation. The learning process is monitored by a Finance faculty member.

FIN 04350:  Personal Financial Planning  
Prerequisite: FIN 04300  
Personal Financial Planning provides the framework and tools for preparing personal financial plans that serve as road maps for goal achievement. This course emphasizes the dynamics of the personal financial planning process by considering the impact of life changes - birth, marriage, divorce, job and career and death. This course will cover a wide variety of money management topics including budgeting, expenses, debt, saving, retirement, and insurance, among others.

FIN 04358:  Bank Management  
Prerequisite: FIN 04300  
This course discusses the regulations, structure and operations of commercial banks, which are the largest of all financial institutions. This course also teaches how these economically vital firms manage different kinds of risks such as credit, market, liquidity, solvency, currency and operational and legal risks. This course also studies the international and global developments in the banking industry.

FIN 04422:  Financial Management I  
Prerequisites: FIN 04300 and STAT 02261 and completion of 90 semester hours as a Business Major  
An in-depth study of the selected financial management topics by using a case and problem-solving approach. The emphasis is on corporate asset management and investment decisions. Topics include risk and return analysis, cost of capital, capital budgeting decision methods, leasing, financial analysis and forecasting, and working capital management.

FIN 04423:  Financial Management II  
Prerequisites: FIN 04422  
An in-depth study of selected financial management topics by using a case and problem-solving approach. The emphasis is on corporate financing decisions. Topics include capital structure decisions, dividend policy, long-term financing, bankruptcy, reorganization, liquidation, mergers, LBOs, divestitures, holding companies, and pension plan management.

FIN 04424:  Seminar In Finance  
Having learned financial markets, financial management, and investment/portfolio analysis in previous finance courses, in this course, students will undertake integrative research on these subjects. This course will teach students the skills required to undertake independent research. They will select a topic, conduct a literature review, and collect and analyze data.
FIN 04425: Financial Derivatives 3 s.h.
Prerequisites: FIN 04431
This course covers a comprehensive survey of the various financial instruments available in the financial markets followed by an in-depth study of practical use of the financial instruments in hedging financial risk. Hedging will be performed from the perspectives of a financial manager and an investor or an investor consultant. Topics include options, futures, swaps, and other hybrid securities and how these securities are used to hedge the risk in a firm or specific financial transaction.

FIN 04431: Investments 3 s.h.
Prerequisites: FIN 04300 and STAT 02261
The basic decision-making processes for investment decisions are outlined in this course in terms of investors’ needs and market opportunities, security market operations, security valuation, investment time, government and corporate securities company analysis and portfolio management.

FIN 04433: Financial Institutions And Markets 3 s.h.
Prerequisites: FIN 04300
This course provides an overview of financial markets and institutions in the U.S. economy. It intends to equip students with a balanced introduction to the operations, mechanics, and structure of the U.S. financial system, emphasizing its institutions, markets, regulators and financial instruments. Another focus of the course is to analyze the major risks faced by financial institutions and the strategies for controlling and managing these risks.

FIN 04435: International Financial Management 3 s.h.
Prerequisites: FIN 04300
This course studies financial management in the international environment. Topics include foreign exchange risk management, multinational working capital management, international portfolio investment, foreign direct investment, capital budgeting for the multinational corporation, political risk, international financing and international financial markets.

FIN 04436: Insurance And Risk Management 3 s.h.
Prerequisites: FIN 04500 AND STAT 02261
Insurance and Risk Management is an advanced elective course for finance majors, and recommended for students who want to pursue careers in insurance and financial planning industries. The course combines the theoretical underpinnings of risk financing with practical applications and examples from business and individual perspectives. Topics include: risk in our society, insurance and risk, types of insurers and marketing systems, insurance company operations, financial operations of insurers, government regulation of insurance, fundamental legal principles, analysis of insurance contracts, life insurance, annuity and individual retirement accounts, health insurance, employee benefit, home insurance, auto insurance, commercial property insurance, enterprise risk management, use of capital market products for risk financing.

FIN 04438: Portfolio Management 3 s.h.
Prerequisites: FIN 04431 and Senior standing
Portfolio Management is an advanced and elective course for finance majors and recommended for students who want to pursue careers in insurance and financial planning industries. The course combines theory of portfolio management with the practical process and issues that one will encounter when managing real money in the real world. Topics include formulating investment policy, recognizing risk and return characteristics of investment vehicles, developing asset allocation and security selection strategies using top down fundamental analysis, evaluating portfolio and manager performance relative to investment objectives and appropriate benchmarks. Investment tools, such as economic indicators, statistical analysis, and ratio comparison will be introduced in computer labs.

FIN 04518: Derivative Securities and Financial Risk 3 s.h.
Prerequisite(s): Investments and Portfolio Analysis FIN 04600 OR Permission of Instructor AND Admission to MBA ORMS in Finance.
In this course, students will learn forward, future, option and swap contracts, and hedging, arbitrage, and derivatives-pricing models. In addition, securitization and risk management concepts will be covered. Students will learn how to model and evaluate derivative instruments and their applications to corporate strategy and risk management.

AFST 11104: Introduction To Africana Studies 3 s.h.
This course will introduce students to the interdisciplinary, multicultural and international field of Africana Studies, from the perspective of the experiences and scholarly and creative contributions of Africans and African descendants to the making of the modern world. The primary focus in the course will be to explore how the experiences and contributions of African peoples have influenced historical and contemporary developments, addressed urgent societal issues, and helped to shape social consciousness, social activism and social change, within the African Diaspora and the global community.
AFST 11304: Africana Social Thought  
**Prerequisites:** AFST 11104  
3 s.h.  
This course engages students in an introductory overview of major ideas, theories, ideological debates, and social/political movements that have emerged in the African Diaspora to challenge national and global social, political, economic and other realities, and to produce a dynamic framework of historical and contemporary thought that have helped to shape social consciousness, social activism, and public policy.

AFST 11305: Research Methods In Africana Studies  
**Prerequisites:** AFST 11104 and COMP 01112  
.5 to 3 s.h.  
This course is designed to develop students skills in applying and critically reviewing basic quantitative research methods. Topics will include analysis of descriptive, correlational and experimental studies, followed by an extensive presentation of the main qualitative research methods, including case studies, ethnographic studies, grounded theory research, life history studies, phenomenological studies, and participatory action research. Students will also learn data gathering methods such as observation, interviewing, and analysis of archival materials.

AFST 11310: Service Learning Seminar In Africana Studies  
**Prerequisites:** AFST 11104 and Permission of Instructor is also required  
3 s.h.  
The proposed model for the Africana Studies Major at Rowan University requires that students participate in a three-credit service learning experience, accumulating 70-75 hours with an educational, social service, mental health, business, or cultural/civic group, institution or organization to explore community or institutional development initiatives which address issues that are local, regional, national and/or international in scope. The seminar will integrate classroom learning and community service through a collaborative partnership involving each student, the seminar leader, and a leader within the community organization. Students will spend approximately one day a week at their internship site, and will return to the classroom to share their experiences. Students interested in enrolling in the Service Learning Internship must interview with the course instructor one semester prior to the semester in which they will enroll in the course.

AFST 11450: Senior Seminar In Africana Studies  
**Prerequisites:** AFST 11104, AFST 11304, and AFST 11305 or an equivalent methods course  
3 s.h.  
The senior seminar in Africana Studies is designed as the culmination of students' experiences in the various aspects of the Africana Studies major. The course emphasizes and reinforces elements of the research and service components of the Africana Studies major, while exploring original themes or focusing on more extensive and intensive study of themes covered in survey courses. It will also provide for faculty and students an intellectual discussion community in which to posit, examine, and disseminate cutting-edge scholarship and creative work, including interdisciplinary approaches to topics in the study of peoples of African descent. Students will use critical thinking and analytical skills in understanding and interpreting relevant literature, to develop a proposal for research, and to produce a substantial written research project report, using either qualitative or quantitative research methods or an integration of both.

AMST 13101: Introduction to American Studies  
**Prerequisite:** COMP 01112  
3 s.h.  
This is an interdisciplinary course intended to introduce the methods and themes central to American Studies. The course describes the typical methods of text, social, historical, and cultural analyses as they apply to the study of American society and culture.

AMST 13301: Interdisciplinary Research and Writing  
**Prerequisite:** COMP 01112 **Corequisite:** AMST 13101  
3 s.h.  
Interdisciplinary Research and Writing provides a disciplinary and interdisciplinary approach to research and writing. The students will gain a basic knowledge of the research methods and writing of three different disciplinary areas: Literary Studies, History, and Social Sciences. These units will approach four questions in a parallel form for each field: What counts as knowledge in this discipline? What counts as evidence in this discipline? How do we collect evidence? and, How do we write up and write about our original research?

AMST 13400: Independent Study In American Studies  
3 to 9 s.h.  
Students will engage in an independent study project under the supervision of a faculty member. Topics will vary.

AMST 13402: Senior Seminar In American Studies - W  
**Prerequisites:** AMST 13201 and COMP 01112  
3 s.h.  
This seminar provides the opportunity for students to engage in their own research into American Studies and to significantly advance their own scholarly development in the field. Students interact with their instructor and the other students in the seminar in the development and completion of individual projects. The central theme will vary by semester. Topics may include: ethnicity, popular religion, slavery in North America, World War II at home and abroad.
ARHS 03103: Art History Survey I  
This course traces the history of painting, sculpture, architecture, and crafts in the West from the Old Stone Age up through the Middle Ages.

ARHS 03104: Art History Survey II  
(No prerequisites but students are urged to take Art History Survey I prior to taking Art History Survey II) This course presents the history of the visual arts in the West from the Renaissance to the early eighteenth century.

ARHS 03130: Art Appreciation  
This general art appreciation course deals specifically with outstanding examples drawn from such diverse areas as product design, architecture, interior design, drawing, painting, sculpture, printmaking and the creative crafts, taken from various time periods in the history of the human family and from different places the world over.

ARHS 03105: Art History Survey III  
This course presents the history of the visual arts in the West from the mid-eighteenth century to modern times. There are no prerequisites but students are urged to take Art History Survey I and II prior to taking Art History Survey III.

ARHS 03220: Modern Art  
This course introduces significant creative visual art achievements of the nineteenth and twentieth centuries. Specific areas of coverage include impressionism, post-impressionism, fauvism, expressionism, non-representational directions, surrealism, regionalism, abstraction, pop art and hyperrealism.

ARHS 03230: SURVEY WOMEN ARTISTS  
An introduction to the work of many female artists who form an important part of the history of art. In order to break down stereotypes, each artist is discussed within the context of her society and with respect to her role in the art world. Rather than canonizing a group of “great women artists,” the course is intended to return female artists to their rightful place in history through the study of individuals whose accomplishments demonstrate the tremendous effect women have had on the visual arts. Since a single semester is too brief for an exhaustive study of women’s contributions, this course focuses on a selection of European and American artists from the sixteenth through twenty-first centuries.

ARHS 03231: Survey Of Asian Art  
This course provides an introduction to the artistic traditions of China, Japan, India, Korea, and Southeast Asia with an emphasis on historical, religious and social context. Focus on the arts of Buddhism, Hinduism, and other religious and cultural influences on the visual arts.

ARHS 03241: History Of Photography  
This course will present the 175 year history of photography in a comprehensive and detailed manner. Students will gain an overview of the history of photography from its inception to present day. Emphasis will be placed on significant movements, concepts and individuals relevant to the evolution of photography. Field trips to gallery and museums where photography can be viewed will be an integral part of the course. Class sessions will consist of digital presentations of images and concepts from the history of photography and will be supported by the required text. Classes will be augmented by readings and field trips to galleries and museums.

ARHS 03252: Concepts In Art: Criticism - Wi  
This course is designed to help the students identify and employ methods of examining art works which allow them to speak and write thoughtful judgments about the art in their world.

ARHS 03310: History Of American Art  
A minimum of at least 30 s.h. completed.
This course provides students with an overview of the development of painting, sculpture and architecture in America from colonial times to the 20th century.

ARHS 03340: Survey Of Women Artists  
An introduction to the work of many female artists who form an important part of the history of art. In order to break down stereotypes, each artist is discussed within the context of her society and with respect to her role in the art world. Rather than canonizing a group of “great women artists,” the course is intended to return female artists to their rightful place in history through the study of individuals whose accomplishments demonstrate the tremendous effect women have had on the visual arts. Since a single semester is too brief for an exhaustive study of women’s contributions, this course focuses on a selection of European and American artists from the sixteenth through twenty-first centuries.
Course Descriptions

ARHS 03350: History Of Graphic Design 3 s.h.
Prerequisite: ART 09343
Graphic design from the 19th century to the present, with emphasis on European and American sources and some examination of world design issues relevant to contemporary design practice. Discussion of events, ideas, movements, designers and other individuals with historical significance and influence. Content topics will consider typography, graphic translation, publication, identity and design systems, visual propaganda, and the effect of technology in design production and creative output. Students without the prerequisite may enroll with instructor’s permission.

ARHS 03420: Art Since 1945 3 s.h.
Prerequisite: ARHS 03205: Art History Survey III OR ARHS 03220: Modern Art
This course explores the visual arts over the last thirty years, with particular emphasis on theory, criticism, political and cultural influences, expanded media, and the art market.

ARHS 03425: Special Problems In Art History 3 s.h.
Prerequisites: ARHS 03103 or ARHS 03104 or ARHS 03205
Special Problems in Art History is an intensive investigation of a specific movement, style, medium, or major artist. Content changes each time the course is offered. Check the Schedule of Classes to determine specific area of study.

ARHS 03520: Art Since 1945 3 s.h.

ART 02100: Representational Drawing 3 s.h.
This course presents the basic representational skills and knowledge for effective drawing. It covers the elements and fundamentals of perspective, composition, anatomy, light and shade and rendering.

ART 02105: Color And Design-Two Dimensional 3 s.h.
An introductory lecture/studio course dealing with compositional strategies, to teach students to manipulate elements in dealing with solutions to the problems of aesthetics, function, and balance and the relationship between form and content. In the studio student’s work on selected conceptual problems in both black and white and color in various materials.

ART 02110: Figure Drawing 3 s.h.
This course consists of experimenting, exploring and improvising with techniques suitable for drawing representation of such visual forms as figure and still-life. It also covers nonrepresentational approaches. For art majors only.

ART 02200: Expressive Drawing 3 s.h.
Prerequisites: ART 02100
This course will consist of experimentation, exploring, and improvisation with techniques suitable for representation of visual forms such as still-life, landscape, and figures as well as non-representational approaches.

ART 02207: Color And Design-Three Dimensional 3 s.h.
Drawing on the experiences gained in the 2D design and color problems, this course teaches students to establish visual excitement in a 3D format. Students deal with relationships of organic and natural structures and mechanical and geometric forms, as well as methods for relating them to one another.

ART 02211: Intermediate Drawing IV 3 s.h.
Prerequisites: ART 02200
These studios are a continuation of fundamental drawing. They will include figure/life drawing, composition, technique, and the analysis of human form, as well as other drawing problems.

ART 02220: Introduction To Painting 3 s.h.
This course introduces students to basic concepts, techniques, materials and procedures of painting.

ART 02222: Studio Core Portfolio Review 0 s.h.
After completing the Foundation Studio Core, each student will present a portfolio of 15 works executed in design and drawing. This portfolio will include at least 8 drawings and at least 5 designs including no less than two three-dimensional projects. Students will receive an evaluation of their portfolios, which is required before progressing on to the studio specialization. Students sign up for this review the semester they are enrolling in their final studio courses of the Foundation Core.
Course Descriptions

ART 02239: Introduction To Glass Working 3 s.h.
Prerequisite: ART 02222
This introductory studio course is designed to teach students to use glass as an expressive art medium. It includes studio work to develop skills and knowledge, as well as discussions and lectures to develop an understanding of both historical and contemporary approaches to the medium. Students explore both sculptural and utilitarian forms in glass. Techniques covered include slumping, fusing, kiln casting, lampworking and patte-de-verre.

ART 02240: Introduction To Sculpture 3 s.h.
Introduction to basic processes, materials, and concepts of sculpture and three-dimensional problem solving techniques.
This course is designed to provide students with safety orientation for their use of equipment and materials.

ART 02245: Intermediate Figure Sculpture 3 s.h.
Prerequisites: ART 02222
This studio emphasizes the analytical and expressive potential of the human figure in sculpture by working in a variety of techniques and methods, including modeling in clay from the live figure. Techniques of moldmaking and casting are an integral part of the course.

ART 02260: Introduction To Printmaking 3 s.h.
The introductory course surveys techniques used in creating intaglio and relief prints. Demonstrated techniques include etching, drypoint, woodcut, lino cut and other press and hand-printing processes.

ART 02300: Workshop In Art 3 s.h.
This course explores various studio experiences and techniques. The area(s) to be covered will be identified prior to registration each semester. For non-art majors only.

ART 02301: Intermediate Sculpture 3 s.h.
These sculpture studios examine projects in three-dimensional form. Students work closely with the instructors on problems of their own choosing. Students may work in a variety of materials and explore major trends in contemporary sculpture.

ART 02304: Intermediate Glass Working 3 s.h.
Prerequisites: ART 02239
This intermediate studio course will further explore issues and techniques learned in Glass-Working I. Students will have the opportunity to study in depth methods of forming glass that allow individual artistic expression and personal style to be developed. Projects will be assigned according to the techniques and processes in which students are interested. Repeatable 3 times

ART 02315: Intermediate Painting 3 s.h.
Prerequisite: ART 02222
These studios continue the study of painting, emphasizing the expressive and physical qualities of media, pictorial composition and color theory.

ART 02317: Intermediate Printmaking 3 s.h.
Prerequisite: ART 02260
These studios allow students to pursue further study in relief and intaglio processes both traditional and experimental approaches. Also the possibilities of photography as it relates to printmaking in a variety of multi-block and multi-plate color processes will be investigated.

ART 02318: Special Topics In Printmaking 3 s.h.
Prerequisites: ART 02222 AND ART 02260
This course focuses on a particular topic within this studio specialty and offers an in-depth study of the concepts and techniques used by artists who base their work on a particular genre. The topical content may vary each time the course is offered.

ART 02335: Intermediate Figure/Life Painting And Drawing 3 s.h.
Prerequisites: ART 02220 and ART 02222
Students paint from life and costumed figures to strengthen their understanding of figure articulation, action, proportion and anatomical construction.
ART 02327: Aquarelle (Intermediate Level) 3 s.h.
This course explores the techniques of all water-soluble media (aquarelle). It investigates and practices such processes and media as transparent watercolor, tempera, gouache and acrylic in water.

ART 02370: Selected Topics In Glass-Working 3 s.h.
Prerequisites: ART 02222
Selected topics to be presented may include lamp-working, stained glass, painting and enameling, history of glass-working and, when facilities can be scheduled with Wheaton Village, glassblowing and/or glass casting.

ART 02400: Independent Study .5 to 9 s.h.
Intended primarily for students working at an advanced level in one of the regular studio areas, this course allows students to complete various projects. Students must show sufficient maturity and experience to assure successful completion of the proposed project.

ART 02401: Advanced Sculpture 3 s.h.
Prerequisite: ART 02301
These studios explore advanced problems in sculpture. Students work in consultation with the instructor.

ART 02404: Advanced Glass Working 3 s.h.
Prerequisites: ART 02403
This advanced studio course will utilize the techniques of Patte-de-verre, slumping, fusing, kiln casting and lamp working. Students will work on projects agreed upon in a contract with the instructor. By this level, students are expected to be operating at an advanced level of technique and aesthetic content. Repeatable 3 times

ART 02414: Advanced Painting 3 s.h.
Prerequisite: ART 02315
These studios provide advanced study emphasizing individual conception of the painted image, composition and design in both representational or abstract painting.

ART 02430: Advanced Printmaking 3 s.h.
Prerequisite: ART 02317
In these studios, students continue to explore printmaking, developing problems that emphasize individual development and discovery. These studios will be individualized to meet the requirements of advanced students

ART 09110: Experiencing Art 3 s.h.
This course provides art experiences as processes which, in a workshop environment, are developed by students into expressional plastic forms. This course introduces work with the tools, materials, processes and purposes of art. Materials used may include clay, paint, wood, plastics, metals and fabric. For non-art majors only.

ART 09200: Theory And Analysis Of Art Education 3 s.h.
This course provides students with an historical knowledge base of the theories, philosophies and persons that have impacted the teaching of art in public schools. Assignments will actively engage learners in developing their own teaching philosophies as they examine current theoretical and pedagogical research, and the national and state curriculum standards for teachers and students of the visual arts.

ART 09201: Community Art Education For Elementary Through Middle Grades 3 s.h.
Prerequisites: EDUC 20220 Corequisites: SMED 01350 AND SECD 03330
This course introduces students to community visual arts programming and involves them in the practice of organizing for art instruction and the teaching of elementary and middle school aged children who are enrolled in the Saturday Morning Art program (smART).

ART 09202: Community Art Education For Secondary Grades 3 s.h.
Prerequisites: SMED 01350 AND SECD 03330 Corequisites: SMED 31360 AND SECD 03332
This course introduces students to community visual arts programming and involves them in the practice of organizing for art instruction and the teaching of adolescents whose schools are partnering with the Saturday Morning Art (smART) program.
ART 09203: Technology for the Art Classroom 3 s.h.
Prerequisite: None
This course prepares pre-service visual art teachers for media and technology applications in the art classroom. These applications include, but are not limited to, using technology as an instructional tool, classroom management, communication, assessment, professional development, and arts advocacy. The knowledge and skills of technology learned from this course is not for content production purposes, but for helping pre-service teachers improve their teaching performance.

ART 09210: Introduction To Metals And Jewelry 3 s.h.
This course introduces metal fabrication techniques including piercing, cold connecting, forming, texturing, soldering, and finishing of non-ferrous metals in order to create small-scale metalwork and jewelry. Technical skills and craftsmanship will be stressed while the students explore ideas and concepts through this three-dimensional medium.

ART 09212: Jewelry And Metal Casting 3 s.h.
Prerequisites: ART 02222
This course deals with various metal casting processes, using a variety of metals. The course provides an in-depth learning experience through intensive independent work.

ART 09225: Introduction To Puppetry I 3 s.h.
This course provides an overview of the field of puppetry, including history, construction, playwriting and performance. It includes studio work.

ART 09226: Intermediate Puppetry II - Puppetry In Education 3 s.h.
This course is devoted to structuring puppet experiences in the classroom and teaching with puppets.

ART 09228: Introduction To Illustration 3 s.h.
Prerequisites: ART 02222
This course provides students with an introductory experience with illustration. Students will work with basic visual, technical and expressive problems in preparation for further study in illustration.

ART 09240: Introduction To Ceramics 3 s.h.
An introductory studio/lecture course designed to teach students to use clay as an expressive art medium. It includes studio work to develop technical skills and knowledge along with discussions and lectures to develop an understanding of both historical and contemporary approaches. Students explore both utilitarian and sculptural forms in clay.

ART 09251: Introduction to Figure Anatomy for the Artist. 3 s.h.
Prerequisite(s): ART 02222
This course is designed to strengthen the students understanding of observational figure drawing and anatomy. Students will develop skills and techniques to accurately recreate the human form by learning the fundamentals of skeletal and muscle anatomy of the human body. The course will serve to improve observational and realistic figure drawing skills, by learning the anatomical relationships and techniques for visualizing form. This course will provide the student the opportunity to interpret anatomy knowledge by working directly from the figure in the drawing studio and the human cadaver at the Cooper Medical School.

ART 09252: Introduction to Natural Science & Zoological Illustration 3 s.h.
Prerequisite(s): ART 02222
This course is designed to develop a strong foundation in concept development and observational drawing skills. As well as integrate traditional and introductory digital media techniques within the subject matter of drawing plants, animals, and natural science content. Both traditional forms of media (graphite, pen/ink, charcoal, color pencil etc.) and digital forms of media production will be used to illustrate subjects through demonstrations and visual problems. The course will focus on the integration of traditional and digital media, as it related to realistic and representational drawing. Students will learn professional production methods and design conventions within the field of natural science and zoological illustration.

ART 09253: Biomedical Art: Introduction to Digital 3D Modeling 3 s.h.
Prerequisite(s): ART 02222
This is an aesthetics based media course that communicates digital 3D content for both biomedical art (didactic) media and entertainment media (illustration, animation, game design etc.). The course is designed to cover concepts in digital 3D organic and inorganic object modeling, which includes observational modeling, conceptual process modeling, and narrative modeling. Students will learn to develop a broad range of modeled content including but not limited to characters, objects, and environments. The digital models designed are rendered and composited as 2D illustration to solve specific visual communication problems. The software (Autodesk 3D Studio Max and Mudbox) used in the course are industry standards for 3D computer graphics production. The subject matter within the Specialization in Biomedical Art and Visualization reflects the subject matter of science and medicine. Students in broader areas of art (sculpture, illustration, painting, etc.) will be able to focus on specific subjects relevant to their artistic goals using the 3D methods and techniques.
ART 09301: Digital Media And Techniques 3 s.h.
This foundation course introduces students to digital media in solving art and design problems. Through demonstrations and hands-on experience, students will explore various computer software applications related to the fine arts and graphic design.

ART 09303: Professional Practices in Art I 3 s.h.
Prerequisite: ART 02222
This course is designed to provide art majors with an in depth exploration of the professional practices artists undertake in order to establish and foster a professional career in the arts. Students will be explored to a variety of resources, techniques, and methods available to help build their careers after baccalaureate graduation.

ART 09308: Color Theory 3 s.h.
Through an investigation of classification systems and theories, color theory students will construct color relationships for various applications with paint and digital media. Must be enrolled in one of the following majors: Art: Education, Art, Studio Art, or Studio Art - Graphic Design Specialization.

ART 09310: Intermediate Puppetry III 3 s.h.
This course is devoted to structuring puppet experiences in the classroom and teaching with puppets.

ART 09311: Intermediate Metals And Jewelry 3 s.h.
Prerequisites: ART 02222 and ART 09210
These courses have a rotating topic of emphasis and build on the techniques and process learned in Introduction to Metals/Jewelry. The semester long topics include forming, vitreous enameling, and small-scale casting. Students will apply these techniques to create unique concept driven jewelry and metalwork. Contact the professor to inquire about the topic of emphasis for the semester.

ART 09313: Intermediate Puppetry IV 3 s.h.
This course is devoted to structuring puppet experiences in the classroom and teaching with puppets.

ART 09314: Special Topics In Metals/Jewelry 3 s.h.
Prerequisites: ART 02222 AND ART 09210
This course focuses on a particular topic within this studio specialty and offers an in-depth study of the concepts and techniques used by artists who base their work on a particular genre. The topical content may vary each time the course is offered.

ART 09336: Intermediate Illustration 3 s.h.
Prerequisite: ART 09228
These courses provide in-depth study emphasizing the dynamics of the image and the symbolic and expressive use of visual language. Draftsmanship, and the application of technique and materials are studied and reviewed in periodic critiques of work in progress. Students will also continue work on developing a professional portfolio.

ART 09343: Introduction To Graphic Design I 3 s.h.
Prerequisites: ART 02105 and ART 02100
Introduction and orientation to concepts and skills in visual communication. Content is focused on fundamentals of graphic translation, typography, and visual organization. Students will develop visual vocabulary, problem solving skills, and conceptual thinking abilities through creative exploration of theory, history, practice, and technology.

ART 09344: Intermediate Graphic Design II: Typography 3 s.h.
Prerequisite: ART 09343
The emphasis of this course is typography as a medium of visual communication. Focusing on principles of typographic composition, structure, and hierarchy, students will explore and analyze relationships between visual and verbal language. Content includes typographic history, technical details of type specification and terminology, and methods of hand-generation and digital manipulation of type.

ART 09346: Computer Aided Design (Cad): 3d Modeling For The Artist/Designer 3 s.h.
Prerequisites: ART 02222
This course is concerned with the visualization and creation of 3D computer-generated models and their applications in the art and design world. Students will be instructed in the principles of 3D modeling using computer modeling software and will be introduced to a variety of 3D model applications as they are used in object and concept design. Students will be taught to conceptualize, develop, detail, present, and communicate on content as well as functionality of designs.
ART 09349: Intermediate Graphic Design III: Visual Identity 3 s.h.
Prerequisite: ART 09344, may be taken concurrently

With an emphasis on symbols/logos and image translation, this course is focused on concept development and establishing hierarchy through the organizational structure of type and image. Acknowledging the role of context in the interpretation of form, students will begin to address tailoring communication to defined audiences. They will be introduced to visual identity systems and branding while investigating additional methods and processes for design problem-solving in professional practice.

ART 09350: Intermediate Graphic Design IV: Packaging 3 s.h.
Prerequisite: ART 09349

This course explores three-dimensional form development of theoretical and applied packaging techniques. Content emphasizes structural design and packaging types, surface graphics, and typography. Working from project briefs, students are introduced to genre-specific issues including production methods and materials, branding, retail/wholesale markets, legislative requirements, product launches, and professional guidelines for best practices in contemporary packaging.

ART 09351: Computer Art Techniques I 3 s.h.

This course introduces students to the techniques made possible by the computer with design, drawing and painting programs. The course explores the computer's ability to execute designs as well as copying, rescaling, mirroring, rotating, color permutation, tapering, shadowing filling and animating.

ART 09352: Intermediate Ceramics 3 s.h.
Prerequisite: ART 09240

These studios provide advanced students an opportunity for intensive, self-structured, independent work. Studio work, kiln construction, advanced clay and glaze formulation is covered. There are on-going critical analyses of individual work and its relation to contemporary aesthetic issues.

ART 09354: Special Topics In Graphic Design 1 to 3 s.h.
Prerequisites: ART 09344 and ART 09349

This course provides extended study of typography and design, on topics as determined by faculty in the studio area of Graphic Design. Through this course, students’ knowledge of facts, concepts, and technical skills will advance as they consider and explore new design challenges. The topical content may vary each time the course is offered. Students may enroll in this course multiple times.

ART 09356: Biomedical Art: Digital Rendering Techniques 3 s.h.
Prerequisites: ART 02222 and ART 09252

This course is designed to develop strong observational skills, and integrate digital media rendering and painting techniques within the scope of biomedical content and visual problems solving. This goal will be to convey an aesthetically powerful illustration, which effectively provides a solution for a specific visual communication. The student will learn a vocabulary for expressing pertinent natural science and medical art concepts in relation to technique design, composition, object accuracy/integrity, and context. Students will learn digital rendering techniques and methods to depict concepts in digital continuous tone and color (Adobe Photoshop and Illustrator). The integration of digital techniques will be used in unique ways to explore the boundaries of medium and convention in modern production. Elective students in the broader areas of Art, Design, Science, and Medicine will be required to apply the concepts and techniques taught in class to specific content pertinent to their major of study.

ART 09358: Web Design: Designing For The World Wide Web 3 s.h.
Prerequisites: ART 02222 and ART 09343

This course introduces students to the basic concepts, issues, and techniques related to designing, building, and managing intelligent, usable, and well-designed web sites. The students will learn how to create dynamic sites that consider the needs of the client and audience within the context of contemporary graphic arts and web design.

ART 09359: Web Design: Interactivity And Motion Graphics 3 s.h.
Prerequisites: ART 02222 AND ART 09343

This course introduces students to concepts, issues, and techniques related to web design and motion graphics, giving them the tools to create and publish animated web sites, produce e-learning content, edit and author audio, as well as create basic online games. Students will also learn about the theory and practice of artists working in this medium.

ART 09360: Biomedical Art: Storyboarding & Animation 3 s.h.
Prerequisites: ART 02222 and ART 09253

This is an aesthetics based course that communicates animated narratives in the areas of art and science. This course serves as an introduction to animation of objects, environments, animals, humans and natural science subjects. Students will learn to create 2D and 3D animations of narratives with goals to communicate a message and/or educate the viewer on their story. The student will learn pre-visualization skills in the form of storyboarding to problem solve their ideals before animation. The student will use pre-visualized concept art to animated short stories of the body, environment, and/or natural science.
through the medium of 2D and 3D digital animation software (Adobe Flash, After Effects and Autodesk 3D Studio Max.) The principles of 2D and 3D digital space and motion/timing will be used as the foundation of production. The subject matter within the Specialization in Biomedical Art and Visualization reflects the subject matter of science and medicine. Students in broader areas of art (sculpture, illustration, painting, etc.) will be able to focus on specific subjects relevant to their artistic goals using the animation methods and techniques.

**ART 09361: Medical Sculpture & Forensic Reconstruction** 3 s.h.
**Prerequisites:** ART 02222 and ART 09253

This course is designed for students interested in learning the structure, anatomy, and features of the head and its relation to facial reconstruction. This course will strengthen the student's understanding of the muscles in the face, bone, and landmarks of the skull. Students will also understand how these two groups contribute to each individual's appearance. Age, race, and gender will be discussed and considered in the re-creation of the face. Demonstrations of techniques, lectures, and critiques are part of the course work. Projects will include study sheets, in-class assignments and some projects that can be completed at home. However, most assignments will be done in class. The course is needed for the instruction of advanced techniques and concepts in biomedical visualization. The course contains specific projects, which reflect the demands of industry specialization and career training expectations. Specific visualization problems in: medical sculpture, prosthetics, and forensic sculpture are required in the course.

**ART 09363: Advanced Graphic Design V: Publication Design** 3 s.h.
**Prerequisites:** ART 09349

An advanced studio course investigating narrative and expressive use of grids, typography, photography and illustration for editorial and information design. Course content includes discussion of editorial vs. advertising design; serial versus monographic visual organization; the roles of graphic designer, art director, and creative director; and contemporary implications and integrations of print and digital presentation.

**ART 09364: Advanced Graphic Design VI: Infographics and Professional Practice** 3 s.h.
**Prerequisite:** ART 09350 (Interm. Graphic Design IV)

This course integrates two key areas: information visualization and critical theory for professional design practice. Working individually and in teams, students will learn to design for clarity and accuracy to visualize factual, abstract, invisible, and sequential data in print and animated formats. Through lectures, readings and case studies, they will consider the practice of design management including issues of pricing, intellectual property, scheduling, and design responsibility and sustainability in a global culture.

**ART 09365: Time-Based Media: Animation** 3 s.h.
**Prerequisites:** ART 02222

This course is a hands-on studio workshop that covers concepts, issues, and techniques related to 2-D animation, exploring the growing range of genres and applications from within the arts including stop-motion, computer-generated animation and experimental animation techniques. Students will create their own 2-D animations as well as study the theory and practice of artists working in the medium. This course supports the fine arts experience by cultivating innovation, visual creativity, experimentation, intellectual enquiry and the acquisition of professional animation techniques.

**ART 09373: Advanced Problems in Biomedical Art** 3 s.h.
**Prerequisites:** ART 02222 and ART 09251 and ART 09252 and ART 09356

This course entails developing skills and knowledge necessary for effective visual communication of complex biomedical concepts and subject matter. The focus will be on developing conceptual visual story telling skills. Students will learn to take complex information presented by specific biomedical subject matter and selectively simplify it to solve visual communication problems effectively for the target audience. Students will work exclusively in digital media to develop competence and efficiency in the rendering methodologies and learn the conventions of modern production. The course is needed for the instruction of advanced techniques and concepts in biomedical visualization. The course contains specific projects which reflect the demands of industry specialization and career training expectations. Specific visualization problems in: medical/legal, veterinary, pharmaceutical, molecular, editorial, textbook, journal visualizations and required in the course.

**ART 09375: Time-Based Media: Video** 3 s.h.
**Prerequisites:** ART 02222

This course is a hands-on studio workshop that covers concepts, issues, and techniques related to video, exploring the growing range of genres and applications from within the arts and industry including video installation, narrative film, documentary film, performance video, and exhibition documentation. Students will create their own video-based projects as well as learn about the theory and practice of artists working in the medium. This course supports the fine arts experience by cultivating innovation, visual creativity, experimentation, intellectual enquiry and the acquisition of professional video production techniques.
ART 09377: Graphic Design & Typography Essentials 3 s.h.
This course develops visual communication skills, teaching non-art majors how to think like a designer. Students will explore the creative design process with digital tools and design software, learning to effectively use and organize basic elements: typography, images, and color. They will examine and analyze case studies in graphic design, developing ability to critique design solutions. Students will use critical thinking skills, learning the essential descriptive vocabulary of graphic design and typography and how to designer's choices about type and image work together to communicate specific content.

ART 09380: Advanced Puppetry V 3 s.h.
Prerequisites: DESN 09225 or ART 09225 and DESN 09226 or ART 09226 and DESN 09310 or ART 09310 and DESN 09313 or ART 09313
These courses study in-depth a specific phase of puppetry. They emphasize hand and rod puppets, shadow puppets and black theatre, marionettes and the history of puppetry.

ART 09381: Advanced Puppetry Vi 3 s.h.
These studio courses offer in-depth involvement with sophisticated puppetry techniques. Students will develop individual expertise, style and approaches to the art of puppetry.

ART 09390: Work In Progress Review 0 s.h.
A required review of work-in-progress for all B.F.A. students.

ART 09401: Senior Show Or Project 0 s.h.
Each B.A. student will prepare and mount selected works as a senior exhibition or execute an equivalent project. Required for graduation.

ART 09405: Advanced Puppetry VII 3 s.h.
These studio courses offer in-depth involvement with sophisticated puppetry techniques. Students will develop individual expertise, style and approaches to the art of puppetry.

ART 09406: Advanced Puppetry VIII 3 s.h.
These studio courses offer in-depth involvement with sophisticated puppetry techniques. Students will develop individual expertise, style and approaches to the art of puppetry.

ART 09411: Advanced Metals And Jewelry 3 s.h.
Prerequisites: ART 02222 and ART 09201 and ART 09311
Advanced students will utilize the skills learned in Introduction and Intermediate levels of Metals/Jewelry to independently research ideas and techniques in order to create concept driven jewelry or metalwork. Student and professor will work together to establish direction in creation of individual pieces or a body of work.

ART 09419: Advanced Illustration 3 s.h.
Prerequisite: ART 09336
Students will pursue advanced work concentrating on further development of the illustrator's vocabulary and procedures. Assignments are developed in consultation with the instructor. Periodic critiques are held to help each student develop a complete professional portfolio.

ART 09450: Advanced Ceramics 3 s.h.
Prerequisite: ART 09352
This advanced production course combines extensive research and scriptwriting skills with sophisticated field production techniques. Students select subjects of local interest to feature in high-quality, 20 minute documentaries involving pre-production planning, extensive field shooting, and post-production editing on Avid editing systems. Field production includes use of single and multiple camera units.

ART 09452: Computer Art Techniques II 3 s.h.
This course allows students to draw, paint, animate, layout and design using computers and software. Students may specialize in fine arts, illustration, drawing, crafts, interior designing, textiles, package design lettering/typography or desktop publishing. Students develop their own professional portfolios of computer art.

ART 09453: Introduction to Game Media Design 3 s.h.
Prerequisites: ART 09253 and ART 02222
This is an aesthetics based course that communicates and focuses on educational and casual game content through the fundamentals of game media design. The course materials and projects will help students understand how and why games can be used for learning in the fields of health, medicine, science, and social change. Students will also learn how casual games can be a powerful learning tool in social situations. The course exposes students to examples of current work and research in game design mechanics, game art production, game learning mechanics, and assessment mechanics, which are important to designing successful and engaging games. Students will learn use traditional drawings media, the Adobe
Creative Cloud, and specific game engines to develop their games. Students will be exposed to industry-specific examples of educational and casual games (social games, learning games, news games, health and science games, and exercise-games etc.) These examples alone with specific lecture topics, demonstrations and material, will allow students to learn how to develop their own educational and casual games projects that deliver content through game media and design.

**ART 09454:** Surgical Illustration and Media  
*Prerequisites:* ART 02222 and ART 09251 and ART 09356  
3 s.h.

This studio course is an introduction to the illustration of surgical procedures and its fundamental application within the discipline of biomedical art. It is based on the belief that understanding the concepts of medical and/or veterinary surgery is essential to creating effective illustrations and other media that visually communicate the information. Students will research surgical procedures and techniques, sketch procedures in the operating room, prepare comprehensive sketches outlining visual narrative of surgical procedures, and render final illustrations/media presentations using a variety of digital media.

**ART 09456:** Biomedical Art Senior Thesis Exhibition & Portfolio Capstone  
*Prerequisites:* ART 02222 and ART 09251 and ART 09356 and ART 09360 and ART 09454 and ART 09352 and ART 09353 and ART 09253.  
3 s.h.

This course is designed to act as a summative experience for the student. The final BFA Thesis Project will be defined by the student and work with a level of professional collaboration. The requirements for the BFA Thesis will be to solve and effectively visually communicate a medical and scientific problem. Integration of outside resources, research effective collaborator/expert communication, professional practices, presentation (oral and written) and documentation of the process of the semester long project. The project visualization will be student driven; content needs will be determined by the student and the research/collaboration. The emphasis in this course will be on the conceptual development of the content accuracy/relevance and its realization through the design process. The final B.F.A. capstone project will have the following: A two sentence (Maximum) Thesis Statement, a designed/written proposal, research paper, business oriented documentation, a digital presentation to explain the work, artist statement/project scope statement, and the final project depicting the solution for the BFA Exhibition.

**ART 09463:** Advanced Graphic Design VII: Internship  
*Prerequisite: Permission of Instructor*  
0 to 3 s.h.

Students are encouraged to seek internships in the design industry to further their professional skills and understanding of the design profession. Faculty will assist in preparation and placement but the student is expected to take initiative in seeking this experience. Design industry experience is under the supervision of both university and employer; written and oral critique of activity is required.

**ART 09464:** Advanced Graphic Design VIII: Identity Systems and Portfolio  
*Prerequisite:* ART 09363  
3 s.h.

This capstone course is focused upon conceptual investigation and development of comprehensive identity systems and formulation of design standards. Students will work individually and in teams to resolve client-based problems. There may be direct client contact. Professional development is also addressed: portfolio formats, resumes, interviews skills, actual and virtual presentation approaches, and job-seeking strategies. The course culminates with a formal public presentation of a design portfolio by each student.

**ART 09490:** B.F.A. Senior Thesis Exhibition  
0 s.h.

This experience allows students an opportunity to enhance their portfolio skills. This exit evaluation, in the form of a solo exhibition, will give students an occasion to make note of their work development and to determine their progress as emerging professional artists.

**ART 11250:** Introduction To Photography I  
*Prerequisites:* ART 02222, Studio Core Portfolio Review  
3 s.h.

This studio identifies and defines the principles, techniques, and history of black and white photography. Students learn the photographic process from exposing and developing film, to making a final print and photo displays. Camera and darkroom techniques in black and white still photography are used to explore and discover the visual world. This course is designed to treat photography as a medium of personal expression as well as a fine art form. Students will learn to incorporate photography into their own studio specialization. Students will provide their own camera and supplies.

**ART 11275:** Intermediate Photography II  
3 s.h.

This studio emphasizes the development of a critical eye and the use of black and white photography as a form of self-expression and an artistic medium. Students are expected to have a working knowledge of the photographic process. Students advance their technical skills in photographic printmaking, and further understand photography as fine art. Students work on long term individual projects, which will develop technical, aesthetic and conceptual mastery of their medium. Major emphasis is on studio lighting, as well as using 35mm and medium format cameras. Students focus on raising the levels of artistic skill and knowledge towards professional standards. Students will provide their own cameras and supplies.
Course Descriptions

ART 11350: Intermediate Photography II  3 s.h.
Prerequisite(s): ART 02222
This studio emphasizes the development of a critical eye and the use of analog and digital photography as forms of self-expression in an artistic medium. Students are expected to have a working knowledge of photographic processed, in both black and white film and digital media. Students advance their technical skills in photographic printing, and gain further understanding of photography as a fine art. Students work on long-term individual projects, which will develop technical, aesthetic and conceptual mastery of the medium. Additional emphasis is placed on studio lighting, as well as using 35mm, medium format, and digital cameras. Students focus on raising the levels of artistic skill and knowledge in order to attain professional standards. Students will provide their own cameras and supplies.

ART 11375: Non-Silver Imagery  3 s.h.
Prerequisite(s): ART 02222 Studio Core Portfolio Review
This studio class is an introduction to various means of relating the photographic image to other two or three-dimensional media. Experimental techniques in fine arts applications are explored within the medium of photography, including historical processes as well as new technologies. Non-silver processes such as Cyanotype, Gum Print, Liquid Light, Van Dyke Brown, and Toning are demonstrated. Students learn to incorporate bookbinding and other fine arts applications, while perfecting their knowledge of black and white photography. Students provide their own cameras and supplies.

ART 11380: Digital Photography  3 s.h.
Prerequisite(s): ART 02222 Studio Core Portfolio Review
This studio class will introduce students to the medium of digital photography and its applications towards the fine arts. Its development in the realm of fine arts and communications has greatly altered our understanding of photography and the use of an image. The aesthetic potential photography embodies seems to be endless. With its ability to change the way we explore ideas and create expression, digital photography has become a valuable tool for artists. Students continue to become more involved with photography by demonstrating digital imagery with painting, printmaking, graphic design, and illustration. Students learn the use of computer programs such as Photoshop to manipulate photography. Students learn the influence of digital photography on art and society in addition to the aesthetic nature of the medium. Students advance their technical skills in photography and learn to make photographs as fine art.

ART 11385: Large Format Photography  3 s.h.
Prerequisite(s): ART 02222 Studio Core Portfolio Review
This studio introduces students to the operation of a 4x5 view camera. Students learn about lens selection, the use of camera swings and tilts, and process procedures for sheet film. Students also learn about the work of many photographers who continue to work with large format cameras. The influence of large format photography on art and society will be examined in addition to the study of the aesthetic nature of the medium. The department for the students to borrow will supply view cameras. The student must purchase all film, paper, and supplies.

ART 11405: Advanced Photo Techniques  3 s.h.
Prerequisite(s): ART 02222 Studio Core Portfolio Review
In this studio students will build aesthetic and technical expertise by studying photography as an art form as well as a commercial endeavor. Students will learn and apply advanced black and white film exposure, processing and special printing techniques. An introduction to copying art works and producing slides will be included. The comprehension of special techniques and materials along with their relationship to the printed image and visual concept is emphasized. This includes experimenting with altered negatives and prints, solarization, hand coloring and toning, working with different graded papers and different paper developer. Students develop a cohesive body of work exploring some topics of their own. Students provide their own camera and supplies.

ART 39330: General Photography  3 s.h.
This course uses the 35mm camera, black and white film and paper to study the aesthetics and technology of photography. Students expose and develop the film, make prints and participate in critiques and photo displays. It emphasizes photography as an art form as well as a technical endeavor through study of composition, materials and equipment. Students provide their own camera and supplies.

INAR 39333: ADVANCED PHOTOGRAPHY  3 s.h.

SMED 31350: Elementary Art Methods: Teaching And Learning Art A  3 s.h.
Prerequisites: C- or better in EDUC 01282 and READ 90319 and SMED 33420 Corequisite: SECD 03330
This course prepares pre-service teachers for instructing preschool, elementary and middle school students in the visual arts. Through laboratory and clinical field experiences learners will apply theories of artistic learning to authentic arts classroom situations while under faculty supervision. Assignments involve the learner in examining art curriculums, a variety of assessment strategies used by art teachers in the classroom, and approaches for critiquing student works and aesthetic enrichment. The learner will be required to prepare art lessons and units of study that demonstrate: a working knowledge of artistic concepts and skills, an understanding of the artistic development of children, and considerations for adaptive learning in the arts for special populations.

ROWAN UNIVERSITY UNDERGRADUATE CATALOG 2016-2017  310
SMED 31360:  Secondary Art Methods: Teaching And Learning Art B  
Prerequisites: ELEM 02270 and ELEM 02282  
This course prepares pre-service teachers for instructing high school students in the visual arts. Through laboratory and clinical field experiences learners will apply theories of artistic learning to authentic arts classroom situations while under faculty supervision. Assignments involve the learner in examining high school art curriculums, a variety of assessment strategies used by art teachers in the classroom, and approaches for critiquing student works and aesthetic enrichment. The learner will be required to prepare art lessons and units of study that demonstrate: a working knowledge of artistic concepts and skills, an understanding of the artistic development of the adolescent, and considerations for adaptive learning in the arts for special populations.

AH 10101:  Allied Health Introduction To Health Care Professions I  
This is the first course in a 4 course seminar sequence in the pre-nursing licensure program. This course provides a comprehensive overview of the most current trends and issues occurring in nursing and health care. It is about the exciting evolution of nursing: its very visible public image and its core foundations, which include nursing theory, nursing education, and licensure and certification. This course will serve as a valuable resource for the entry-level nurse.

AH 10102:  Allied Health Introduction To Health Care Professions II  
Prerequisite: AH 10101  
This is the second course in a 4 course seminar sequence in the pre-nursing licensure program. This course provides a comprehensive overview of the most current trends and issues occurring in nursing and health care including health care economics, the evolution of the health care system, health care policy and politics, and legal and ethical issues. This course will serve as a valuable resource for the entry-level nurse.

AH 10103:  Allied Health Introduction To Health Care Professions III  
Prerequisites: AH 10101 and AH 10102  
This is the third course in a 4 course seminar sequence in the pre-nursing licensure program. This course provides a comprehensive overview of the most current trends and issues occurring in nursing and health care, with a focus on the basic skills that are necessary for nurses to function effectively in the professional nursing role. Topics include leadership role and management theory, effective communication, nursing care delivery models and the role of nursing research and evidence base practice. This course will serve as a valuable resource for the entry-level nurse.

AH 10104:  Allied Health Introduction To Health Care Professions IV  
Prerequisites: AH 10101 and AH 10102 and AH 10103  
This course is the fourth and final course of a 4 course seminar sequence in the pre-nursing licensure program. This course provides a comprehensive overview of the most current trends and issues occurring in nursing and health care, preparing the student to embark on a career in the field of nursing. Topics include the transition process from student to professional nurse, contemporary nursing roles and career opportunities, time management and the NCLEX exam. This course will serve as an excellent base for novice students as they build their career into professional nursing.

BIOL 01100:  Biology I  
This course studies the chemical properties of protoplasm; cell structure and cell division; metabolic processes in organisms, including photosynthesis and respiration; principles of genetics including Mendelian laws; evolution and ecological relationships of organisms.

BIOL 01101:  Biology II  
Prerequisites: BIOL 01100  
This course provides a brief survey of the different kinds of plants and animals; the roles of hormones and enzymes; tropisms; growth and development; plant and animal tissues and organ systems.

BIOL 01104:  Biology I: Diversity, Evolution, And Adaptation  
This laboratory course is designed for freshman Biology majors and is the first of a four-course introductory sequence. This course introduces students to organismal diversity and its evolutionary origins, covers the fundamental concepts of evolutionary theory, and surveys many of the ways that organisms have become adapted to their environments. In addition, students in this course will learn some of the basic skills necessary for scientific inquiry, including the scientific method, critical thinking, experimental design, and the gathering, analysis, and presentation of quantitative data. Credit will not be given for both Biology I (BIOL 01104) and Biology I (BIOL 01100). Priority for enrollment will be given to students declared as Biology majors, Biology minors, Computer Science majors, Biochemistry majors, Environmental Studies majors, Environmental Studies minors, or Pre-Medical concentration.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 01105</td>
<td>Essentials Of Biology</td>
<td>4 s.h.</td>
<td>CHEM 05102</td>
</tr>
<tr>
<td>BIOL 01106</td>
<td>Biology 2: Concepts In Genetics</td>
<td>4 s.h.</td>
<td>BIOL 01104</td>
</tr>
<tr>
<td>BIOL 01107</td>
<td>Biology 2T: Introduction to Biological Skills and Methods</td>
<td>4 s.h.</td>
<td>BIOL 01.100 or BIOL 01.101.</td>
</tr>
<tr>
<td>BIOL 01110</td>
<td>Human Biology</td>
<td>3 s.h.</td>
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<tr>
<td>BIOL 01111</td>
<td>Scientific Process and Biological Discovery</td>
<td>3 s.h.</td>
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<tr>
<td>BIOL 01112</td>
<td>General Biology: Environmental Focus</td>
<td>4 s.h.</td>
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<tr>
<td>BIOL 01113</td>
<td>General Biology: Human Focus</td>
<td>4 s.h.</td>
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<tr>
<td>BIOL 01115</td>
<td>General Biology: Plants And People</td>
<td>4 s.h.</td>
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</tr>
<tr>
<td>BIOL 01201</td>
<td>Pharmacognosy</td>
<td>3 s.h.</td>
<td>BIOL 01204</td>
</tr>
<tr>
<td>BIOL 01202</td>
<td>Biology 3T: Biological Skills And Methods</td>
<td>4 s.h.</td>
<td>BIOL 01100 and BIOL 01101.</td>
</tr>
</tbody>
</table>
BIOL 01203: Biology 3: Introduction To Cell Biology
Prerequisites: BIOL 01106
This laboratory course introduces students to the fundamentals of cell biology, including the cellular basis of life, cell evolution, cellular organization, cell metabolism, cell diversity, cell-cell communication, intracellular signaling and the cellular basis of disease.

BIOL 01204: Biology 4: Global Ecology
Prerequisites: BIOL 01104, BIOL 01106 and BIOL 01203 or BIOL 01100 and BIOL 01101 and BIOL 01202
This laboratory course serves as the capstone for the biology core curriculum. Students will learn integrative concepts linking topics from Biology 1, 2, and 3 together in terms of population, community, and ecosystem-level ecological processes. We will explore these concepts through case studies covering diverse topics from biodiversity patterns to anthropogenic effects on individuals to ecosystems. This course will reinforce the skills introduced in earlier core courses, and will build upon these skills with further expectations of writing, primary literature synthesis and review, and critical thinking.

BIOL 01205: Foundations in Biology for Biomedical Sciences I
Prerequisite(s): CHEM 06101 or CHEM 06106
This laboratory course is the first of the two semester sequence designed for students not majoring in Biology but interested in pursuing studies in biomedical areas through advanced Biology courses. This sequence serves as an introductions to fundamental biological concepts and the foundation for upper-level biology courses for such students. Both courses of the sequence focus on genetics, cell biology, and evolution and the relationship to human health. This course focuses more specifically on the molecular basis of variation and heredity and its evolutionary context.

BIOL 01206: Foundations in Biology for Biomedical Sciences II
Prerequisite(s): BIOL 01205
This laboratory course is the second of the two semester sequence designed for students not majoring in Biology but interested in pursuing studies in biomedical areas through advanced Biology courses. This sequence serves as an introduction to fundamental biological concepts and the foundation for upper-level biology courses for such students. Both courses of the sequence focus on genetics, cell biology, and evolution and their relationship to human health. This course focuses on molecular and cellular mechanisms of life and their evolutionary context.

BIOL 01210: Biological Systems And Applications
Prerequisites: CHEM 06105
Fundamental concepts and applications of biochemistry, cellular biology, microbial physiology, and environmental microbiology will be presented during this course. Emphasis will be placed on the theme that all biological systems (from the molecular level to the community level) are dynamic and interactive. Laboratory sessions will expose students to a variety of standard biological techniques from areas such as biotechnology, microbiology, and environmental biology. No credit toward biology major.

BIOL 01211: Biology for Chemical Engineers
Prerequisites: CHEM 06100 and CHEM 06101
This course develops a basic understanding of the biology of living things. Topics include the organization, function, development and differentiation of cells, the temporal and spatial cooperation of biomolecules and cells under the control of signal transduction, the genetic programming of cells and organisms, and the interconnection of various life forms through evolution. Also covered is application of these concepts and processes to modern bioengineering focus areas, such as bioinformatics, genomics, proteomics, tissue engineering, and systems biology.

BIOL 01300: Phycology
Prerequisites: BIOL 01204
This laboratory course considers the algae. It studies the relationships of these organisms as they are ordered in taxonomic schemes. Proper identification of specimens will be emphasized. May not be offered annually.

BIOL 01310: Evolution
Prerequisites: BIOL 01204
This laboratory course considers organic evolution, including its conceptual basis, its historical development, the processes that produce it, and the evolutionary history of life on earth. Laboratory exercises will include simulations of evolutionary processes, demonstrations illustrating patterns of evolution in the past, and opportunities to utilize research techniques of evolutionary biology.
BIOL 01320: Introduction To Virology 4 s.h.
Prerequisites: BIOL 01204
This laboratory course explores topics such as virus origin and evolution, their physical structure and chemical composition, taxonomy, and modes of transmission. The mechanisms involved in their control of the machinery of their host cells will be studied in detail. Particular focus will be placed on important virus-associated human and animal diseases, AIDS, and the role of viruses in cancer.

BIOL 01325: Introduction To Mycology 4 s.h.
Prerequisites: BIOL 01204
This lecture and laboratory course provides a comprehensive treatment of the morphology, taxonomy, physiology, and ecology of fungi, and their involvement in man's everyday life. This course may not be offered annually.

BIOL 01350: Biodiversity and the History of Life 3 s.h.
Prerequisites: Global Ecology (BIOL 01.204) OR Foundations of Biology for Biomedical Sciences 2 (BIOL 01.206).
This course investigates the evolution of biodiversity over the courses of Earth history. Students will survey the diversity of life and investigate current understanding of the evolutionary relationships among organisms based on a variety of data. Students will also study biodiversity through geologic time, including examining fossil evidence for the origins of major groups and for extinction events and their causes.

BIOL 01352: Ornithology 4 s.h.
Prerequisites: BIOL 01204
This course covers anatomy, physiology, ethology and ecological parameters of the avian community. Laboratory and field investigations form a significant part of the course. May not be offered annually.

BIOL 01356: Parasitology 4 s.h.
Prerequisites: BIOL 01204
This lab course examines the biology of organisms that normally grow only in or on the living body of another, and from which they obtain nourishment.

BIOL 01405: Conservation Biology 4 s.h.
Prerequisites: BIOL 01204
This laboratory course for upper-level students majoring in biology is designed to familiarize students with the current crisis in global biodiversity. The objectives of this course are to examine fundamental and applied aspects of genetics, population and community ecology, paleontology and systematics, agriculture and forestry, wildlife biology and zoo management, and sociology and economics. Laboratory and field exercises are designed to introduce students to local, regional and global conservation issues and to emphasize synthesis and creativity in addressing conservation problems.

BIOL 01421: Fundamentals in Cell Culture Techniques 4 s.h.
Prerequisites: BIOL 01204 or BIOL 01206 or BIOL 01211
This course features hands-on instruction to introduce students to techniques, methodologies, principles, and applications of cell culture. The students will learn principles of cell culture in monolayers and suspension as well as concepts of cell differentiation and tissue histology.

BIOL 01428: Developmental Biology 4 s.h.
Prerequisites: BIOL 01101 and BIOL 1430 or BIOL 01101 and BIOL 14440 or BIOL 01204
This course studies the development of multicellular organisms from fertilization, through embryonic and post-embryonic stages. Topics include fertilization, cellular differentiation, regulation of gene expression, pattern formation, morphogenesis, and evolution of developmental mechanisms. Experimental approaches of developmental biology will be emphasized.

BIOL 01430: Cell Biology 4 s.h.
Prerequisites: BIOL 01204
This laboratory course addresses the fundamental properties of cells from an experimental perspective by exploring modern and classic experiment approaches to the study of cell biology. Structural, biochemical and molecular aspects of cell function will be considered.

BIOL 01435: Cell Culture Technology 4 s.h.
Prerequisites: BIOL 01204
This laboratory course introduces advanced biology students to the history, theory, and techniques of maintaining live cells in long-term culture. The combination of lectures and laboratory experiences have been designed to demonstrate cell biology in both theory and practice. The course is very much geared to a 'hands-on' approach in the context of real laboratory operations in neighboring work areas.
Course Descriptions

BIOL 01440: Special Topics In Biological Sciences 2 s.h.
Prerequisites: BIOL 01204
This seminar course is a literature-driven exploration of a broad range of topics in individual areas of the biological sciences. The particular subjects discussed will examine both fundamental and cutting-edge biological processes and technologies. Students will be required to give oral presentations on the selected topics. They may be also asked to submit written reports. This course is expected to strengthen the skills of students in critical reading and evaluation of the primary scientific literature. This course is required for all Biology majors.

BIOL 01445: Special Topics In Biological Sciences - Wi 3 s.h.
Prerequisites: BIOL 01204, COMP 01112 and senior standing
This writing intensive seminar course is a literature-driven exploration of a broad range of topics in individual areas of the biological sciences. The particular subjects discussed will examine both fundamental and cutting-edge biological processes and technologies. Students will develop skills in writing through writing activities designed to emphasize the process and structure of scientific writing. This course is also expected to strengthen the skills of students in critical reading and evaluation of the primary scientific literature. This course is required for all Biology majors.

BIOL 01450: Independent Study In Biological Sciences 3 s.h.
Students conduct independent work on a project concerned with biological science with the supervision of a selected faculty member. This course requires development and execution of the proposed work, including preparation of an acceptable report of work completed.

BIOL 01454: Herpetology 4 s.h.
Prerequisites: BIOL 01204
Students make an intensive study of the behavior, ecology, evolution and physiology of amphibians and reptiles. Laboratories stress identification, gross anatomy and techniques.

BIOL 01458: Mammalogy 4 s.h.
Prerequisites: BIOL 01204
This course provides a detailed study of the mammals of the world. Its topics include: the anatomy, behavior, ecology and systematics of the class. Laboratory work emphasizes the mammals of New Jersey as well as field work.

BIOL 01460: Animal Behavior 4 s.h.
Prerequisites: BIOL 01204, BIOL 01381, PST 10380
This laboratory course investigates the proximate and ultimate factors, natural selection, phylogenetic, and cultural bases of animal behavior. In this course, students will develop an appreciation of the interaction of the environment and other organisms on the development, production, and function of animal behaviors in both naturalistic and controlled situations. Conceptual, theoretical, and empirical approaches to behavior will also be discussed. Students will be expected to observe, manipulate, and analyze the behaviors of a wide variety of animals such as insects, birds, and fish through hands-on methods.

BIOL 01465: Animal Histology 4 s.h.
Prerequisites: BIOL 01204
This upper level lecture and laboratory course provides an in-depth study of animal tissue. It includes the examination and identification of specific cells, tissues and organs. The students will develop laboratory skills in cytological and histological techniques. The relationship of histology to cell biology, physiology and pathology will be emphasized.

BIOL 01470: Ichthyology 4 s.h.
Prerequisites: BIOL 01204
This course is a senior-level zoology course designed to introduce students to the fundamental aspects of the biology of the major groups of fishes. Topics to be discussed in class include taxonomy and systematics of the major groups of fishes, a survey of modern fishes, their basic structure and function, behavior, and ecology. Laboratory exercises are designed to introduce students to current methods, approaches, and topics; field exercises are designed to survey the diversity of fishes and their habitats in New Jersey and nearby states.

BIOL 01475: Biology Lab/Field Research 3 s.h.
This course introduces and/or develops research techniques used in biological research. Research is performed in collaboration with one or more faculty in an area of specialization of the faculty. Emphasis will be placed on developing research skills, developing technical writing skills, and the development of skills needed for scientific presentations. Up to three credits from this course may be counted towards the major; additional credits may count as free electives.
Course Descriptions

BIOL 02300: Introductory Botany 4 s.h.
Prerequisites: BIOL 01204
This laboratory course considers the biology of plants. It is a broad survey of plant nutrition, physiology, development, anatomy, morphology, reproduction, evolution and ecology. An emphasis is placed on the structure and function of plants and the relevance of plants to humanity and the global environment.

BIOL 02301: Plant Diversity 4 s.h.
Prerequisites: BIOL 01204
This laboratory course considers the patterns of plant diversity and the processes that generate and maintain plant diversity. Several types of diversity are assessed for each of the major groups of plants, including diversity in morphology, physiology, evolution, ecology and human economy. Students who complete this course will have a better understanding of the types and sources of plant diversity, and the role of human and nonhuman factors in affecting plant diversity.

BIOL 02350: Flora Of New Jersey 4 s.h.
Prerequisites: BIOL 01204
This laboratory course is an exploration of the local flora in terrestrial communities, from the shore to the Pine Barrens. The emphases of this course are plant communities and the identification of plants. It also provides an overview of plant conservation and the features of plants that determine their population dynamics. The focus of the laboratories is several all-day field trips. Offered during summer sessions.

BIOL 02405: Plant Physiology 3 s.h.
Prerequisites: BIOL 01204 and CHEM 07200
This course will cover the principles and factors concerned with development of plants, including nutrition, water relationships, photosynthesis, chemosynthesis, reproduction, and growth.

BIOL 02410: Stream Ecology 4 s.h.
Prerequisites: BIOL 01204
This course covers topics in the area of study concerned with the physical, chemical, biological and ecosystems processes in creeks, streams and rivers (so-called lotic environments or related running waters). The course has a strong laboratory component with hands-on research in an effort to understand local stream ecology.

BIOL 05355: Bioinformatics: Biological Applications 3 s.h.
Prerequisite: BINF 07250
This course in bioinformatics covers the application of modern computational and functional genomics methods to current questions in biological and biomedical sciences. Bioinformatics approaches and philosophy will be highlighted through exploration of research problems in cell and developmental biology, molecular biology, population genetics, evolutionary biology, and ecology. Collaborative learning and problem-solving using computational, statistical and genomics methods will be emphasized.

BIOL 07300: Invertebrate Zoology 4 s.h.
Prerequisite: BIOL 01204
This laboratory course will focus on the diversity and adaptations of single-celled and multicellular invertebrates. We will explore the current understanding of the evolutionary relationships among taxa, using both traditional morphological and contemporary genetic approaches.

BIOL 07301: Comparative Vertebrate Anatomy 4 s.h.
Prerequisites: BIOL 01204
This laboratory course provides an intensive comparative study of the gross and microscopic anatomy of vertebrate animals, including dissection of representative chordates.

BIOL 07400: Comparative Biomechanics 4 s.h.
Prerequisite(s): BIOL 01204 and (PHYS 00211 or PHYS 00221)
This upper-level Biology elective with lab examines the function of organisms in terms of mechanics. Focusing mainly on animals, the course covers topics such as locomotion and feeding in both aquatic and terrestrial environments, as well as looking at systems such as circulation and respiration in terms of fluid mechanics.

BIOL 10210: Human Anatomy And Physiology I 4 s.h.
This course offers a molecular, cellular and systematic approach to the structure and function of the component units and organizational systems of humans. Emphasis is placed on membrane physiology and the skeletal, molecular, digestive and circulatory systems.
### BIOL 10212: Human Anatomy And Physiology II
This laboratory course focuses on the gross and microscopic structure of the body. The course is the second semester of a two-semester sequence that covers all of the functional systems of the human organism. In this course, the systems of the body to be studied in detail include the endocrine, cardiovascular, respiratory, excretory, digestive, and reproductive systems. Whole body metabolism and fluid balance will also be studied.

### BIOL 10345: Human Physiology
**Prerequisites: BIOL 01204 and CHEM 07200**
This course surveys the basic physiology of the human organism, emphasizing the nervous and circulatory systems.

### BIOL 10350: Work Physiology
**Prerequisites: BIOL 01204**
This course studies the effect of short term and long term work stress on the human organism. This course may not be offered annually.

### BIOL 10381: Cellular and Molecular Neuroscience
**Prerequisite(s): B+ or higher grade in PSY 10315, or Permission of Instructor.**
This lecture course will cover the major issues of cellular neurosciences, including molecular and cellular events underlying neural signaling, synaptic transmission, neuronal development and migration, and neuronal plasticity will be discussed. Topics include the cellular structure of neurons and glia, neurogenesis, synaptogenesis, molecular bases of neuronal transmission and memory, and the genetics of behavior. Special attention will be paid to current issues such as stem cell transplantation, neuronal regeneration of the central nervous system, neurological disorders, and animal models being used in these areas.

### BIOL 10401: Animal Physiology
**Prerequisites: BIOL 10204**
This laboratory course provides the student with in-depth knowledge of the various systems of the animal body. Students will understand and predict the structure-function relationships across various animal groups from the molecular to the organismal level. Specific adaptations to environmental conditions, whether naturally occurring or as a result of acclimation to new areas, will be discussed. Students will also investigate the various processes of homeostasis and system regulation that exist in animals. Physiological simulation and dissection preparations will be used to provide the student with hands-on skills on physiological research methodology and techniques.

### BIOL 11330: Microbiology
**Prerequisites: BIOL 01204**
This course deals with the morphology and physiology of unicellular organisms, with emphasis upon bacteria. It studies culture methods, growth parameters, isolation, identification and characterization, and metabolism of microorganisms in the laboratory.

### BIOL 11338: Immunology
**Prerequisites: BIOL 01204**
This course studies infection and resistance and the principles and types of immunity and hypersensitivity. Laboratory applications include: antigen-antibody formation, structure and reactivities.

### BIOL 11405: Environmental Microbiology
**Prerequisites: BIOL 01204 and BIOL 11330**
This course covers topics related to microorganisms in the environment. It deals with the actions of microbes in the terrestrial, aquatic, air and plant/animal environment and places focus on microbial control and microbial applications.

### BIOL 14440: Introduction To Biochemistry - Lecture Only
**Prerequisites: BIOL 01204 and CHEM 07201**
This course investigates chemical compounds and chemical reactions which are of paramount importance to the functioning of biological systems. It also examines the major metabolic pathways for energy production and biosynthesis.

### BIOL 18360: Marine Biology
**Prerequisites: BIOL 01204**
Field and laboratory oriented, this course studies the interrelationships of marine animals and plants and provides instruction and experience in collecting and identifying examples of local marine flora and fauna.
Course Descriptions

BIOL 18400: Limnology 4 s.h.
Prerequisites: BIOL 01204
This course introduces basic and applied concepts in limnology, or the study of fresh waters. It analyzes the physical, chemical, biological and ecosystems processes in lakes (so called lentic environments). The course has a strong laboratory component with hands-on research in an effort to understand regional lake ecology.

BIOL 19300: Introduction To Oceanography 3 s.h.
This course introduces the varied techniques of the oceanographer; it emphasizes recent developments in the field of Marine Sciences as well as physical, chemical, geological and biological aspects of the world’s oceans. Field work required; a trip on a research vessel recommended. Offered only in the summer at the New Jersey Marine Sciences Consortium facilities.

BIOL 19425: Coastal Marine Geology 4 s.h.
This course includes a field study of the geological processes of the beach, bay, lagoon, estuary and salt marsh; it also covers erosional and depositional features and sediment analysis. Field experience is supplemented by laboratory work and individual projects. Offered in the summer at New Jersey Marine Sciences Consortium facilities.

BIOL 20100: Introduction To Natural Resources 3 s.h.
This introductory course considers natural resources and their relationship to man and society. For science and non-science majors.

BIOL 20150: Human Ecology: An Evolutionary Approach 3 s.h.
This course will take an evolutionary approach to understand how the environment has shaped biological and cultural changes in humans, and how humans and are continuously impacting the environment. The emphasis of this course will be to understand the biological, cultural and environmental diversity that has emerged through human history and its impact in the intricate interactions among humans and between humans and their environment.

BIOL 20310: Ecology 4 s.h.
Prerequisites: BIOL 01204
This course emphasizes population, communities and ecosystems. It studies aspects of energy flow, species diversity and population dynamics in a variety of ecosystems. The course requires laboratory and field work.

BIOL 20425: Environmental Toxicology 4 s.h.
Prerequisites: BIOL 01024 and CHEM 07200
This course covers topics related to the fate and impact of pollutants in the environment. This course deals with the laws and regulations of pollutant discharge, the kinds of chemical pollutants, the transport and distribution of such chemicals into the environment, and their effect in populations and communities as well as individual organisms. The acute and chronic effect of these pollutants, the principles of environmental monitoring and assessment, and special examples and case studies will be analyzed.
<table>
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<tr>
<th>Course Code</th>
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<th>Credits</th>
<th>Prerequisites</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>BIOL 20474:</td>
<td>Tidal Marsh Ecology</td>
<td>4 s.h.</td>
<td>BIOL 01204</td>
<td>This course studies salt marsh development and physiography, community structure, energetics and interrelationships.</td>
</tr>
<tr>
<td>BIOL 21401:</td>
<td>Entomology</td>
<td>4 s.h.</td>
<td>BIOL 01204</td>
<td>This course studies the insect anatomy; physiology and insect control; historical and economic significance of insects in man's society; methods of collecting, preserving, rearing and mounting of insects; insect classification. This course may not be offered annually.</td>
</tr>
<tr>
<td>BIOL 22335:</td>
<td>Genetics</td>
<td>4 s.h.</td>
<td>BIOL 01204</td>
<td>The course will provide an in-depth background in all areas of Mendelian, molecular, population and evolutionary genetics. The students will learn how to use genetic tools in dissecting complex biological pathways, developmental processes and regulatory systems. Discussion of landmark genetic experiments will constitute the basis of an inquiry-based approach that will delineate the dynamic nature of modern genetics. The laboratory exercises are designed to put special emphasis on molecular biology techniques and the use of bioinformatics.</td>
</tr>
<tr>
<td>BIOL 22410:</td>
<td>Concepts In Human Genetics</td>
<td>4 s.h.</td>
<td>BIOL 01204</td>
<td>The course will discuss the application of genetics principles to the human species. All major areas of genetics such as transmission genetics, cytogenetics, biochemical genetics, molecular genetics and population genetics will be covered. The emphasis will be placed on fundamental concepts and technological advances in the study of human genetics as they pertain to medical practice. The principles of human genetics applied to counseling, screening, ethics, law, and the evaluation of their social implications will also be addressed. The laboratory sessions will focus on the practical analysis of various case studies related to different human genetic disorders. Oral presentation of primary literature articles by the students is expected.</td>
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<tr>
<td>BIOL 22450:</td>
<td>Molecular Genetics</td>
<td>4 s.h.</td>
<td>BIOL 01204</td>
<td>This course considers the principal concepts in biochemical genetics including gene function and regulation, DNA replication, and mutation. Laboratories focus on fundamental biotechnology concepts and techniques.</td>
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<tr>
<td>BIOL 27403:</td>
<td>Comparative Embryology</td>
<td>4 s.h.</td>
<td>BIOL 01204</td>
<td>This laboratory course focuses on the morphological and physiologic processes involved in embryogenesis of animals. The course includes the development of echinoderms, amphibians, birds, and mammals. Considerable emphasis will be placed on organogenesis and the development of organ systems.</td>
</tr>
<tr>
<td>BMS 01105:</td>
<td>Introduction to Biomedical Sciences I</td>
<td>2 s.h.</td>
<td>None</td>
<td>This course is the first in a sequence of courses that introduces and provides an overview of the field of translational biomedical sciences while developing students' understanding of tools used in this interdisciplinary field. Students will gain knowledge of the role of basic science in and the steps required to &quot;translate&quot; biomedical technologies from the bench top to the bedside through introductory examples, projects, and presentations.</td>
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<tr>
<td>BMS 01110:</td>
<td>Introduction to Biomedical Sciences II</td>
<td>2 s.h.</td>
<td>BMS 01105</td>
<td>This hands-on, project based course is the second in a sequence of courses that introduce and provide an overview of the field of biomedical sciences while developing students' understanding of tools used in the field. Students will gain knowledge of the steps required to &quot;translate&quot; biomedical technologies from the bench top to the bedside through examples, projects, and presentations that have more technical detail than those in the first course in the sequence.</td>
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<tr>
<td>BMS 01220:</td>
<td>Translational Biomedical Research I</td>
<td>2 s.h.</td>
<td>BMS 01.110 Introduction to Biomedical Sciences</td>
<td>This is the first course in a sequence of six courses providing meaningful research training for students majoring in Translational Biomedical Science. Student research teams will work on current research problems in the biomedical field. The specific research problem will be developed and assigned by a research advisor. Student participants will develop a detailed knowledge of measurement techniques and limitations while also gaining an in-depth understanding of a current research area in the biomedical field. Students will be required to complete a literature search and review. Communication skills, both oral and written, will be emphasized.</td>
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<td>Course Code</td>
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<tr>
<td>BMS 01230:</td>
<td>Translational Biomedical Research II</td>
<td>2 s.h.</td>
<td>BMS 01.220 Translational Biomedical Research I</td>
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<td>This is the second course in a sequence of six courses providing meaningful research training for students majoring in Translational Biomedical Science. Student research teams will work on current research problems in the biomedical advisor. Student participants will develop a detailed knowledge of measurement techniques and limitations while also gaining an in-depth understanding of a current research area in the biomedical field. Students will be required to complete a literature search and review. Communications skills, both oral and written, will be emphasized.</td>
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<tr>
<td>BMS 01306:</td>
<td>Translational Cell Biology</td>
<td>3 s.h.</td>
<td>BIOL 01206 or BIOL 01203 or with special permission of the instructor.</td>
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<td>This course focuses on translational approaches of cellular processes towards analysis, diagnostics, and treatment of human diseases. Topics including biological causes of cellular and metabolic diseases, molecular diagnostics, gene therapy, and stem cell therapy will be addressed.</td>
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<tr>
<td>BMS 01315:</td>
<td>Instrumentation for Biomedical Sciences</td>
<td>3 s.h.</td>
<td>PHYS 00300 OR BMS 02230</td>
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<td>The design and use of advanced instrumentation are critical in all areas of the biomedical sciences for analysis of biomedical systems and for synthesis of new biomedical technologies. This course will familiarize students with a wide range of the instrumentation they are likely to encounter in a biomedical career. Various instruments will be examined with respect to: (1) Theoretical basis of the measurement or synthesis and relation to instrumental architecture, (2) Implementation of the method and experimental design, and (3) Data interpretation and analysis. The course will integrate primary scientific literature and discuss the evolution of instrumentation with new technologies and/or applications. The course will include inspection of instruments and observation of experimental execution, providing students with experience over a broad range of modern biomedical instrumentation.</td>
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<tr>
<td>BMS 01320:</td>
<td>Translational Biomedical Research III</td>
<td>2 s.h.</td>
<td>BMS 01230 Translational Biomedical Research II</td>
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<td>This is the third course in a sequence of six courses providing meaningful research training for students majoring in Translational Biomedical Science. Student research teams will work on current research problems in the biomedical field. The specific research problems will be determined in collaboration with a research advisor. Student participants will develop a detailed knowledge of measurement techniques and limitations while also gaining an in-depth understanding of a current research area in the biomedical field. Students will be required to compete a literature search and review and make significant creative contributions influencing the direction of the research. Communication skills, both oral and written, will be emphasized.</td>
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<tr>
<td>BMS 01330:</td>
<td>TRANSL BIOMEDICAL RESEARCH IV</td>
<td>2 s.h.</td>
<td>BMS 01.320 Translational Biomedical Resarch III</td>
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<td>This is the fourth course in a sequence of six courses providing meaningful research training for students majoring in Translational Biomedical Science. Students research teams will work on current research problems in the biomedical field. The specific research problem will be determined in collaboration with research advisor. Student participants will develop a detailed knowledge of measurement techniques and limitations while also gaining an in-depth understanding of a current research area in the biomedical field. Students will be required to complete a literature search and review and make significant creative contributions influencing the direction of the research. Communication skills, both oral and written, will be emphasized.</td>
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<tr>
<td>BMS 01333:</td>
<td>CELLULAR BIOCHEMISTRY</td>
<td>4 s.h.</td>
<td>CHEM 07203; restricted to TBS majors OR by permission of instructor.</td>
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<td>This course is intended to introduce students majoring in Translational Biomedical Science to fundamental biochemical principles. This will include structure and function of biomolecules, biochemical pathways in cells, cellular processes, and examples that are relevant to disease states. The laboratory component will focus on the basic biochemical techniques required for purification and analysis of biomolecules.</td>
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<tr>
<td>BMS 01360:</td>
<td>Biophysics I</td>
<td>4 s.h.</td>
<td>PHYS 00300, BIOI 01203 or BIOI 01202 and one of PHYS 00211 or PHYS 00221 or PHYS 00222</td>
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<td>This course is aimed at understanding the physics of biological systems. The goal of the course is to quantitatively define biological systems and their functions. Key emphasis will be placed on (1) understanding theories, laws, and axioms that govern systems and their behavior and (2) the use of physics to determine quantitative information about systems and their behaviors. For each topic, the basic laws of physics will be reviewed followed by their application to specific biomolecular or biological system examples. The laboratory component is aimed at giving students hands-on experience in measurement and observation for biological systems.</td>
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Course Descriptions

BMS 01420: Translational Biomedical Research V 2 s.h.
Prerequisite: BMS 01.330 Translational Biomedical Research IV.
This is the fifth course in a sequence of six courses providing meaningful research training for students majoring in Translational Biomedical Science. Student research teams will work on current research problems in the biomedical field. The specific research problem will be determined in collaboration with a research advisor. Student participants will develop a detailed knowledge of measurement techniques and limitations while also gaining an in-depth understanding of a current research area in the biomedical field. Students will be required to complete a literature search and review and perform independent research with faculty mentors providing feedback and redirection. Communications skills, both oral and written, will be emphasized.

BMS 01430: Translational Biomedical Research VI 2 s.h.
Prerequisites: BMS 01.420 Translational Biomedical Research V

BME 00210: SPECIAL TOPICS IN BME 4 s.h.

BME 00390: Special Topics in Biomedical Engineering 1 to 6 s.h.
Prerequisites: Determined by the topic associated with the selected topic.
This course is designed to introduce students to emerging topics in biomedical engineering. Prerequisites are determined by the nature of the topic.

CHE 06201: Principles Of Chemical Processes I 2 s.h.
Prerequisites: (MATH 01131 minimum grade of C- and PHYS 00220 minimum Grade of C- and CHEM 06101 minimum grade of C).
Restrictions: Must be enrolled in one of the following Field of Study (Major, Minor, Concentration, Sequence, or Specialization): Chem Engr: Biological Engineering 0905 or Chemical Engr: Materials Engnr 0904
This course presents an introduction to chemical engineering calculations; processes, process variables, and design. Material balances for chemically non-reacting and reacting systems are described. Single-phase and multi-phase systems; property tables and diagrams are reviewed. Demonstrations may be integrated throughout the course.

CHE 06202: Principles Of Chemical Processes II 2 s.h.
Prerequisites: CHE 06201 minimum grade of C- and CHEM 06101
This course is a continuation of Principles of Chemical Processes I. It will describe energy concepts for chemical processes. This course presents energy balances for chemically non-reacting and reacting systems and will show students how to use property tables and diagrams. Computer-aided material and energy balance calculations will be performed. Transient material and energy balances will be introduced. Demonstrations may be integrated throughout the course.

CHE 06203: Principles of Chemical Processes 4 s.h.
Prerequisites: MATH 01131 minimum grade of C- and PHYS 00220 minimum grade of C- and CHEM 06101 minimum grade of C.
Restrictions: Must be enrolled in one of the following Fields of Study (Major, Minor, Concentration, Sequence, or Specialization): Chem Engr: Biological Engineering 0905 or Chemical Engr: Materials Engnr 0904
This course presents an introduction to chemical engineering calculations; processes, process variables, and design. Material balances for chemically non-reacting and reacting systems are described. Single-phase and multi-phase systems; property tables and diagrams are reviewed. The course also includes energy concepts for chemical processes. It presents energy balances for chemically non-reacting systems and shows students how to use property tables and diagrams. Computer-aided material and energy balance calculations are performed. Demonstrations may be integrated throughout the course.

CHE 06241: Chemical Engineering Fluid Mechanics 2 s.h.
Prerequisite: MATH 01230, Minimum Grade of C- ANDPHYS 00220, Minimum Grade of C- AND (CHE 0620, Minimum Grade of C- OR CHE 06203, Minimum Grade of C).
The subject of this course is in the area of general fluid flow with an emphasis on fluid flow in pipe systems. Topics covered in the area of general fluid flow include hydrostatics, mechanical energy balances, macroscopic momentum balances, and dimensionless groups. Topics covered in the area of pipe flow include incompressible flow, turbulence, viscous flows with an emphasis on quantifying frictional losses. The course includes appropriate laboratory experiments and computer applications.

CHE 06302: Principles Of Chemical Processes II 2 s.h.
Prerequisites: CHE 06106 AND Grade of C- or better in CHE 06201
This course is a continuation of Principles of Chemical Processes I. It will describe energy concepts for chemical processes. This course presents energy balances for chemically non-reacting and reacting systems and will show students how to use property tables and diagrams. Computer-aided material and energy balance calculations will be performed. Transient material and energy balances will be introduced. Demonstrations may be integrated throughout the course.
Course Descriptions

CHE 06309: Process Fluid Transport 2 s.h.
Prerequisite(s): MATH 01235 and (ENGR 01341 minimum grade of C- or ENGR 01342 minimum grade of C- or CHE 06241 minimum grade of C-) and (CHE 06202 minimum grade of C- or CHE 06203 minimum grade of C-).
The course will introduce students to topics in fluid and momentum transport related to chemical processes. Students will investigate the fundamental and design topics of momentum and fluid transport beyond those covered in Fluid Mechanics I. The topics area will be applied to various chemical processing applications. Topics will include Newtonian and non-Newtonian fluid behavior, two-phase flow, flow through beds of solids, pumping of liquids and gases, and mixing.

CHE 06310: Chemical Engineering Thermodynamics I 3 s.h.
Prerequisite(s): CHE 06202 minimum grade of C- or CHE 06203 minimum grade of C- and MATH 01235 minimum grade of C-
This course provides a foundation in engineering thermodynamic principles. The course includes an overview of basic thermodynamic principles, heat effects, the Second Law of Thermodynamics, and thermodynamic properties of fluids and flow processes. The course will also include solution thermodynamics theory and application, phase equilibria, chemical reaction equilibria, power and refrigeration cycles, liquefaction and thermodynamic analysis of processes. The course will focus on the synthesis and solution of complex problems in a team project-oriented environment.

CHE 06311: Heat Transfer Processes 2 s.h.
Prerequisite(s): (ENGR 01341 minimum grade of C- or ENGR 01342 minimum grade of C- or CHE 06241 minimum grade of C-) and (CHE 06202 minimum grade of C- or CHE 06203 minimum grade of C-)
This course describes modes of heat transfer: conduction, convection (forced and natural) and radiation. It presents steady and unsteady state analysis of heat transfer, types of heat exchangers and heat exchanger design. Demonstrations and laboratories will be integrated throughout the course.

CHE 06312: Separation Processes I 2 s.h.
Prerequisite(s): MATH 01230 minimum grade of C- and (ENGR 01341 minimum grade of C- or ENGR 01342 minimum grade of C- or CHE 06241 minimum grade of C-) and (CHE 06202 minimum grade of C- or CHE 06203 minimum grade of C-)
This course describes modes of diffusion of mass and chemical composition. This course includes mass transfer analysis; molecular diffusion in gases, liquids, and solids and convective mass transfer. It will have an introduction to equilibrium-staged mass transfer operations such as: absorption/stripping, extraction/leaching operations. Demonstrations, laboratories and computer simulations may be integrated throughout this course.

CHE 06314: Separation Processes II 4 s.h.
Prerequisite(s): CHE 06309 and CHE 06312, (minimum grade of C-), and CHE 06310
This course is the second course of a two semester sequence in mass transfer and separation processes. The course presents several separation processes and their relevant theory, design and applications for gas, liquid and solid separation in both traditional and emerging industries. These processes include distillation; adsorption and chromatography; membrane separations, reverse osmosis and gas permeation; and solid liquid separations; centrifugation, particle filtration, crystallization. Demonstrations, laboratories and computer simulations may be integrated throughout this course.

CHE 06315: Chemical Engineering Thermodynamics II 3 s.h.
Prerequisite(s): CHE 06310 minimum grade of C-
This course is a direct continuation of Chemical Engineering Thermodynamics I. This course includes an in-depth view of multicomponent systems, phase equilibria such as liquid-liquid and solid-liquid equilibria, simultaneous chemical reactions equilibria, and electrolyte equilibria. The course will also cover chemical engineering thermodynamics applications in emerging technologies such as the biochemical and biomedical fields.

CHE 06316: Chemical Reaction Engineering 4 s.h.
Prerequisite(s): CHE 06309 and CHE 06310 and CHE 06311 and CHE 06312 and CHEM 07200
This course describes various topics related to homogeneous and heterogeneous reaction kinetics, idealized reactor models for batch and flow systems, corrections for non-ideal residence times, and heat and mass transfer effects. An introduction will be made to homogeneous and heterogeneous catalytic processes and industrial catalytic reactors. Demonstrations and laboratory exercises will be integrated into the course.

CHE 06381: CHEMICAL ENGINEERING MATERIALS 2 s.h.
Prerequisite(s): CHEM 06100 or CHEMISTRY II
This course develops the material structure and property relations. Atomic bonding, lattice structures, crystalline and polymeric structures and properties, imperfections, dislocations, phase diagrams, and quantitative analysis are presented. Properties of metals and alloys, ceramics, polymers, composites, and electrical materials are discussed.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Description</th>
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<tbody>
<tr>
<td>CHE 06401</td>
<td>Chemical Process Component Design</td>
<td>4 s.h.</td>
<td>CHE 06315 and CHE 06314 and (CHE 06316 with minimum grade of C-)</td>
<td>This course addresses the problems in economic design of chemical process components used in the synthesis of overall chemical processes. Economic aspects of engineering, including evaluating alternative course of action, cost factors, and process optimization are presented. Safety and environmental considerations in process selection will be discussed.</td>
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<tr>
<td>CHE 06402</td>
<td>Transport Phenomena</td>
<td>3 s.h.</td>
<td>CHE 06314 and CHE 06316</td>
<td>This course describes analogies among heat, mass, and momentum transfer. Governing differential equations are presented and their uses in steady-state and unsteady-state systems. This course reviews applications to mass transfer coupled with heat transfer and/or chemical reaction. Numerical methods and computer applications are included.</td>
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<tr>
<td>CHE 06403</td>
<td>Unit Operations Experimental Design And Analysis</td>
<td>2 s.h.</td>
<td>CHE 06315 and CHE 06314 and CHE 06316</td>
<td>This course addresses the fundamental operation and applications of chemical engineering unit processes, generally referred to as unit operations. Students will learn and develop experimental designs and engage in the data analysis required to characterize the operations and relate theory to industrial practice. Students will engage in pilot-scale process experimentation based on appropriate experimental designs and analysis. Typical processes covered include process filtration, tubular flow reactors, liquid-liquid extraction, fluidized beds, continuous crystallization, leaching, reverse osmosis, gas permeation, absorption and stripping, and bioprocesses.</td>
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<tr>
<td>CHE 06404</td>
<td>Unit Operations Laboratory II</td>
<td>2 s.h.</td>
<td>CHE 06403</td>
<td>This course is a direct continuation of Unit Operations Laboratory I, examining a different series of unit operations but with similar goals and expectations. Students will again engage in pilot-scale process experimentation on various systems and relate theory and phenomenological principles to performance of a realistic industrial operation.</td>
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<tr>
<td>CHE 06405</td>
<td>Process Dynamics And Control</td>
<td>3 s.h.</td>
<td>CHE 06314 and CHE 06314 and CHE 06316</td>
<td>This course provides an introduction to the dynamics, modeling and control of process systems. Topics studied will include: modeling analysis and application to control systems, dynamic behavior of processes, control objectives and benefits. Various aspects of feedback control will be emphasized: feedback loop, PID algorithm, tuning, performance, and applications. Enhancements to single-loop PID control; cascade control, and feed-forward control will be discussed along with special topics. Process control design case studies will be included.</td>
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<tr>
<td>CHE 06406</td>
<td>Chemical Plant Design</td>
<td>3 s.h.</td>
<td>CHE 06405 and (CHE 06401 with a minimum grade of C-)</td>
<td>This course will focus in design strategy for process synthesis and analysis and economic decision making in the process design. The course explores the development of reactors, compressors, separators and heat exchangers. Cost diagrams and quick screening of process alternatives are utilized. The course will use computer-aided process design software for industrial cases.</td>
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<tr>
<td>CHE 06441</td>
<td>Process Safety</td>
<td>3 s.h.</td>
<td>ENGR 01341 and CHE 06110 and CHEM 06100 or ENGR 01341 and CHE 06110 and CHEM 06105</td>
<td>This course presents the basic principles, guidelines, and calculations necessary for the safe design and operation of chemical plants and related manufacturing facilities. Topics include: toxics and human exposure, fires and explosions, vessel relief systems, hazard identification and risk assessment, source and dispersion models. Accident investigation is discussed along with a review of actual case histories.</td>
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<td>CHE 06442</td>
<td>Fluid Flow In Processing And Manufacturing</td>
<td>3 s.h.</td>
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<td>This course surveys fluid flow applications in the processing and manufacturing industries. It presents advanced flow concepts; multiphase flow, complex flow, and turbulence. Gas-solid fluidized bed technology and design. This course will analyze liquid-liquid and liquid-solid mixing systems.</td>
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<tr>
<td>CHE 06462</td>
<td>Bioprocess Engineering</td>
<td>3 s.h.</td>
<td>CHEM 06100 and MATH 01130 or CHEM 06105 and MATH 01130</td>
<td>This course reviews the fundamentals and engineering of bioprocess engineering with emphasis on applying biotechnology to industrial processes. Essential aspects of biochemistry, microbiology and kinetics are presented. This course discusses bioreactor engineering, and recovery and purification processes. Processing applications of engineering kinetics and enzyme technology are included. Laboratory experiments and demonstrations will be integrated throughout the course.</td>
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CHE 06463: Green Engineering Of Chemical Processes 3 s.h.
Prerequisites: CHE 06314 and CHE 06316
This course evaluates process design techniques to minimize waste and by-products in the processing and manufacturing industries. Topics include: mass and heat recycling processes; technologies for process stream renovation, material reuse and recycling methods. Case studies of industrial applications are utilized.

CHE 06464: Advanced Separation Technology 3 s.h.
This course describes advanced separation processes not previously covered in Transfer Processes II and Separation Processes courses. Topics include: crystallization and precipitation; adsorption, chromatography and ion exchange; reverse osmosis, ultrafiltration, gas permeation and prevaporation. Commercial system design parameters and laboratory demonstrations will be included. An overview of other novel separation processes will be done.

CHE 06465: Advanced Design Of Reactors 3 s.h.
This course presents an overview of chemical reaction types and ideal reactors. Topics presented include: catalysis and catalytic reactors; analogies for real reactors; fluid flow and heat and mass transfer effects on chemical reactions and reactor design; numerical analyses and simulation of reacting systems; applications in the chemical industry.

CHE 06466: Polymer Processing 3 s.h.
Prerequisites: ENGR 01281 and CHE 06310
The course provides an introduction to the various aspects of polymer engineering starting with basic polymer properties, structure and function. The major topics covered are the formation of polymer systems and manufacturing techniques. Fabrication processes topics include coating, extrusion, and foams. The production of thin-films and membranes will focus on stretching, phase inversion, and hollow fiber spinning. Students will study application of polymeric materials engineering to various industries.

CHE 06468: Principles Of Electrochemical Engineering 3 s.h.
Prerequisites: CHEM 06100 or CHEM 06105
This course will focus on the fundamental principles of process electrochemistry. Basic principles of thermodynamics, kinetics and mass transfer as applied to electrochemical systems will be presented. Modeling of electrochemical systems and application of electrochemical principles to corroding systems will be conducted by the students. Engineering case studies of commercial applications in energy conversion and storage and electrolytic processes will be presented.

CHE 06470: Principles Of Air Pollution Control 3 s.h.
Prerequisites: CHEM 06100 or CHEM 06105
This course introduces students to air pollution control theory. Students design air pollution control processes and specify equipment related to the control of particulate, gaseous and toxic air emissions. The chemistry required for pollution control process design is presented. The environmental impacts due both to controlling and not controlling emissions are considered. Students design control equipment, specify and troubleshoot control systems and predict the impacts for each major type of control system.

CHE 06471: Principles of Biomedical Control Systems 3 s.h.
Prerequisite(s): CHE 06405
This course is an extension of Process Dynamics and Control (CHE 06409) focusing on the identification and study of biomedical control systems. Students will learn to identify components of physiological control systems and examine the origin of diseases at a systems level. Additional topics include the incorporation of artificial organs into existing physiological control systems, mathematical modeling of biological processes, and designing therapeutic strategies.

CHE 06472: Principles Of Biomedical Processes 3 s.h.
Prerequisites: CHEM 06100 or CHEM 06105
This course introduces students to chemical engineering fundamentals applied to biomedical systems. Students analyze and design biomedical processes. The basic biochemistry and physiology required for understanding of biomedical systems is presented. Basic principles of mass transfer, heat transfer, fluid flow, and chemical reaction are used to analyze or design drug delivery systems, pharmacokinetic models, the circulatory system, transport across cell membranes, and human and artificial organs. Laboratory experiments and demonstrations will be integrated throughout the course.

CHE 06473: Principles of Biomaterials Engineering 3 s.h.
Prerequisites: CHEM 06100 or CHEM 06105
The goal of studying biomaterials is to understand how the body's natural tissues are organized on a compositional, structural, and properties basis. We also seek to understand how the body recognizes and responds to foreign materials, and combine this knowledge in order to successfully design implants that can be used to treat debilitating diseases.
Course Descriptions

CHE 06474: Fundamentals Of Particle Technology 3 s.h.
Prequisites: CHEM 06100 or CHEM 06105
This course introduces students to the chemical engineering functions of particle technology. Students analyze and design chemical industry processes involving particles. The basic chemistry of particle synthesis and manufacturing is presented. Principles of mass and heat transfer, fluid flow and chemical reaction kinetics are used to analyze a wide range of industrial processes involving particles. Processes involving fluidization, pneumatic conveying, multi-phase mixing and catalysis will be discussed. Laboratory experiments and demonstrations will be integrated throughout the course.

CHE 06475: Principles of Biopharmaceutical and Industrial Fluid Mixing 3 s.h.
Prequisite(s): CHEM 06100 or CHEM 06105
Students in this course will demonstrate the importance mixing of in both biotechnology and the pharmaceutical industries. The design project in this class will include a product that requires multiple process steps involving multiple phases and complex liquids and chemical reactions. Students will apply single and multi-phase fluid dynamica to the design of an industrial process that includes equipment design. A major objective of the class is to develop equipment for the biotechnology and pharmaceutical industry.

CHE 06476: Principles Of Bioseparation Processes 3 s.h.
This course will focus on the fundamental principles of bioseparation processes. The characteristics of bioseparations will be presented as applied to downstream processing in the pharmaceutical/biotechnology and related industries. Theory and design of filtration, microfiltration, centrifugation, cell disruption, extraction, adsorption, chromatography, precipitation, ultrafiltration, crystallization, and drying will be presented as applied to biosystems. Commercial design considerations, such as sanitary design/sterilization, water quality, solvent recovery, waste disposal and biosafety will be reviewed.

CHE 06477: Fundamentals Of Engineering Process Analysis And Experimental Design 3 s.h.
This course exposes students to advanced engineering applications of process analysis and experimental design. The course includes a multidisciplinary approach with theoretical background to support the course applications. Students will use advanced statistical and optimization techniques for process analysis and experimental design, process monitoring and quality control presently used in industry. The analysis and experimental design techniques presented in this course serve to optimize complex industrially relevant processes and make engineering design and calculations more effective. Applications from a wide range of industries will be presented including pharmaceutical, food, bulk and specialty chemicals, and petroleum industry applications.

CHE 06478: Tissue Engineering Fundamentals 3 s.h.
Prequisite(s): BIOL 01210 or BIOL 01211 or BIOL 01204
Tissue engineering is an expanding field that integrates principles of biology and engineering for the development of tissue substitutes and artificial organs. This course, which utilizes a combined lecture-laboratory approach, will review embryology, cell culture techniques, stem cell biology, cell signaling, cell development and differentiation, biocompatibility, tissue organization and function, biomaterial synthesis/characterization, and structure-function relationships in tissue engineering scaffolds.

CHE 06479: Industrial Process Pathways 3 s.h.
Prequisites: CHE 06316
This course will study chemical reaction mechanisms that play crucial roles in the chemical industry. Fundamentals of reaction thermochemistry and reaction kinetics will be discussed. Students will learn to construct mechanistic models of complex, multi-reaction systems, and to apply these models to the solution of practical problems such as yield optimization.

CHE 06480: Project Optimization In Engineering 3 s.h.
This course will overview strategies for planning and directing long-term engineering projects. Topics will include project organization, project scheduling, allocation of resources, project optimization and financial analyses.

CHE 06481: Advanced Process Analysis 3 s.h.
This course will examine advanced topics in process analysis including: process consistency, identification of optimal process based on economic analysis, process documentation including flowsheets and budgets, replacement analysis for processing equipment, and rationing limited resources between competing projects.

CHE 06482: Principles Of Food Engineering 3 s.h.
Prequisites: MATH 01141, CHEM 06100 and CHEM 06105 or MATH 01131
This course introduces students to chemical engineering fundamentals applied to food processing systems. Students analyze and design food engineering processes. The basic chemistry required for understanding of food systems is presented. Basic principles of mass transfer, heat transfer, fluid flow, chemical reaction, process control, and mixing are used to analyze or design food production systems. Computer simulations will be used for the design of food processing systems. Laboratory experiments and demonstrations will be integrated throughout the course.
CHE 06483: Principles Of Engineering Exercise Physiology  4 s.h.
Prerequisites: MATH 01236 and CHEM 06100
This course introduces students to chemical engineering fundamentals applied to physiologic systems, primarily during exercise. The basic biochemistry and physiology required for understanding these systems is presented. Basic principles of mass transfer, heat transfer, fluid flow, thermodynamics, and chemical reaction are used to analyze the human metabolic system, respiratory system, cardiovascular system, and thermal system. The interrelationships of these systems will be investigated, and their dynamic response to exercise will be studied. Laboratory experiments will be conducted throughout the course. This course is jointly taught with the Department of Health and Exercise Science.

CHE 06484: Fundamentals Of Controlled Release  3 s.h.
This course introduces students to chemical engineering fundamentals applied to controlled release systems. Basic principles of materials, mass transfer, heat transfer, fluid flow and chemical reactions are used to analyze and design controlled release systems. Applications to pharmaceutical, agricultural, and food industries will be explored. Laboratory experiments and demonstrations will be integrated throughout the course.

CHE 06485: Fundamentals Of Engineering Quality Control  3 s.h.
Prerequisites: MATH 01235 and MATH 01236
This course will expose students to the fundamental principles of engineering quality control and process controller design. Students will learn basic control charting techniques and process capability assessment. The course will include process monitoring and control techniques routinely used in industry and expose students to the relevance of these techniques in the design and development of processes and process safety and risk assessment. The course will include numerous examples from a wide range of engineering applications and industries.

CHE 06486: Membrane Processes  3 s.h.
Prerequisites: CHEM 06105 and MATH 01131 or MATH 01141 or CHEM 06100 and MATH 01131
Principles of membrane processes: reverse osmosis, ultrafiltration, microfiltration, electrodialysis, prevaporation, gas permeation, and their application to traditional and emerging fields. Membrane materials and structure. Mass transfer and design aspects for both liquid and gas separation systems.

CHE 06490: Special Topics In Chemical Engineering: Topic  3 to 4 s.h.
Prerequisites: (MATH 01131 or MATH 01140) and (CHEM 06100 or CHEM 06105)
This course presents chemical engineering topics related to recent developments in industrial practice or research. May be repeated.

CHEM 05100: Essentials of General Chemistry  3 s.h.
This course presents fundamental principles of chemistry and math as well as their application to solving chemistry problems used in Chemistry I (CHEM 06100). Students will learn essential chemical principles to succeed in Chemistry I. Chemistry background information on topics such as the composition, structures and properties of matter, elemental symbols, elemental properties, isotopes, composition of matter, chemical formulas, atoms, molecules an moles, basic stoichiometry, and the concepts of acids and bases will be presented. Mathematical topics including solving simple algebraic equations, unit conversions, the metric system, use of proportions, percentages, and word problems within the context of general chemistry will also be presented. There are no prerequisites for this course.

CHEM 05102: Chemistry Of Everyday Life (Lecture And Lab)  4 s.h.
A one-semester course for the non-science major presenting an overview of General, Organic and Biochemistry. Emphasis is upon the application of chemical principles to industrial processes, environmental concerns and biologically interesting reactions. This course cannot be applied for credit toward a science major nor used as prerequisite for CHEM 06101.

CHEM 05249: Introduction to Forensic Science  3 s.h.
This course is intended to introduce non-science and non-engineering majors to fundamental chemical and biochemical principles that underlie standard forensic investigative approaches. This will include basic structure and function of biomolecules, cellular processes, analytical methods to detect and measure target materials, and standard examples that are relevant to common investigative procedures. There also will be discussion of good laboratory practices and statistical analysis of complex datasets.
CHEM 05301: Chemistry In The Environment 3 s.h.
Prerequisites: MATH 03305 or ENST 94101 or CHEM 05102
This course relates the fundamentals of chemistry learned in the prerequisite course to the natural processes found in nature. It also examines how chemistry is related to environmental concerns in our modern world. The course is not designed for majors in science and engineering.

CHEM 05310: Independent Study-Chem 1 to 6 s.h.

CHEM 05350: Forensic Chemistry (Lecture And Lab) 4 s.h.
This course considers the application of physical and chemical methods to the identification and analysis of the physical evidence associated with a crime. The course emphasizes those areas of chemistry and to a lesser extent physics, biology and geology useful for determining the evidential value of crime scene and related evidence. The laboratory experience emphasizes the application of physical and chemical analytical procedures to the examination of materials that would likely be considered evidence in a crime.

CHEM 05430: Advanced Topics In Chemistry 3 s.h.
This course covers special topics in individual areas of chemistry. Specific prerequisites are determined by the nature of the course when it is announced.

CHEM 05435: Cooperative Experience In Chemistry 3 s.h.
The goal of this course is to provide the student with the opportunity to participate in a research/development experience in a non-academic setting. The course may be taken as an advanced elective by students with Junior or Senior status for a maximum of 3 s.h. credit. It may be elected to fulfill the research requirement of the BS in Chemistry major. It can be taken more than once.

CHEM 05440: Research I 3 s.h.
This course provides individual laboratory investigation of a topic outside the scope of existing courses; laboratory and conferences are required. The results of investigation will be presented in a written and oral report.

CHEM 05441: Research II 3 s.h.
Prerequisites: CHEM 05440
This course is a continuation of CHEM05.440.

CHEM 05450: Seminar I 1 s.h.
In this course students give oral reports on topics chosen from the current chemical literature. Students must attend local professional meetings.

CHEM 06100: Chemistry I (Lecture And Lab) 4 s.h.
This course presents the basic principles involved in the study of chemistry. It emphasizes modern theories and laws used in the understanding of the structures and reactions of the elements and compounds and also includes gas laws, stoichiometry, and solution theory.

CHEM 06101: Chemistry II (Lecture And Lab) 4 s.h.
Prerequisites: CHEM 06100 or CHEM 06105
This course is a continuation of CHEM06.100. It covers these topics: equilibria, including acids and bases, complexes, and sparingly soluble compounds, thermodynamics, kinetics, electrochemistry, and solution theory. Descriptive inorganic chemistry is also covered.

CHEM 06105: Advanced College Chemistry I (Lecture And Lab) 4 s.h.
Prerequisites: Passing grade on Chemistry Placement Exam OR C- or better in Essentials of General Chemistry(CHEM 05100) OR appropriate AP test scores (3, 4, or 5).
This course is an introductory chemistry course for students in chemistry and biochemistry. The content includes theories and laws used in the understanding of the structures and reactions of elements and compounds, atomic structure, stoichiometry, gas laws, states of matter, and solution theory. Illustrative examples focusing on the research interests of the Department will be used to introduce topics. Introduction to Advanced laboratory methods will also be covered. It is not recommended for those who do not have a declared science or engineering major.
CHEM 06106: Advanced College Chemistry II (Lecture And Lab)  
**Prerequisites:** CHEM 06105 Advanced College Chemistry I.  
This course is a continuation of Advanced College Chemistry I. Topics include thermodynamics, chemical kinetics, chemical equilibrium, acid base chemistry, precipitation reactions, redox reactions, and electrochemistry. Illustrated examples focusing on the research interests of the Department will be used to introduce topics. Advanced laboratory methods will also be covered.

CHEM 06300: Advanced Inorganic Chemistry  
**Prerequisites:** PHYS 08400 or CHEM 08400  
This course studies concepts and models of inorganic chemistry. It explains molecular geometries and other physical and chemical properties on the basis of the several chemical bonding theories and with reference to the periodic table. Students study both main group and transition element chemistries. The laboratory component emphasizes the synthesis and characterization of inorganic compounds.

CHEM 06301: Inorganic Chemistry  
**Prerequisites:** CHEM 07201 or CHEM 07202  
This course covers the basic concepts and models of inorganic chemistry. The course encompasses the study of various elements in the periodic table along with their components. Students study the descriptive chemistry of both main group and d-block transition elements.

CHEM 06400: Advanced Inorganic Chemistry Lecture  
**Prerequisite:** CHEM 08400  
This course covers concepts and models of inorganic chemistry. It encompasses molecular geometries and other physical and chemical properties on the basis of the several chemical bonding theories and with reference to the periodic table. Students study the chemistry of both main group and d-block transition elements.

CHEM 06401: Advanced Inorganic Chemistry Laboratory  
**Prerequisite:** CHEM 06400 with concurrency allowed.  
This course covers concepts and models of inorganic chemistry in the laboratory setting. Students study both main group and transition element chemistries. The laboratory component emphasizes the synthesis and characterization of inorganic compounds.

CHEM 07200: Organic Chemistry I (Lecture And Lab)  
**Prerequisites:** CHEM 06101 or CHEM 06106  
This course studies the chemistry of carbon compounds and their properties, structures and reactions. It emphasizes the study of the principle classes of aliphatic and aromatic compounds, which in conjunction with selected experiments, gives an understanding of the mechanisms of organic reactions. Required for science majors.

CHEM 07201: Organic Chemistry II (Lecture And Lab)  
**Prerequisites:** CHEM 07200  
This course is a continuation of CHEM 07200. Required for science majors.

CHEM 07202: Industrial Organic Chemistry  
**Prerequisite(s):** CHEM 07200, Restricted to engineering majors.  
Industrial Organic Chemistry will cover common topics found typically in Organic Chemistry II (CHEM 07.201) but will focus on the utility of this chemistry in an industrial setting. Highlights include: polymer synthesis, mineral sources of chemicals, renewable sources of chemicals, green chemistry, aromatic materials, coal, organic color chemistry, detergents, food, pharmaceutical chemistry, and others.

CHEM 07203: Organic Chemistry II for Biomedical Sciences  
**Prerequisite:** CHEM 07201  
This course studies the chemistry of carbon compounds and their properties, structures and reactions in biochemical framework. It emphasizes the study of the principle classes of aliphatic and aromatic compounds, which in conjunction with selected experiments, gives an understanding of the mechanisms of organic reactions. Specifically designed for Biomedical Sciences and Engineering majors. This course if a continuation of CHEM 07201.

CHEM 07348: Biochemistry (Lecture And Lab)  
**Prerequisites:** CHEM 07201 or CHEM 07202  
This course deals with chemical compounds and reactions important to the functioning of biological systems and includes a discussion of the metabolic pathways for energy production and biosynthesis.
Course Descriptions

CHEM 07357: Chemical Biology 3 s.h.
Prerequisites: CHEM 07201 or CHEM 07202
The goal of this course is to describe how chemistry is applied to biochemical and biological systems to answer specific questions. It examines the use of small, synthetic molecules that are used as probes of biochemical function as well as how to design experiments using these molecules. The course also encompasses the use of purely synthetic compounds as functional or structural mimics of biological molecules. The methods and techniques used to measure designed interactions will also be discussed.

CHEM 07399: Bioinformatics - Biochemical Applications 3 s.h.
Prerequisites: (CHEM 07201 or CHEM 07202) and BIOL 01106
This introductory course in bioinformatics covers the application of modern computational methods to the fundamentals of molecular biology (protein and DNA structure, transcription and translation). The biochemical tools of molecular biology will be discussed. Methods of aligning DNA sequences will be studied in relation to mutations, phylogenetic tree analysis, forensic science, and genetic diseases. Algorithms for protein structure prediction, microarray technology and gene expression will be explored. Computer based lab exercises will support the topics presented.

CHEM 07405: Introduction To Polymer Chemistry 3 s.h.
Prerequisites: CHEM 07201 or CHEM 07202
This course presents an introduction to the topic of polymer chemistry. The subject matter, by its nature, crosses all the lines of specialization within chemistry. The structure, properties and synthesis of polymeric materials are covered in accordance with the recommendations of the joint polymer education committee of the American Chemical Society.

CHEM 07407: Advanced Biochemistry Lecture 3 s.h.
Prerequisite: CHEM 07458 and CHEM 09250
This lecture course deals with complex biochemical processes involving the interaction of numerous classes of biomolecules. Specifically the course focuses on the interplay of proteins, lipids, carbohydrates, and nucleic acids in the cellular response and adaptation to the environment, both locally in the cell and of the organism as a whole. The course relies on both traditional descriptions of biochemical processes and the inclusion of primary literature sources to analyze experimental data, explain methodology, and introduce cutting edge concepts.

CHEM 07408: Advanced Biochemistry 4 s.h.
Prerequisites: BIOL 14348 or CHEM 07348
This course provides an in-depth study of the principles involved in biological processes. It emphasizes the significance of biochemical reactions and regulations as well as mechanisms. A thorough elucidation of the structure, function and mechanism will be presented. The overall strategy of living systems will be illustrated. The laboratory experiments will provide exposure to representative procedures and some important modern techniques.

CHEM 07409: Advanced Biochemistry Laboratory 2 s.h.
Prerequisites: CHEM 07407 (may be taken concurrently) and CHEM 09250
This laboratory course deals with isolation and characterization of molecules from biochemical systems. The fundamentals and applications of chromatographic, electrophoretic, and spectroscopy techniques applied to biological molecules are taught through laboratory projects.

CHEM 07410: Medicinal Chemistry 3 s.h.
Prerequisites: CHEM 07201
A study of the biochemical principles and metabolic pathways with particular emphasis on pharmaceutical applications and biotechnology. This course will focus on the molecular mechanisms of drug action and chemical basis of drug therapy. Current methods used to study medicinal chemistry including recombinant DNA, combinatorial chemistry and bioinformatics will be reviewed. A 3-D molecular modeling of drug targets and drug design will be integrated throughout the course. Clinical trials of drug case study are included.

CHEM 07431: Advanced Topics In Biochemistry 3 s.h.
This course covers special topics in individual areas of biochemistry. Specific prerequisites are determined by the nature of the course when it is announced.

CHEM 07442: Biochemical Research Methods 3 s.h.
Prerequisite: CHEM 07348
This course provides individual laboratory investigation of a topic beyond the scope of existing courses based on current research in the department. The results of the research project will be presented in a written and oral report.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 07464</td>
<td>Advanced Organic Chemistry I (Lecture) - Wi</td>
<td>3 s.h.</td>
<td>ENGL 01112, CHEM 07201 and PHYS 08400</td>
<td>This course provides an advanced presentation of the major classes of organic chemistry reactions, giving major emphasis to the detailed mechanisms of such reactions. Modern organic theory is included. This course is generally offered in fall every other year. A writing intensive course.</td>
</tr>
<tr>
<td>CHEM 07470</td>
<td>Organic Spectroscopic Analysis (Lecture And Lab)</td>
<td>3 s.h.</td>
<td>CHEM 07201 or CHEM 07202</td>
<td>This is a laboratory course with class discussion on the separation and identification of organic compounds. It uses both classical and instrumental techniques in compound structure determination. Lectures emphasize interpreting IR, NMR and mass spectra. This course is not offered annually.</td>
</tr>
<tr>
<td>CHEM 07472</td>
<td>Organometallic Chemistry</td>
<td>3 s.h.</td>
<td>CHEM 07201 OR CHEM 07202</td>
<td>This course covers the chemistry of organometallic compounds and corresponding applications in diverse fields such as organic synthesis, pharmaceutical industry, and the petroleum chemical industry. Major topics of discussion include the study of physical and chemical properties, characterization, and preparation of organic compounds. The basic reactivity patterns and the reaction mechanisms will also be introduced. The course is ideal for Chemistry, Biochemistry, Chemical Engineering, and Biology majors.</td>
</tr>
<tr>
<td>CHEM 07473</td>
<td>Polymer Synthesis</td>
<td>4 s.h.</td>
<td>CHEM 07201 and PHYS 08400</td>
<td>This course provides an in-depth study of the procedures, techniques and theoretical aspects of polymer synthesis. Reaction mechanisms including kinetic and thermodynamic considerations will be studied. The topic of polymer synthesis will be examined from raw material sources through product usage. The laboratory experiments will provide exposure to representative procedures and techniques.</td>
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<tr>
<td>CHEM 07478</td>
<td>Polymer Characterization</td>
<td>4 s.h.</td>
<td>CHEM 07201 and PHYS 08400</td>
<td>This course provides an in-depth study of the procedures, techniques and theoretical aspects of polymer characterization. Major topics include molecular weight determinations, polymer solutions, viscoelasticity and bulk properties. The laboratory experiments will provide exposure to representative procedures and techniques with emphasis on molecular weight determination and thermal methods.</td>
</tr>
<tr>
<td>CHEM 07490</td>
<td>General Aspects of Pharmacology</td>
<td>3 s.h.</td>
<td>CHEM 07201 OR CHEM 07202</td>
<td>This course provides an understanding of the basic principles and mechanisms in pharmacology. Some of the topics discussed include the pharmacodynamics and pharmacokinetics of drugs, and their interactions with the living tissues. It also provides fundamental knowledge about mechanisms of action, structure-activity relationships, drug metabolism, and the interactions of therapeutics with physiological systems. Biochemistry (CHEM 07348) or Introduction to Biochemistry (BIOL 14.440) is strongly recommended before taking General Aspects of Pharmacology.</td>
</tr>
<tr>
<td>CHEM 07492</td>
<td>Pharmaceutical Chemistry</td>
<td>3 s.h.</td>
<td>CHEM 07201 OR CHEM 07202</td>
<td>This course covers the structure, properties, and preparation, of organic and inorganic pharmaceutical drugs. Some of the topics that will be discussed include natural source derived organic pharmaceuticals, inorganic pharmaceuticals, and their properties under biological conditions, etc. This course is ideal for Chemistry, Biochemistry, Biology, and Chemical Engineering majors.</td>
</tr>
<tr>
<td>CHEM 07557</td>
<td>Chemical Biology</td>
<td>3 s.h.</td>
<td></td>
<td>The goal of this course is to describe how chemistry is applied to biochemical and biological systems to answer specific questions. It examines the use of small, synthetic molecules that are used as probes of biochemical function as well as how to design experiments using these molecules. The course also encompasses the use of purely synthetic compounds as functional or structural mimics of biological molecules. The methods and techniques used to measure designed interactions will also be discussed.</td>
</tr>
<tr>
<td>CHEM 08305</td>
<td>Biophysical Chemistry</td>
<td>4 s.h.</td>
<td>BIOL 01101 or BIOL 01106 and MATH 011131 and (PHYS 02201 or PHYS 00222), CHEM 07201 and CHEM 09250</td>
<td>This course covers the topics of physical chemistry and their applications in biochemistry. Topics include thermodynamics, kinetics and spectroscopy.</td>
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</table>

Course Descriptions
### Course Descriptions

**CHEM 08400:** Physical Chemistry I (Lecture)  
**Prerequisite(s):** (CHEM 07201 or CHEM 07202) and (MATH 01131 or MATH 01141) and (PHYS 02201 or PHYS 00222 or PHYS 02203 or PHYS 00211 or CHE 06302)  
This course deals with the problems of the fundamental principles underlying physical chemistry. It gives major emphasis to thermodynamics, kinetics and quantum mechanics. It also includes spectroscopy, group theory and statistical mechanics. MATH 01.230 recommended.

**CHEM 08401:** Physical Chemistry II (Lecture)  
**Prerequisite:** CHEM 08400  
This is a continuation of CHEM 08400.

**CHEM 08402:** Physical Chemistry Laboratory I  
**Prerequisites:** CHEM 09250 and CHEM 08400  
Laboratory work in this course is designed to illustrate the principles of physical chemistry.

**CHEM 08403:** Physical Chemistry Laboratory II  
**Prerequisite:** CHEM 08401  
This course is a continuation of CHEM 08402.

**CHEM 08410:** Survey Of Molecular Modeling Methods  
**Prerequisites:** (CHEM 07201 OR CHEM 07202) AND (MATH 01130 OR MATH 01140) **Recommended:** CHEM 09250 and MATH 01131  
This survey course emphasizes the applications of molecular modeling theory and simulations in chemistry and biochemistry. The course will present to students a broad and in-depth knowledge of different modeling concepts and methodologies, and provide students opportunities to apply modern computational software to investigate molecular structures, chemical reactions, and biomolecular processes such as enzyme catalysis and protein conformational changes, etc. This course is ideal for Chemistry, Biochemistry, Bioinformatics, and Pharmaceutical Science students.

**CHEM 09249:** Analytical Chemistry  
**Prerequisite(s):** CHEM 06101 or CHEM 06106  
This course is for those taking chemistry as a minor and covers basic concepts in analytical chemistry and serves to develop skills needed to solve analytical problems in a quantitative manner. A wide range of techniques that are useful in modern analytical chemistry are introduced. Statistics relevant to analytical chemistry molecular spectroscopy, atomic spectroscopy as well as acid base chemical equilibrium are covered.

**CHEM 09250:** Quantitative Analysis (Lecture And Lab)  
**Prerequisites:** CHEM 06101 or CHEM 06106  
This course provides lecture and laboratory experience in classical methods of gravimetric and volumetric analyses as well as electrical and spectrophotometric analyses.

**CHEM 09300:** Environmental Chemistry  
**Prerequisite:** CHEM 09250 and CHEM 09250  
This course is comprehensive overview study of environmental science from a chemistry perspective. The course is appropriate for junior/senior-level undergraduate students. Topics include environmental pollution of soil, water and air, atmosphere and climate change, and methods for measuring and abating this pollution.

**CHEM 09410:** Instrumental Methods (Lecture And Lab)  
**Prerequisites:** CHEM 08401 and CHEM 09250  
This course covers the use of instrumental methods in the solution of chemical problems. It stresses both the theoretical and practical aspects of obtaining and interpreting data. Among the instruments considered are visible, UV, IR, NMR, AA, ICP, Raman and Mass Spectrometers as well as electrical and chromatographic techniques.

**CHEM 09411:** Electrochemistry  
**Prerequisite(s):** CHEM 09250 and PHYS 00222  
This course covers principles of electrolyte solutions, thermodynamics and kinetics of electrochemical reactions, devices and instrumentation of electrochemical measurements, techniques of electroanalytical methods, and examples of bioelectrochemistry. The course introduces a variety of applications of the electroanalytical methods in the areas of point-of-care diagnosis, hazard detection, and biosensors.
CHEM 09420: Supramolecular Chemistry 3 s.h.
Prerequisite(s): CHEM 07201 or CHEM 07202 and CHEM 08400 or CHEM 08305 or CHEM 06310
The course is about concepts, structures, functions, and applications of supramolecular molecular systems. The
supramolecular systems discussed in this course include surface assembled monolayer and multilayers, L-B films, host-guest
molecular recognition systems, liquid crystals, and nanoclusters. Application of supramolecular chemistry includes clinic
diagnostics, drug design and drug delivery, biomimic, and nanofabrication.

PHYS 08305: Biophysical Chemistry 4 s.h.
Prerequisites: BIOL 01101, MATH 01131, PHYS 02201, CHEM 07201 and CHEM 09250
This course covers the topics of physical chemistry and their applications in biochemistry. Topics include
thermodynamics, kinetics and spectroscopy. This course also provides laboratory experience in physical methods that apply
to biological systems.

CEE 08101: Introduction to Infrastructure 2 s.h.
Prerequisite(s): None
The civil infrastructure of the US is deteriorating rapidly. The quality of the infrastructure directly affects the economy
and security of the US. The next generation of civil and environmental engineers needs to be more skilled and more able to
create a sustainable infrastructure. The goal of this course is to introduce freshmen civil and environmental engineers to the
built infrastructure including bridges, buildings, foundations, dams, canals, roads, intersections, water treatment plants,
wastewater treatment plants, and solid waste landfills. Students will be exposed to case studies in each area of infrastructure
and will prepare final team oral and written reports on specific infrastructure cases.

CEE 08102: Engineering Graphics 2 s.h.
The course deals with the creation and interpretation of engineering drawings, maps, and plans using engineering software
programs.

CEE 08103: Field Surveying 2 s.h.
The course deals with the measurement of existing and man-made land profiles. The tasks performed include
measurements of drainage areas, distances, angles, and elevations; closing traverses; topographic surveys; and highway
alignments.

CEE 08203: Surveying And Engineering Graphics 4 s.h.
The course deals with the measurement of existing and man-made land profiles (surveying), and the creation and
interpretation of engineering drawings, maps and plans (engineering graphics). The tasks performed include the
measurements of drainage areas, distances, angles, and elevations; closing traverses; topographic surveys; and highway
alignments. Additional tasks include creation and interpretation of engineering plans, drawings, and maps using appropriate
engineering software programs.

CEE 08301: Civil Engineering Materials 2 s.h.
Prerequisites: ENGR 01272 with a grade of C- or better or ENGR 01273 with a grade of C- or better.
This course deals with asphalt pavement, concrete pavement, and structural concrete including: the testing and analysis of
aggregates, asphalt binders, cement and admixtures; the design of asphalt pavement, concrete pavement, and structural
concrete; and the testing and analysis of asphalt pavement specimens, concrete pavement specimens, and structural
concrete specimens. The course includes appropriate laboratory experiments.

CEE 08305: Civil Engineering Systems 3 s.h.
Prerequisites: MATH 01131 or MATH 01140
The course deals with the theories and principles of civil engineering systems as applied to real-world analysis and design
problems. The course covers four important areas of civil engineering systems: linear programming, project scheduling,
probability and statistics, and engineering economics. The course includes appropriate computer applications.

CEE 08311: Environmental Engineering I 3 s.h.
Prerequisite: CHEM 06105 with a grade of C- or better and (Corequisite ENGR 01341 or prerequisite ENGR 01342)
This course deals with topics in principles of environmental engineering, including ecosystems, water and wastewater
treatment and design, and sludge/residuals management.

CEE 08312: Sustainable Civil & Environmental Engineering 3 s.h.
Prerequisites: CEE 08311 with C- or better grade.
This course deals with topics in solid and hazardous waste and air pollution engineering, including regulations,
fundamentals, evaluation, management, prevention, treatment and disposal.
Course Descriptions

CEE 08342: Water Resources Engineering 3 s.h.
Prerequisite: (ENGR 01341 with a grade of C- or better or ENGR 01342 with a grade of C- or better) and (MATH 01235 with a grade of C- or better or MATH 01231 with a grade of C- or better)
This course deals with the analysis and design of basic water flow structures using the principles of hydraulics and hydrology. The topics covered in hydrology include the analysis of rainfall, runoff, groundwater flow, and stream flow. The topics covered in hydraulics include the analysis and design of hydraulic structures such as weirs, open channels, culverts, and storm sewers. The course includes appropriate laboratory experiments and computer applications.

CEE 08351: Geotechnical Engineering 3 s.h.
Prerequisite: (ENGR 01341 with a grade of C- or better or ENGR 01342 with a grade of C- or better) and (ENGR 01272 with a grade of C- or better or ENGR 01273 with a grade of C- or better) and CEE 08301
The course deals with the basic principles of geo-technical engineering including soil properties and soil mechanics. The study of soil properties includes soil gradation, void ratio, porosity, water content, degree of saturation, specific gravity, soil consistency, soil classification. The study of soil mechanics includes permeability, capillarity, seepage and stresses in soils. The course includes appropriate laboratory experiments.

CEE 08361: Transportation Engineering 3 s.h.
Prerequisites: CEE 08103
The course deals with the analysis, design, construction, operation, maintenance, rehabilitation, and efficiency of transportation systems and mass transit systems. The course includes a study of the impact on transportation systems caused by sociological, geographical, economic and environmental factors. The course also includes appropriate field measurements and computer applications.

CEE 08382: Structural Engineering 3 s.h.
Prerequisite: ENGR 01272 with a grade of C- or better or ENGR 01273 with a grade of C- or better
This course deals with the analysis of simply-supported and continuous structures using classic and matrix analysis methods including integration, moment-area, conjugate beam, virtual work, force, and stiffness methods. Trusses, beams and frames are considered in the course.

CEE 08383: Analysis And Design Of Steel Frames 3 s.h.
Prerequisites: CEE 08382
This course deals with the analysis and design of structural frames. Analysis using the stiffness method is emphasized. The design of frame members includes the design of steel beams and beam-columns, connections for steel frames, bracing and composite steel/concrete members. Steel joists and decking are also introduced. The course includes appropriate computer applications.

CEE 08404: Engineering Estimating For Seniors 3 s.h.
Prerequisites: ECON 04102
The course deals with the development of engineering estimates for civil engineering projects and project components including labor, materials, and equipment. Total project costs including direct and indirect costs, field and home-office costs, and contingency are covered. Also covered are the various types of civil engineering estimates including piles and cfferdams, wellpoints and earthdrilling, water and sewer systems, road and highway pavements, concrete buildings and bridges, and steel buildings and bridges. The course includes appropriate computer applications.

CEE 08412: Environmental Treatment Process Principles 3 s.h.
Topics in Fundamentals of Physiochemical Processes in Environmental Engineering such as Absorption, Coagulation/Floculation, Filtration, Sedimentation, Disinfection, Ion Exchange, Chemical Oxidation, Corrosion and Membranes.

CEE 08413: Introduction To Environmental Management 3 s.h.
This course deals with integrated environmental management issues and methodologies with a global perspective. Topics include environmental decision-making from a socio-economic and environmental standpoint, environmental data collection, analysis, and management, techniques for environmental assessment and feasibility case studies. The course is intended to give students an understanding of current environmental issues and tools for analysis of data for environmental management. The issues are examined from the worldwide perspectives of science, engineering, business, and society.

CEE 08422: Site Remediation Engineering Principles 3 s.h.
This course deals with topics with site remediation engineering. Topics include site characterization, site safety, modeling site conditions, conducting feasibility studies, and designing remediation systems, such as pump and treat, stabilization, containment, treatment walls, natural attenuation, enhanced bioremediation, phyto remediation, oxidation, soil flushing, and soil vapor extraction.
Course Descriptions

CEE 08431: Solid And Hazardous Waste Management 3 s.h.  
The course deals with solid and hazardous waste sources, regulations and management; engineering principles; treatment and disposal methods; design of landfills; recycling; toxicology principles; and risk assessment. The course includes appropriate laboratory experiments and computer applications.

CEE 08432: Pollutant Fate And Transport Principles 3 s.h.  
This course deals with topics in characteristics and properties of organic pollutants, aquatic chemistry, transport mechanisms for pollutants (Absorption, Retardation, Attenuation, Volatilization, Biodegradation), groundwater (Properties, Flow Equations, Transport in Porous Media) and mathematical modeling.

CEE 08433: Principles Of Integrated Solid Waste Management 3 s.h.  
The course deals with the theories and principles of integrated solid waste management as applied to real-world analysis and design problems. The course covers the design of facilities and programs, such as landfills, composting facilities, transfer stations, collection programs, and drop-off centers, and planning of integrated systems for municipalities and counties. Computer applications are included.

CEE 08436: Sustainable Technologies For Built Environments 3 s.h.  
Prerequisite(s): (Any 100 level MATH) or STAT Course  
This course introduces engineering and non-engineering students to innovative technologies that must be employed to sustain the human species on Earth by reducing the impact of urban communities. After an introduction to Sustainability, technologies will be considered in five areas related to the built environment: environmental protection, energy, water, shelter, and transportation. The course is designed to increase students’ understanding of sustainable technologies and ability to incorporate such technologies into programs to improve sustainability.

CEE 08437: Sustainable Buildings 3 s.h.  
Prerequisite(s): (Any 100 level MATH) or STAT Course  
This course introduces engineering and non-engineering students to innovative designs that can be employed to better sustain the human species on Earth by reducing the impact of buildings. After an introduction to the impact of buildings on sustainability, technologies will be considered in five areas: sustainable sites, water, energy, materials, and indoor environmental quality.

CEE 08443: Advanced Water Resources Engineering For Seniors 3 s.h.  
Prerequisites: CEE 08342  
The fundamental theme of the course is the study of advanced topics in water resources engineering including the analysis and design of advanced hydraulic structures, hydraulic similitude and modeling, wave action, and advanced hydrology. The course includes appropriate laboratory experiments and computer applications.

CEE 08444: Principles Of Hydraulic Design 3 s.h.  
Prerequisites: CEE 08342  
The fundamental theme of the course is the design and analysis of structures for controlling and conveying water in both the built and natural environment. Topics covered vary from year to year based upon instructor and student interests. Past topics have included open channel flow design, dams and spillways sanitary and storm sewers, culverts, pumping stations, turbomachinery, and hydraulic similitude and modeling.

CEE 08445: Principles Of Environmental Fluid Mechanics 3 s.h.  
Prerequisites: CEE 08342  
The fundamental theme of the course is the engineering study of fluid flow in the environment. Advanced topics in water resources engineering are explored, with content varying based upon instructor and student interests. Past topics have included open channel flow, hydrology, fish passage at hydraulic structures, sediment transport, mixing in natural water bodies, and water quality modeling. The course includes appropriate laboratory and/or field experiments and computer applications.

CEE 08446: River Engineering Principles 3 s.h.  
Prerequisite: CEE 08342  
This course presents the theory and analytical techniques for the design and analysis of engineering projects that control or convey water in open channel systems. Topics include sediment transport, design of hydraulic structures, river restoration, and computer modeling.
Course Descriptions

CEE 08447: Watershed Engineering Principles 3 s.h.
Prerequisite: CEE 08342
This course presents the theory and analytical techniques for the design and analysis of stormwater management projects. Topics include environmental law, stormwater mitigation structures, rainfall-runoff analysis, limnology, and computer modeling.

CEE 08448: Introduction to Water and Environmental Monitoring 3 s.h.
Prerequisites: CEE 08203 and CEE 08342
This course introduces the latest technologies and techniques used by water resources and environmental engineers for mapping, modeling and monitoring. The goal of this class is to allow students to develop an understanding of water and environmental spaces and how maps represent them. This course will provide an overview of the application of advance geographic information system, remote sensing and complex mapping in water resources and environmental engineering. Students will use satellite images to extract data and produce viable information. State of the art software will be uses in this class.

CEE 08452: Foundation Engineering For Seniors 3 s.h.
Prerequisites: CEE 08351 with C- or better grade.
The fundamental theme of the course is the analysis and design of structural building and bridge foundations based on advanced principles of soil mechanics. These advanced principles of soil mechanics include compressibility, shear strength, and bearing capacity. The types of foundations analyzed and designed include spread footings and pile foundations. The course includes appropriate laboratory experiments and computer applications.

CEE 08453: Earth Retaining Systems For Seniors 3 s.h.
Prerequisites: CEE 08351 with C- or better grade.
The fundamental theme of the course is earth retaining systems including advanced principles of soil mechanics and analysis and design of earth retaining systems. The advanced principles of soil mechanics covered include lateral soil pressure and slope stability. The analysis and design of earth retaining systems includes slopes, embankments, retaining walls, and other systems. The course includes appropriate laboratory experiments and computer applications.

CEE 08463: Transportation Planning, Demand, And Data Analysis 3 s.h.
Prerequisite: CEE 08361
This course introduces students to the general field of transportation planning including travel demand analysis and data collection methods. Statistical data collection and analysis methods are discussed. Examples using the traditional four-step planning process illustrate common planning procedures. Computer applications are included.

CEE 08464: Elements Of Transportation Engineering for Seniors 3 s.h.
Prerequisite: CEE 08361
The fundamental theme of the course is the study of advanced topics in highway design and analysis, signalized and un-signalized intersection design, forecast travel demand modeling and transportation planning. Topics covered vary from year to year based upon instructor and student interests. This course also includes field measurements and computer applications.

CEE 08465: Pavement Analysis And Evaluation 3 s.h.
Prerequisites: CEE 08361 and CEE 08301
The fundamental theme of this course is the engineering study of the mechanical behavior of flexible and rigid pavements. These include understanding of the pavement response and field performance data, and design of flexible and rigid pavements. The course will include appropriate computer applications.

CEE 08466: Introduction to Transportation Systems Modeling 3 s.h.
Prerequisite: CEE 08361
Introduces latest technologies and techniques used by transportation planners and engineers to study current travel characteristics and estimate future travel demand and supply. This course focuses on urban travel characteristics and activity analysis, travel demand and supply analysis, transportation system and project evaluation, and program and project implementation strategies. The course will (1) introduce concepts, procedures and methods associated with transportation planning; (2) provide basic knowledge of travel demand forecasting models; and (3) provide basic knowledge of relevant travel demand modeling software. The course is designed for undergraduate students who want to develop their career in transportation engineering and planning.
Course Descriptions

CEE 08473: Advanced Structural Analysis For Seniors 3 s.h.
Prerequisites: CEE 08382
The course deals with the matrix method of structural analysis. The topics covered include structural members, member joints, member end conditions, local and global structural matrices, condensation of global structural matrices, static structural analysis, and dynamic structural analysis. The course will include appropriate computer applications.

CEE 08474: Structural Mechanics 3 s.h.
Prerequisites: (CEE 08383 or ME 10301) and MATH 01235
This course presents the foundations of structural mechanics. Topics include: stress and strain tensors; equilibrium; compatibility and consecutive relationships; strain energy density; energy methods for solid bodies, frames and trusses; and techniques for approximate solutions of problems.

CEE 08475: Fatigue And Fracture 3 s.h.
Prerequisites: (CEE 08383 or ME 10301) and MATH 01235
This course presents the theory and analytical techniques to design structural components for cyclic loading. Topics include linear elastic fracture mechanics; S-N fatigue; fatigue crack growth; and algorithms for simulating three-dimensional crack propagation.

CEE 08481: Reinforced Concrete Design 3 s.h.
Prerequisites: CEE 08382
The course deals with the topic of reinforced concrete analysis and design. The analysis and design of reinforced concrete structural members includes types of concrete and steel, fundamentals of reinforced concrete behavior, analysis and design of rectangular and T-beams and slabs including flexural and shear behavior, development of reinforcement, deflections and crack control. Analysis and design of short reinforced concrete columns is also included. The course includes appropriate computer applications.

CEE 08483: Advanced Steel Design For Seniors 3 s.h.
Prerequisite: CEE 08383
This course addresses advanced topics not covered in a first course in steel design including topics such as design of plate girders, connections, and structural frames and bracing.

CEE 08484: Prestressed Concrete For Seniors 3 s.h.
Prerequisites: CEE 08481
The fundamental theme of this course is the analysis and design of prestressed concrete members for highway bridges, parking structures, office buildings, and industrial buildings. Topics covered include prestressed construction applications and materials, flexural analysis of pretensioned and post-tensioning beams, bending and shear design, loss of prestress, deflection, and composite beams. The course includes appropriate computer applications.

CEE 08485: Advanced Reinforced Concrete For Seniors 3 s.h.
Prerequisites: CEE 08481
The fundamental theme of the course is the design and analysis of advanced reinforced concrete structures and structural components including two-way slabs, footings, retaining walls, shear walls, and slender columns.

CEE 08486: Bridge Engineering For Seniors 3 s.h.
Prerequisites: CEE 08482 and CEE 08385
The fundamental theme of the course is the analysis and design of modern steel highway bridges utilizing the bridge code of the American Association of State Highway and Transportation Officials. The topics covered include bridge loads, load combinations, design methods, reinforced concrete deck slabs, steel wide-flange stringer bridges, steel composite wide-flange stringer bridges, continuous bridge spans, steel composite plate-girder bridges, elastomeric bearing connections, steel fixed bridge connections, and steel roller bridge connections. The course includes appropriate computer applications.

CEE 08487: Design Of Masonry And Wood Structures 3 s.h.
Prerequisite: CEE 08382
This course provides the fundamentals of structural design using masonry and wood. Topics include materials properties, flexure, axial loading, and lateral load resisting systems. This course builds upon previously acquired fundamental concepts of structural analysis and design.

CEE 08490: Civil Engineering Practice 1 s.h.
Prerequisites: CEE 08305
This sequence of seminars and workshops is designed to give civil engineering students meaningful exposure to several critical topics related to the real-world practice of civil engineering. Topics covered will include bid specifications and documents, contracts and performance bonds, engineering estimates and cost engineering, engineering management and project scheduling, and professional ethics and responsibilities.
Course Descriptions

CEE 08491: Civil Engineering Design Project I 2 s.h.
Prerequisites: CEE 08361 and CEE 08362
This is the first course in a sequence of two courses that will provide a meaningful design experience for teams of undergraduate civil engineering students under the direction of two or more faculty advisers. The sequence will include a thorough literature search and review, the development of a clear and concise problem statement, consultations with other faculty and industry experts, and the derivation of publishable results. The project will culminate in a final written report and oral presentation.

CEE 08492: Civil Engineering Design Project II 2 s.h.
Prerequisites: CEE 08491
This is the second course in a sequence of two courses that will provide a meaningful design experience for teams of undergraduate civil engineering students under the direction of two or more faculty advisers. The sequence will include a thorough literature search and review, the development of a clear and concise problem statement, consultations with other faculty and industry experts, and the derivation of publishable results. The project will culminate in a final written report and oral presentation.

CEE 08493: Selected Topics In Civil And Environmental Engineering 1 to 3 s.h.
This course is designed to introduce students to emerging topics in the Civil and Environmental Engineering field. Consent of the instructor is necessary, and prerequisites are determined by the nature of the topic.

CEE 08575: Advanced Fatigue And Fracture 3 s.h.
This course presents the theory and analytical techniques to design structural components for cyclic loading. Topics include linear elastic fracture mechanics; S-N fatigue; fatigue crack growth; and algorithms for simulating three-dimensional crack propagation. The course culminates with an original research project, resulting in both oral and written reports.

CM 01301: Fundamentals of the Construction Industry I 3 s.h.
This course provides a general overview of the planning, administration, management, and cost of construction projects and an introduction to the methodology used in executing specific designs. Emphasis is placed on the organization of construction firms, use and types of primary construction equipment, estimating and quantity take-offs, contractual and management systems, scheduling, project administration, and inspection of construction operations.

CM 01302: Fundamentals of the Construction Industry II 3 s.h.
Prerequisites: CM 01301 Fundamentals of the Construction Industry I.
This course introduces the design process and development of construction documents. It covers the standard design phases: programming, conceptual design, schematic design, design development, construction documents and construction administration, and the format and utilization of project manuals including contract specifications, the interpretation and analysis of engineering plans and specifications, and the new technologies being used in the design, including Building Informational Modeling (BIM) and sustainable (green) practices. The course also explores the various common project delivery methods.

CM 01303: PROJECT BUILDING SYSTEMS 3 s.h.
Prerequisites: CM 01302 Fundamentals of Construction Industry II.
Students will learn the description and identification of the equipment and materials used in mechanical systems for heating, ventilating and air conditioning, electrical, plumbing, fire protection, piping, gas, lighting, water and waste water, conveyance, life safety systems, environmental, security, audio/visual, and building system controls. The course also provides and introduction to building structural and envelopes systems.

CM 01304: PROJECT ADMINISTRATION 3 s.h.
Prerequisites: CM 01304 (Fundamentals of the Construction Industry II).
This course provides exposure to and use of various types of projects control systems for project efficiency and documentation. Students will learn how the submittal process operates and is monitored. They will also be shown a variety of tools used in tracking project documentation, and essential elements related to contract law and administration.

CM 01305: CONSTRUCTION COST ESTIMATING 3 s.h.
Prerequisites: CM 01302 (Fundamentals of the Construction Industry II).
Introduction to various costs of construction including direct and indirect project costs, comparison of hard and soft costs, job cost analysis and forecasting of cost to completion, labor, material and equipment expenses, cash flow, overhead, profitability, and general conditions costs. Students will learn research techniques used to create accurate estimating and bidding procedures.
Course Descriptions

CM 01306: Construction Project Planning and Scheduling
Prerequisites: CM 01302 (Fundamentals of the Construction Industry II AND CM 01303 (Project Building Systems)).
Students will learn procedures used in project planning and scheduling that employ float methods of scheduling logic. They will examine the critical path series of activities of project completion, including the use of computer software applications for problem solving, and related tools, spreadsheets, and information management. Also covered are work breakdown structures, activity durations, status reports, resource allocation, re-planning, monitoring, and updating of projects. Students will develop projects site logistics plans.

CM 01407: Advanced Leadership and Communication
Prerequisites: CM 01302 (Fundamentals of the Construction Industry II)
The course is designed to teach students to become more effective leaders and communicators in the construction industry. Drawing on various case studies, students will examine ethical practices in the industry. They will define and role-play effective communications strategies that simulate situations they may encounter within the industry such as general-to-subcontractor, corporate, and labor relations. Students in this course will also examine principles of negotiation and dispute resolution in the construction industry.

CM 01408: Industrial Relations in the Construction Industry
Prerequisites: CM 01302 (Fundamentals of the Construction Industry II).
This course examines various perspectives (union, management, government) on the collective bargaining system in place in the construction industry. Topics include the legal and regulatory environment, problem solving, and the roles of labor and corporations.

CM 01409: Building Energy Systems for Construction Managers
Prerequisites: CM 01302 (Fundamentals of the Construction Industry II) AND CM 01303 (Project Building Systems).
The Building Energy Systems for Construction Managers course provides a conceptual understanding of functions and performances of energy systems including mechanical, electrical, electronic, and plumbing and transport systems in residential and commercial buildings. The course also provides information on integration between energy systems and other building components. While introducing the concepts of alternative energy sources, energy efficiency, structural implications of mechanical systems, indoor air quality, and environmental control strategies, the course familiarizes students with more recent and current efforts in sustainability and green building ideas. The course also introduces codes and standards relevant to energy devices used in building construction, such as National Fire Protection Association (NFPA), American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), and National Electrical Code (NEC).

CM 01410: BUILD CONSTRUCTION SYS & CODES
Prerequisites: CM 01302 (Fundamentals of the Construction Industry II).
This course provides a conceptual understanding of functions and performance of structural building systems. The primary purpose of this course is to provide familiarity with use of construction code with reference to International Building Codes (IBC) 2012. For anyone in the field of construction or construction management it is necessary to know about the concepts and fundamental aspects of the code. As a result, the course is intended to provide an understanding of how the code was developed, how it is to be interpreted, and how it is applied to design and construction of buildings, the goal of the course is to make implementation of the code easier, and clearer to understand. Other than discussions on structural elements and their construction methods, the course covers issues such as use and occupancy, types of construction, fire-resistive constructions, interior finishes, building material, inspections, and tests.

CM 01411: Fundamentals of the Construction Industry II
Prerequisites: CM 01302 (Fundamentals of the Construction Industry II).
This course offers a practical guide for eliminating safety and health hazards from construction worksites. The Handbook of OSHA Construction Safety and Health addressed the occupational safety and health issues faced by those working in the construction industry. The course covers a vast range of issues including program development, safety and health program implementation, intervention, and prevention of construction incidents, regulatory hazards faced by those working in the construction industry and sources of information. The course also features updates for construction regulations, construction job audit, training requirements, and OSHA regulations. It includes new record keeping guidelines and forms with additional material on focused inspections. Containing updated contact information for the newest agencies, the course also presents a model safety and health program, examples of accident analysis and prevention approaches.

CM 01412: CAPSTONE PROJECT
Prerequisites: CM 01410 (Building Construction Systems and Codes).
In the course, students will build on what they have learned in the major, integrating the theory and knowledge that they gained in class with practical experience in the construction industry. Capstone projects are developed through a series of project meetings between the student and program faculty.
Course Descriptions

CMS 04200: Introduction To Communication Studies 3 s.h.
Introduction to Communication Studies introduces students to the field of Communication Studies by examining the various disciplines within the field. Such disciplines include interpersonal communication, communication ethics, health communication, family communication, organizational communication, intercultural communication, rhetorical studies, media studies, and others. The course also looks at the similarities and differences among the disciplines.

CMS 04205: Public Speaking 3 s.h.
Prerequisites: COMP 01112 or ENGR 01201
This course trains students in the fundamentals of public speaking, including study and practice of speech preparation and speech delivery. The goal is to enable the student to participate effectively in oral communication, as a student, professionally and as a citizen.

CMS 04210: Mass Media And Their Influences 3 s.h.
Prerequisites: ENGL 05105 or COMP 01112 or ENGR 01201 or permission of instructor
This course studies the impact on our daily lives of television, radio, films, magazines and newspapers. Students examine how the media influence politics, purchases, and entertainment, and how the media affect the culture in shaping beliefs and attitudes. It discusses how each of the media operates and what each accomplishes. This course examines the gap between real life and "mediated" reality.

CMS 04211: Mass Media And Their Influences - Wi 3 s.h.
Prerequisites: COMP 01112 or ENGR 01201 or permission of instructor
This is a writing intensive course that studies the impact on our daily lives of television, radio, films, magazines, and newspapers. Students examine how the media influence politics, purchases, and entertainment, and how the media affect the culture in shaping beliefs and attitudes. It discusses how each of the media operates and what each accomplishes. This course examines the gap between real life and "mediated" reality.

CMS 04215: Fiction To Film 3 s.h.
Prerequisite: 30 credits required
This course provides comparative study of film and literature. Students learn the critical vocabulary of literature and film and enhance their understanding of both art forms. The course covers American and foreign works.

CMS 04220: Interpersonal Communication 3 s.h.
Students explore the basic theories and concepts of interpersonal communication research. Some areas to be covered include perception and social cognition, the relationship of culture to interpersonal communication, self-perception and communication, interpersonal systems, sex/gender and interpersonal communication, and interpersonal communication contexts (i.e., family, friendship, romance).

CMS 04225: Semantics 3 s.h.
Prerequisite: 30 credits required
This course makes students aware of the relationship between language and human behavior and of the use and abuse of verbal and non-verbal language. It emphasizes meaning, the classification and abstraction processes and the application of semantic principles to the language of literature, politics, advertising and prejudice.

CMS 04226: Semantics - Wi 3 s.h.
Prerequisites: COMP 01112 or ENGR 01201 + 30 credits required
This is a writing intensive course that makes students aware of the relationship between language and human behavior and of the use and abuse of verbal and non-verbal language. It emphasizes meaning, the classification and abstraction processes and the application of semantic principles to the language of literature, politics, advertising and prejudice.

CMS 04240: Small Group Communication 3 s.h.
This course focuses on the principles and theories of communication as they relate to the small group process. It deals with the barriers to effective group discussion and leadership with corresponding remedial measures, as well as an application of small group research as it pertains to hypothetical and actual small group situations.

CMS 04241: Small Group Communication - Wi 3 s.h.
Prerequisites: COMP 01112 or ENGR 01201
This is a writing intensive course that focuses on the principles and theories of communication as they relate to the small group process. It deals with the barriers to effective small group discussion and leadership with corresponding remedial measures as well as an application of small group research as it pertains to hypothetical and actual small group situations.
Course Descriptions

CMS 04250: Communication Theory 3 s.h.
Prerequisites: COMP 01112 or ENGR 01201 or permission of instructor
This sophomore-level course acquaints students with current theories as they apply to a variety of communication environments. Drawing upon a wealth of timely research, students study theories relating to interpersonal, small group, organizational, public and mass communication. The course presents theories through readings as well as extensive class discussion.

CMS 04255: Nonverbal Communication 3 s.h.
This course will introduce students to the theories and applications of nonverbal communication across different contexts, such as interpersonal, health, mass media, work, and intercultural. The topics studied will include messages of and about the human body; approach-avoidance signals of space, gaze, and touch; facial expressions; and the overlapping channels of voice and gesture.

CMS 04260: Organizational Communication Theory And Research 3 s.h.
Prerequisites: COMP 01112 or ENGR 01201
Organizational Communication theory and research introduces students to the basics of organizational communication. The class will focus on how scholars and researchers study and understand the communication patterns and relationships that go on in organizations. Students will be asked to consider a variety of perspectives and theories of organizational communication while comparing them to each other and to their own experiences as organizational actors.

CMS 04270: Persuasion And Social Influence 3 s.h.
This course surveys theories and theorists dealing with the area of persuasion, beginning with the Classical Age and extending through present-day empirical research. It emphasizes applying the theories to practical situations and goals.

CMS 04290: Rhetorical Theory 3 s.h.
Prerequisites: COMP 01112 or ENGR 01201
Rhetorical Theory introduces students to the concept of rhetoric and how it has been theorized from antiquity to the present. The course provides students with a systematic history of rhetorical theory and spotlights significant theorists such as Plato, Aristotle, Cicero, Blair and Burke. Students will explore how both ancient and contemporary theories of rhetoric apply to contemporary society.

CMS 04300: Ethical Issues In Human Communication 3 s.h.
Prerequisites: 58 credits required
Ethical Issues in Human Communication will address numerous ethical conundrums in our communicative activities. Specific ethical systems provide the groundwork for application to interpersonal, organizational, intercultural, political and rhetorical communication contexts. Case studies and class discussions will be used to encourage students to develop their own ethical frameworks for communication contexts.

CMS 04305: Advanced Public Speaking 3 s.h.
Prerequisites: CMS 06202 or CMS 04205 or permission of instructor
Students analyze the special problems of advanced speech composition and delivery through discussion and platform appearance. In addition to strengthening students' command of the fundamentals of public speaking, this course gives attention to rhetorical style and specialized types of speaking situations. This course may not be offered annually.

CMS 04310: Images Of Gender In Popular Culture 3 s.h.
Prerequisites: COMP 01112 or ENGR 01201
This course examines the concept of gender as it is rhetorically constructed in contemporary popular culture. Students will analyze how various cultural texts (such as advertisements, popular songs, television shows, or video games) communicate what it means to be masculine and feminine in U.S. culture. The course will examine how these images have changed historically and how depictions of race, class, and sexual identity also contribute to our understandings of gender in popular culture.

CMS 04315: Participatory Media 3 s.h.
Prerequisites: COMP 01112
This course examines the social, economic and political implications of the use of participatory media, which enable audience participation in the production of mediated messages. Students taking this course will study network theory, the historical roots of the participatory culture, collective action and social networking, convergence, and the changing modes of media production. Students will also study legal and social justice issues related to these evolving trends in media use.
CMS 04316: Mediated Interpersonal Communication 3 s.h.
Prerequisite: COMP 01112, or HONR 01112, or ENGR 01201, or ENGL 01112
The study of mediated interpersonal communication focuses on the role that communication technologies play in meaning making within interpersonal communication contexts, such as personal, family, community, and professional relationships. The purpose of the course will be to discuss the history and changing meaning of mediated interpersonal communications, survey relevant theoretical perspectives in the research literature, and apply those perspectives in contemporary issues. This course may not be offered annually.

CMS 04317: DIGITAL COMMUNITIES 3 s.h.
Prerequisites: CMS 04205
This course focuses on the role of digital media in a group's or organization's communication practices. It includes a service learning component that allows students to apply what they are learning to a community management campaign for a local nonprofit organization. Students will learn about media ecology, network theory, the characteristics of community, strategies and approaches that groups and organizations use to enact a community management plan, best practices for messaging strategies and the ways in which discourse shapes understanding, details about what online community managers do and why they do it, and ways to adapt messaging to specific technological platforms. This course may not be offered annually.

CMS 04318: Leadership Communication 3 s.h.
This course surveys theories of leadership communication and looks at leaders from different fields, including business, political, social, religious, and cultural, analyzing their ethical communication, and their vision and transformational influence. The course provides a basic introduction to leadership by focusing on the social construction of leaders and followers. The course will examine topics such as: the nature of leadership, theories of communication and leadership, communication ethics in leadership, creating a vision, communication leadership globally, and leadership for the greater good. The course will combine the theory and practice of leadership communication by having an applied component, such as case study analyses of "real world" leaders, and personal reflection of students' leadership communication skills. Attention will be given to helping students to understand and improve their own leadership performance.

CMS 04320: Communicating Gender 3 s.h.
Prerequisites: COMP 01112 or ENGR 01201
Communicating Gender will consider the theory, research, and experience of the intersection between gender and communication. Focus will be given to the ways in which gender, as a concept and set of expectations, is created through communication. Students will also consider their own individual experiences as gendered communicators while studying the varying perspectives of communication studies scholars with regard to this phenomenon.

CMS 04325: Linguistics 3 s.h.
Students study the nature of human language by examining four major components: phonology, semantics, syntax, and morphology. Linguistics principally emphasizes linguistic universals, characteristics which all human languages share. Students discuss dialect formation, first-language acquisition in children, and animal communication systems. Students also compare modern linguistic theories.

CMS 04330: International Media Communication 3 s.h.
This course examines systems of communication from a global perspective, analyzing the historical, cultural, and philosophical influences that have shaped those systems. The course enables students to analyze the systemic effects of globalization, new technologies, regulation, efforts of various groups to control development of communication structures, inequities in communication infrastructure, so-called cultural imperialism, and the linkage between international media and diplomacy, economics, and politics.

CMS 04335: Introduction To Survey Research 3 s.h.
Prerequisites: 60 credits required
This course provides students with an understanding of research in general and survey research in particular. Theory is applied through emphasis on survey design, sampling, interviewing, tabulating and analysis of data. Students learn the "whys" and "hows" of public opinion polling by doing an actual survey.

CMS 04340: Family Communication 3 s.h.
Prerequisites: COMP 01112 or ENGR 01201
This course focuses on how scholars and researchers study and understand the communication patterns and relationships in families. Family types, roles, and ongoing communication processes are discussed. Students are asked to consider a variety of perspectives and theories of family communication while comparing them to each other and to their own experiences as family members.
CMS 04345: Argumentation And Debate
3 s.h.
Prerequisites: CMS 06202 or CMS 04205 or permission of instructor
This course focuses on the principles and techniques of argumentative speaking and formal debating. Students study types and tests of evidence and reasoning, and develop skills in logical persuasion, cross examination, intensive research, case preparation, and critical listening. This course may not be offered annually.

CMS 04350: Communication Studies Research Methods
4 s.h.
Prerequisites: CMS 01220 or CMS 04200 and CMS 01300 or CMS 04250
This course introduces the student to quantitative and qualitative research methods used in communication studies. Students will learn about research procedures, identification and definition of variables, sampling methods, and basic statistical methods such as discourse analysis, correlational analysis, parametric and non-parametric tests, and descriptive techniques. Students will become familiar with current communication studies research and will design and complete a research project.

CMS 04355: Communication Studies Internship I
3 s.h.
Prerequisites: 75 credits required and Communication Studies Major with 2.5 Major GPA
Under professional supervision in the field, students practice theories and skills learned in the classroom. No part is a prerequisite for another; order is not a factor in selecting this course.

CMS 04356: Communication Studies Internship II
3 s.h.
Prerequisites: 75 credits required and Communication Studies Major with 2.5 Major GPA
Under professional supervision in the field, students practice theories and skills learned in the classroom. No part is a prerequisite for another; order is not a factor in selecting this course.

CMS 04357: Communication Studies Internship III
6 s.h.
Prerequisites: 75 credits required and Communication Studies Major with 2.5 Major GPA
Under professional supervision in the field, students practice theories and skills learned in the classroom. No part is a prerequisite for another; order is not a factor in selecting this course.

CMS 04360: Intercultural Communication
3 s.h.
Prerequisites: COMP 01112 or ENGR 01201
Intercultural Communication will consider the theory, research, and experience of intercultural communication. The nature of culture and its relationship to communication will be discussed. Students will be asked to consider their own experiences as intercultural communicators while studying the varying perspectives of communication studies scholars with regards to this phenomenon.

CMS 04365: Research Practice In Communication Studies
1 to 3 s.h.
Prerequisites: Completion of 75 credits required, approval of Communication Studies Department advisor.
Research Practicum in Communication Studies allows students to apply the theories and methodology learned in Communication Studies courses to a research partnership with a member of the department faculty. Students earn 1 credit for every 40 hours of work, with most practica implemented for 3 credit hours. Students keep a detailed log of working hours, prepare a portfolio representative of their practicum experience, write an analytical critique of the practicum, and are evaluated by their faculty partner as well as the practicum supervisor. To receive approval for this course, students must have a minimum 2.5 grade point average.

CMS 04370: Political Communication
3 s.h.
Prerequisites: COMP 01112 or ENGR 01201 and POSC 07100 or POSC 07110 or POSC 07200
Political Communication investigates the many and varied understandings of how "the political" functions symbolically in contemporary society. Most broadly the course further develops students' appreciation for the inherently political relationship between language and meaning. More specifically, it focuses on the intersections of public, political discourse, representations and manifestations of the tensions between liberalism and democracy, the performance of citizenship, and civic responsibility.

CMS 04375: Special Topics In Communication
3 s.h.
This course provides students with an opportunity to thoroughly investigate specific areas critical to the field of communication. Course topics change as new trends develop and as student interest necessitates scheduling. Topics are selected on the basis of timeliness and the availability of expert staff. General topics are announced as the course is scheduled. This course is not offered annually.
CMS 04380: Health Communication 3 s.h.
Prerequisites: COMP 01112 or ENGR 01201
Health communication will address the topic of health as it is enacted and defined in communication. Specific topics to be discussed are doctor-patient interaction, social and cultural issues of health, mass media representations of health and healthy behaviors, along with communication within health organizations.

CMS 04385: Constructing Health 3 s.h.
Constructing Health will address the various communicative means by which the concept and structure of "health" is socially defined. Students taking this course will study the constructs of health, medicine, the body, and normalcy as enacted in rhetorical, mediated, organizational and interpersonal communication examples. The relationship between power and these constructions is also interrogated.

CMS 04390: Rhetorical Criticism 3 s.h.
Prerequisites: CMS 06202
This course surveys ancient to modern theories of speech criticism to develop defensible criteria for evaluating speeches, social movements, and non-oratorical events. Students study and evaluate past and present public speeches by applying various rhetorical standards. This course may not be offered annually.

CMS 04405: Independent Study - Communication Studies 1 to 3 s.h.
Prerequisite: department permission
This course provides students with an opportunity to work independently on specialized communication topics under the guidance of a faculty member. Generally, this course may not be substituted for any course offered by a department in the College of Communication. In addition to departmental permission, approval by the dean is also required.

CMS 04450: Seminar In Communication Studies - Wi 3 s.h.
Prerequisite(s): CMS 04350 with a grade of C- or higher and standing in the Communication Studies major
This writing intensive course provides a seminar experience in areas of communication that are not part of the regular course offerings. Examples of potential topics include Friendship, Rhetoric of Music, Romantic Relationships, and Presidential Campaigns.

CMS 04455: Senior Transition 1 s.h.
Prerequisite(s): CMS 04450 or (corequisite) and Communication Studies major
This course asks Communication Studies majors to gather representative works from their major and reflect on them in light of the department's goals. It also provides preparation for post graduation work in their filed through specific discussion of graduate school and job attainment.

CS 01080: Computer Literacy 3 s.h.
This Course teaches students how to use microcomputers effectively. Students learn about computer hardware and how it functions with an operating system and application software. Computer file management, data storage, multimedia, computer architecture, local area networks, the Internet, data security, and obtaining information from a library database are included. There is extensive hands-on use of windows, word processing, spreadsheets, and the Internet. This is a Basic Skills course; credit is not applied toward graduation.

CS 01102: Introduction To Programming 3 s.h.
This course acquaints students with the logical structure of a computer, the algorithmic formulation of problems, and a modern high-level programming language. Extensive programming experience is included in the course. Proficiency equivalent to Basic Algebra II (MATH01.199) is expected for this course.

CS 01104: Introduction To Scientific Programming 3 s.h.
This course emphasizes algorithmic solutions of problems. The syntax of the programming language is also studied, as well as the writing of structured code. Proficiency equivalent to Basic Algebra II.

CS 01105: Web Literacy 3 s.h.
This is an introductory course on the world wide web, exposing how it works, and showing students how to use it appropriately. This course teaches students to create and modify basic web pages with markup languages and style directives, and how to embed non-text information such as video, images, and sound. The principles of publishing websites on the Internet and the process by which a page is delivered to end users will also be covered.
Course Descriptions

CS 01190: Introduction To Computer Game Modeling 3 s.h.
This is an introductory computer games modeling course which examines the basics of computer game design and visual effects. Students will use graphics software modeling packages to create characters and visual effects, and to develop a computer game idea, including storyline and plots. Elementary programming techniques may also be taught.

CS 01200: Computing Environments 3 s.h.
Students will be exposed to a variety of computing environments. The course will include extensive hands-on a variety of software applications. Topics covered will include user tools, user programming techniques, application packages, and networking communications. Students will gain an understanding of the principles of computing which will enable them to adapt to future technological developments. A solid and fundamental understanding of computers and current operating systems, word processing and spreadsheet software are essential to this course.

CS 01205: Computer Laboratory Techniques 3 s.h.
Prerequisites: CS 04113 or CS 04103
A practical introduction to the hardware, software and networks used by the Computer Science Department. A foundation in programming using the language or languages required for intermediate and advanced computer science courses will be included.

CS 01210: Introduction To Computer Networks And Data Communications 3 s.h.
This is an introductory computer networks course for students that are not majoring or minoring in computer science. This course will examine the basics of data communication and computer networks and will cover such topics as history and evolution of data communications, layered network architectures, physical and data link layers, introduction to internetworking, the Internet, IP protocols, basics of TCP and UDP transmission protocols, standard network applications and basics of network security, network utility software, and configuring local area networks in a popular operating system.

CS 01211: Principles Of Information Security 3 s.h.
Students will be exposed to the spectrum of security activities, methods, technologies, and threats. This course will cover a range of key topics in the area of information and computer security including inspection and protection of information assets, detection of and reaction to security threats, taxonomy of security threats, and concentrating on issues in computer and operating systems security, principles of network security, and basics of cryptography.

CS 01295: Special Topics in Computer Science 3 s.h.
Restricted to CS Majors and Minors
Specific topical outline to be covered will vary depending upon the topic chosen for the course and will be clearly stated on the course syllabus.

CS 01395: Topics In Computer Science 1 to 4 s.h.
This course enables the faculty to offer courses in advanced topics which are not offered on a regular basis. Prerequisites will vary according to the specific topic being studied.

CS 01400: Independent Study 1 to 4 s.h.

CS 04103: Computer Science And Programming 4 s.h.
This course emphasizes programming methodology, algorithms and simple data structures. A programming language rich enough to allow easy implementation of data structures is studied. Prior programming experience in any programming language is expected for this course.

CS 04110: Introduction To Programming Using Robots 3 s.h.
This course teaches fundamental programming skills centered in the context of robot programming. Students will program small robots to perform a variety of tasks. In addition to learning a sophisticated programming language, students will gain skills in design techniques and experience working in teams to build complex systems.

CS 04112: Java For Object Oriented Programmers 2 s.h.
Prerequisites: CS 04103
This course is designed for students who have substantial programming experience in an object-oriented language, such as C++, but who need to learn Java as prerequisite knowledge for other courses in the curriculum. Students will study the syntax and semantics of Java, specifically, classes and objects, abstraction, encapsulation, data types, calling methods and passing parameters, decisions, loops, arrays and collections, documentation, testing and debugging, exceptions, design issues, inheritance, and polymorphic variables and methods.
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CS 04113</td>
<td>Introduction To Object Oriented Programming</td>
<td>4 s.h.</td>
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<td></td>
<td><strong>Prerequisites:</strong> MATH 01122 or MATH 01123 or MATH 01130</td>
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<td>This course introduces the fundamental concepts of programming from an object-oriented perspective. Topics are drawn from classes and objects, abstraction, encapsulation, data types, calling methods and passing parameters decisions, loops, arrays and collections, documentation, testing and debugging, exceptions, design issues, inheritance and polymorphic variables and methods. The course emphasizes modern software engineering and design. Proficiency equivalent to Basic Algebra (MATH 01.195) expected for the course.</td>
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<tr>
<td>CS 04114</td>
<td>Object Oriented Programming And Data Abstraction</td>
<td>4 s.h.</td>
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<td><strong>Prerequisites:</strong> CS 04113 or (CS 04103 and CS 04112)</td>
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<td>Objects and data abstraction continues from Introduction to Object-Oriented Programming to the methodology of programming from an object-oriented perspective. Through the study of object design, this course also introduces the basics of human-computer interfaces, graphics, with an emphasis on software engineering. A second operating system/programming platform is introduced.</td>
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<tr>
<td>CS 04115</td>
<td>C++ For Java Programmers</td>
<td>1 s.h.</td>
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<td><strong>Prerequisites:</strong> CS 04113</td>
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<td>This course is designed for students who have substantial programming experience in an object-oriented language such as Java, but who wish to learn C++, a language that is still commonly used in research and industry. Students will study the syntax and semantics of C++, pointers, classes (inheritance, encapsulation, polymorphism, methods, etc.), control structures, file processing, and GUI programming.</td>
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<tr>
<td>CS 04140</td>
<td>Enterprise Computing I</td>
<td>4 s.h.</td>
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<td><strong>Prerequisites:</strong> CS 01110, or minimum score of 70 on the Computer Competency Exam</td>
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<td>This course will acquaint students with data representation, data organization and data storage utilizing basic data structures. Students will perform basic file manipulation by reading data from files, writing data to files and data file formatting. Students will also understand basic logic, basic object oriented design and programming and the concepts of software engineering. Proficiency equivalent to Basic Algebra II (MATH 01.195) is expected for this course.</td>
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<tr>
<td>CS 04141</td>
<td>Enterprise Computing II</td>
<td>3 s.h.</td>
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<td><strong>Prerequisites:</strong> CS 04140</td>
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<td>This course is designed to extend the material presented in Enterprise Computing I by applying object oriented design and software engineering principles to develop a small scale enterprise system. This course will acquaint students with advanced features and data structures. Students will also understand basic graphical programming, event driven programs, exception handling and web programming.</td>
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<tr>
<td>CS 04171</td>
<td>Creating Android Applications</td>
<td>3 s.h.</td>
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<td><strong>Prerequisite(s):</strong> None</td>
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<td>This course is designed for students who want to start developing mobile applications on Android platforms and understand the basic concepts of Computer Science. The course will start with the basics of Android programming by covering the most recent version of Android and understanding its development framework. Students will then learn to develop feature-rich Android applications using the MIT App Inventor Integrated Development Environment and learn the basic &quot;Big Ideas&quot; of Computer Science such as, algorithmic thinking, abstractions, logic, flow control, and data representation, storage and manipulation.</td>
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<tr>
<td>CS 04210</td>
<td>Advanced Programming Workshop</td>
<td>2 s.h.</td>
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<td><strong>Prerequisites:</strong> CS 04103 OR CS 04113</td>
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<td>Programming languages, integrated development environments, application programming interfaces, software packages, and libraries are examples of programming technologies. This project intensive course, which is part of B.A. in Computing and Informatics program, explores a specified programming technology at an advanced level.</td>
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<tr>
<td>CS 04222</td>
<td>Data Structures And Algorithms</td>
<td>4 s.h.</td>
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<td><strong>Prerequisite(s):</strong> CS 04.114 (C- or better) and MATH 03.160 or MATH 03.150</td>
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<td>This course features programs of realistic complexity. The programs utilize data structures (string, lists, graphs, stacks, trees) and algorithms (searching, sorting, etc.) for manipulating these data structures. The course emphasizes interactive design and includes the use of microcomputer systems and direct access data files.</td>
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<tr>
<td>CS 04225</td>
<td>Principles of Data Structures</td>
<td>3 s.h.</td>
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<td><strong>Prerequisites:</strong> (CS 04103) or (CS 04113)</td>
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<tr>
<td></td>
<td>The course features programs of realistic complexity. The programs utilize data structures (strings, lists, graphs, stacks) and algorithms (searching, sorting, etc.) for manipulating these data structures. The course emphasizes interactive design and includes the use of microcomputer systems and direct access data files.</td>
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</table>
Course Descriptions

CS 04233: Structured Design And Programming Using Cobol 3 s.h.
Prerequisites: CS 01102 or CS 04113 or CS 04103
In this course students learn to write structured programs in COBOL. It includes a description of the language and a comparison with other languages. It emphasizes structured modular programming and documentation such as hierarchy charts (HIPO) and flow charts. Prior programming experience in any programming language is expected for this course.

CS 04234: Advanced Structured Design And Programming Using Cobol 3 s.h.
Prerequisites: CS 04233
This course prepares students for professional proficiency in the COBOL programming language, and includes structured and modular programming, top-down design, hierarchy charts and flow diagrams, table handling, sorting, searching, report preparation, character manipulation, sequential and ISAM files, programming standards and the transaction-master update problem.

CS 04301: Bioinformatics - Computational Aspects 3 s.h.
Prerequisite(s): (CS 01104 or CS 04103) and CS 01205 and BINF 05250
This course introduces the student to the computer hardware, software, algorithms and statistical packages that are used in computational aspects of bioinformatics. Hardware topics include multiprocessor clusters, high performance computing, and parallelism. Software topics include message passing and shared memory styles of parallel/concurrent programming languages, databases, available software packages, and visualization techniques for large data sets. Algorithms and statistical packages include those for the study of molecular biology, evolution, structural biology, and biological networks.

CS 04305: Web Programming 3 s.h.
Prerequisites: CS 01205 and CS 04222
This course introduces the student to some of the underlying software components of the World Wide Web as it currently exists. Topics include markup languages, scripting languages, programming languages such as Java, and other software components of the Web.

CS 04315: Programming Languages 3 s.h.
Prerequisites: (CS 04222 or CS 04225) and (CS 06205 or/and CS 06.205)
A study of the fundamental principles underlying the design of programming languages. Students will study two or more languages from contrasting programming paradigms such as Functional, Object-Oriented, Logical, or Concurrent.

CS 04325: Programming In Ada 3 s.h.
Prerequisites: CS 04222
Students will gain an understanding of the major concepts of the programming language Ada. They will learn how the constructs of the Ada language can be used to produce software which is portable, readily maintained and modified, and efficiently designed. Students will do several programming projects in Ada, and will be exposed to problems in the design of real-time systems and concurrent programming.

CS 04327: Power Java 3 s.h.
Prerequisites: CS 04222
This advanced programming course explores the power of the Java programming language. It looks at the advanced features provided in Java: reflection and proxies, interfaces and inner classes, graphics programming, the event listener model, event handling, Swing user interface components, graphical user interface design, object serialization, multithreading, network programming, remote objects and remote method invocation, collection classes, database connectivity, and JavaBeans.

CS 04371: Introduction to Android Programming 3 s.h.
Prerequisite(s): CS 04113 or permission of the instructor
This course is targeted for students who want to start writing mobile applications on Android platforms. Android has become a formidable mobile operating system, and this course will provide hands-on learning on writing Android applications. The course will start with the basics of Android programming by covering the most recent version of Android and understanding its development framework. Students will then learn both the fundamentals and the nuts and bolts of Android application development and have an exciting opportunity to write feature-rich Android applications.

CS 04372: Advanced Android Programming 3 s.h.
Prerequisite(s): CS 04371 or permission of the instructor
This course is designed to extend the material presented in Introduction to Android Programming (CS 04.371). This course covers advanced and custom Android user interface development, localization and resource management, the Android network API, location aware applications, data storage, testing and performance tuning, and publishing and selling Android applications. Students will gain a deeper understanding of Android application development and have an exciting opportunity to write feature-rich Android applications.
CS 04373: Introduction to Windows Mobile Application Programming 3 s.h.
Prerequisites: CS 04113 or permission of the instructor.
This course is targeted for students who want to start writing mobile applications on Windows platforms. Windows has become a formidable mobile operating system, and this course will provide hands-on learning on writing Windows applications. The course will start with the basics of Windows programming by covering the most recent version of Windows and understanding its development framework. Students will then learn both the fundamentals and the nuts and bolts of Windows application development and have an exciting opportunity to write feature-rich Windows applications.

CS 04374: Advanced Windows Mobile Application Programming 3 s.h.
Prerequisites: CS 04373 or permission of the instructor.
This course is designed to extend the material presented in Introduction to Windows Mobile Application Programming (CS 04.373). This course covers advanced and custom Windows user interface development, localization, and resource management, the Windows network API, location aware applications, data storage, testing, and performance tuning, and publishing and selling Windows applications. Students will gain a deeper understanding of Windows application development and have an exciting opportunity to write feature-rich Windows applications.

CS 04375: Introduction to iOS Application Programming 3 s.h.
Prerequisites: CS 04113 or permission of the instructor.
This course is targeted for students who want to start writing mobile applications on iOS platforms. iOS has become a formidable mobile operating system, and this course will provide hands-on learning on writing iOS applications. The course will start with the basics of iOS programming by covering the most recent version of iOS and understanding its development framework. Students will then learn both the fundamentals and the nuts and bolts of iOS application development and have an exciting opportunity to write feature-rich iOS applications.

CS 04376: Advanced iOS Application Programming 3 s.h.
Prerequisites: CS 04375 or permission of the instructor.
This course is designed to extend the material presented in Introduction to iOS Programming (CS 04.375). This course covers advanced and custom iOS user interface development, localization, and resource management, the iOS network API, location aware applications, data storage, testing, and performance tuning, and publishing and selling iOS applications. Students will gain a deeper understanding of iOS application development and have an exciting opportunity to write feature-rich iOS applications.

CS 04380: Object Oriented Design 3 s.h.
Prerequisites: CS 07340
This course will introduce important concepts, such as inheritance and polymorphism, which are crucial tools needed for crafting object-oriented solutions to real-world problems. Design patterns that commonly occur in design situations will be covered. A formal notation for describing and evaluating object-oriented designs such as the Unified Modeling Language (UML) will be taught. Students will apply the concepts to design and implement object-oriented solutions to one or more reasonably sized real-world problems.

CS 04390: Operating Systems 3 s.h.
Prerequisites: CS 04222 and CS 06205
The course concentrates on the design and functions of the operating systems of multi-user computers. Its topics include time sharing methods of memory allocation and protection, files, CPU scheduling, input-output management, interrupt handling, deadlock and recovery and design principles. The course discusses one or more operating systems for small computers, such as UNIX.

CS 04391: Concurrent Programming 3 s.h.
Prerequisites: CS 04390
Introduces the motivation for and fundamental concepts of concurrent programming. Topics include processes, threads, context switching, atomic instructions/actions, shared data, race conditions, critical sections, mutual exclusion, synchronization, locks, barriers, semaphores, monitors, shared-memory multiprocessors, and an overview of distributed programming (distributed-memory multicomputers, interprocess communication, message passing, remote procedure call, rendezvous). The course includes developing concurrent programming skills by using a language that supports the multithreaded paradigm.

CS 04392: System Programming And Operating System Internals 3 s.h.
Prerequisites: CS 04390 and CS 01205
This course examines the system kernel of a modern operating system including the file structure and implementation, the process structure and process scheduling, memory management policies, and the I/O subsystem. This course also covers the system call interface to the system kernel and various inter-process communication schemes.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
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</thead>
<tbody>
<tr>
<td>CS 04394</td>
<td>Distributed Systems</td>
<td>3 s.h.</td>
<td>(CS 06205 and CS 04222) or (ECE 09242 and CS 04223)</td>
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<td></td>
<td>This course will introduce students to the Distributed System, a network of (possibly autonomous) computers that cooperatively solve single problems or facilitate parallel execution of related tasks. Key topics of study include Distributed Systems Architecture, Distributed Resource Management, and Accessing Distributed Resources. Students will participate in algorithm, process and system design for distributed systems.</td>
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<tr>
<td>CS 04400</td>
<td>Computer Science - Senior Project</td>
<td>3 s.h.</td>
<td>CS 04315 and CS 04340</td>
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<td>This is an advanced programming course in which students work on large-scale individual or team programming projects and make a formal presentation on their work. The course discusses program development, methodologies and strategies.</td>
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<tr>
<td>CS 04401</td>
<td>Compiler Design</td>
<td>3 s.h.</td>
<td>CS 04315 and CS 04225</td>
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<td>This course presents theory of compiler design, syntax-directed translation, and code generation. Students design a compiler for a subset of a high-level programming language.</td>
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<tr>
<td>CS 04430</td>
<td>Database Systems: Theory And Programming</td>
<td>3 s.h.</td>
<td>CS 04222</td>
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<td>This course focuses on the design of DBMS and their use to create databases. The course covers both the theoretical concepts and the implementation aspects of database systems with a special emphasis on relational database systems, SQL, programming (in a modern programming language such as C++ or Java) using a real database Application Programming Interface (such as JDBC or ODBC)</td>
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<tr>
<td>CS 04471</td>
<td>Topics in Mobile Programming</td>
<td>3 s.h.</td>
<td>Permission of the instructor or sufficient programming background</td>
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<td>Students will explore topics in mobile application development. This course covers the various mobile operating systems, mobile development tools, and all that is needed to create mobile applications, using programming languages appropriate for the mobile platform being studied. Students will gain an advanced understanding of mobile application development and have an exciting opportunity to write and publish feature-rich mobile applications.</td>
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<tr>
<td>CS 06205</td>
<td>Computer Organization</td>
<td>3 s.h.</td>
<td>(CS 04113 or CS 04103) or (MATH 03160 or MATH 03150)</td>
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<td>This course provides an introduction to computer organization. Students are exposed to the register level architecture of a modern computer and its assembly language. The topics include machine level data representation, von Neumann architecture and instruction execution cycle, memory hierarchy, I/O and interrupts, instruction sets and types, addressing modes, instruction formats and translation.</td>
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<tr>
<td>CS 06310</td>
<td>Principles Of Digital Computers</td>
<td>3 s.h.</td>
<td>CS 06311 Prerequisites: CS 06205</td>
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<td>This course provides an introduction to the fundamentals of computer hardware systems. The topics include digital logic, combinational circuits, sequential circuits, memory system structure, bus and interconnection structure, computer arithmetic and the ALU unit, I/O system structure, hardwired control unit, microprogrammed control unit, and alternative computer architectures. This course is not open to students who have taken CS06.370 Digital Design and Lab.</td>
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<tr>
<td>CS 06311</td>
<td>Digital Computer Laboratory</td>
<td>1 s.h.</td>
<td>CS 06310 Prerequisites: CS 06205</td>
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<td>This lab course provides the student with hands-on experience in the design and implementation of digital components. State-of-the-art systems are used to design, test, and implement digital circuits: Combinational circuits, sequential circuits, registers, counters, datapath, arithmetic/logic units, control units, and CPU design. This course is taken concurrently with Principles of Digital Computers.</td>
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<tr>
<td>CS 06390</td>
<td>Introduction To Systems Simulation And Modeling</td>
<td>3 s.h.</td>
<td>(CS 04222 or CS 04225) and (MATH 01210 or (ENGR 01202 and MATH01235))</td>
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<td>The students in this course will understand the fundamentals of and have practical experience with system modeling and simulation. Course topics include the Monte Carlo simulation technique, discrete event simulation algorithms and tools, and principles of mathematical modeling, queuing theory, input modeling, output analysis, and verification and validation of a simulation model. The students in this course will learn to use a commercial simulation software tool and will conduct a simulation study in an engineering field.</td>
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Course Descriptions

CS 06410: Data Communications And Networking 3 s.h.
Prerequisites: CS 07340 and STAT 02290
Students in this upper-division course will study the principles of data communications and important network architectures and protocols. Its topics include: the advantages of networking, major network architectures, protocol reference models and stacks, the Data Link Layer, the Network Layer, the Transport Layer, and the Internet. Additional topics may include: local, metropolitan and wide area networks; wireless, telephone and cellular networks; network security; and network programming. Students complete a networking team project.

CS 06412: Advanced Computer Architecture 3 s.h.
Prerequisites: CS 06410
This is an advanced course in computer architecture designed to expand the knowledge gained by students in the Principles of Digital Computers course. The topics include various performance enhancement techniques such as DMA, I/O processor, cache memory, multiport memories, RISC, pipelining, and various advanced architectures such as high-level language architecture, data-flow architecture, and multiprocessor and multi-computer architectures. This course also allows detailed examination of one or two contemporary computers.

CS 06415: Wireless Networks, Protocols And Applications 3 s.h.
Prerequisites: CS 06410
This course prepares students to understand wireless networks systems, and the underlying communications technologies that make them possible. The course covers descriptive material on wireless communications technologies, and important deployed and proposed wireless networks and systems. Wireless system performance and Quality of Service capabilities are addressed. Students will prepare and deliver technical presentations on state-of-the-art topics in wireless networks and systems.

CS 06416: Tcp/Ip And Internet Protocols And Technologies 3 s.h.
Prerequisites: CS 06410
This is an advanced computer networking course that will expand students knowledge received in the Data Communications and Networking course. This course will examine operation of the TCP/IP protocol as well as design and architecture of the Internet. This course will cover such topics as: Medium access protocols, address resolution protocols, Internet Protocol (IP), Quality of Service, Transport Protocol, and congestion control mechanisms. This course will also include selected topics on network security and network management. Students will prepare and deliver technical presentations on state-of-the-art research topics in the Internet.

CS 06417: Principles of Network Security 3 s.h.
Prerequisite(s): CS 06410
This course examines the fundamentals of network security and cryptography. The material covered in this course includes such topics as cryptographic systems necessary for security, public key infrastructure, principles of data integrity, authentication, and key management, Internet architecture and TCP/IP protocol suite, application layer security, secure sockets layer and transport layer security protocols, IPSec and distributed denial of service attacks, designing secure network protocols, wireless security, firewalls and intrusion detection systems, and others. Students will prepare and deliver technical presentations on state-of-the-art research topics in the network security.

CS 06420: Embedded Systems Programming 3 s.h.
Prerequisites: CS 04390 and CS 06310 and CS 06311
Embedded software is used in almost every electronic device. This course deals with software issues that arise in embedded systems programming. Important concepts covered in this course will include device programming interfaces, device drivers, multi-tasking with real-time constraints, task synchronization, device testing and debugging, and embedded software development tools such as emulators and in-circuit debuggers. These concepts will be applied to design and implement embedded software for one or more modest-sized embedded systems.

CS 07210: Foundations Of Computer Science 3 s.h.
Prerequisite(s): C- or better in (MATH 03160 or MATH 03150) and one of the following: CS 01102, CS 04103, CS 01104 or CS 04113
This course provides an introduction to the theoretical foundations of computer science, including finite automata, context-free grammars, Turing machines, and formal logic.

CS 07252: Foundations of Computer Forensics 3 s.h.
This interdisciplinary course focuses on the legal and technical principles of digital forensics. Analysis of complex legal issues and current trends in high technology crime will be followed by exploration of formal methodologies and best practices for the forensically sound acquisition and analysis of digital evidence. Social and ethical impacts will also be explored throughout the course as it relates to high technology crime. Hands-on scenario based activities will provide students with opportunities to develop the legal understanding and technical skills that will serve as a foundation to pursue careers in computer forensics in law enforcement and the private sector.
CS 07310: Robotics
Prerequisites: (CS 04222 and MATH 01210) or (CS 04225 and ENGR 01202 and MATH 01236)
This course provides an introduction to the fundamentals of robotics. Students will study robot manipulators and mobile robots, robot sensors, and robot cognition. Students will also gain experience programming in small groups, and programming in a domain where noisy and imprecise data is commonplace.

CS 07320: Software Engineering Laboratory
Prerequisites: concurrent enrollment in CS 07321
This lab is designed for students who register for CS 07.321 Software Engineering I and wish to learn how to develop and structure their deliverables, as well as how to use software development tools, under faculty guidance and supervision. Real-world projects will often be provided.

CS 07321: Software Engineering I-Writing Intensive
Prerequisites: (CS04.222 or CS 04.225) and (COMP 01.112 or ENGR 01.201) and (CMS 06.202 or ENGR 01.202)
An introduction to the discipline of Software Engineering. Students will explore the major phases of the Software Lifecycle, including analysis, specification, design, implementation, and testing. Techniques for creating documentation and using software development tools will be presented. Students will gain experience in these areas by working in teams to develop a software system. Proficiency in programming is expected of the students entering this course.

CS 07322: Software Engineering II-Writing Intensive
Prerequisites: CS 07321
Students will apply their knowledge from Software Engineering to develop an advanced software system, working in teams. The project will be taken through each of the major software development phases and student teams will create appropriate deliverables for each phase. Advanced modern software engineering topics such as critical systems, real-time systems, formal specification and validation, and project management will be covered.

CS 07340: Design And Analysis Of Algorithms
Prerequisites: CS 04222 and CS 07210
In this course, students will learn to design and analyze efficient algorithms for sorting, searching, graphs, sets, matrices, and other applications. Students will also learn to recognize and prove NP-Completeness.

CS 07350: Computer Cryptography
Prerequisites: CS 07210, CS 04222
This course introduces students to the principles and practices which are required for secure communication: cryptography, cryptanalysis, authentication, integrity, and digital certificates. Mathematical tools and algorithms are used to build and analyze secure cryptographic systems with computers. Social, political, and ethical aspects of cryptography are also covered.

CS 07351: Cyber Security: Fundamentals, Principles and Applications
Prerequisites: CS 04222 and CS 06205
This course exposes students to the principles of cyber-security and will introduce a wide range of security activities, methodologies, and procedures. The topics covered in the course include fundamental concepts of computer security, principles of cryptography, software security and trusted systems, network security as well as other topics.

CS 07360: Introduction To Computer Graphics
Prerequisites: (MATH 01210 or MATH 01235) and CS 0740
This junior/senior level course covers such topics as fundamentals of graphics devices; use of graphics language/packages; windowing and clipping; geometrical transformation in 2- and 3-D; raster display algorithms; hidden line and surface elimination; animation.

CS 07370: Introduction To Information Visualization
Prerequisites: CS 04.222 OR CS 04.225 OR MIS 02.234
This is a junior/senior level course that introduces basic elements of Information Visualization, which is concerned with the creation of visual representation of Big Data abstract phenomena for which there may not be a natural physical reality, such as stock market movements, social relationships, gene expression levels, manufacturing production monitoring, survey data from political polls, or supermarket purchases. Students will be exposed to techniques covering the five main phases of developing information visualization tools: representation, presentation, interaction, perception and interpretation, and evaluation. Students will be required to develop a large project related to information visualization.
CS 07380: Introduction To Computer Animation 3 s.h.
Prerequisites: (MATH 01210 or MATH 01236) and (PHYS 02200 or PHYS 00220)
This is a junior/senior level course that takes a look at Computer Animation from a programmers perspective. It will investigate the theory, algorithms, and techniques for describing and programming motion for virtual 3D worlds. Approaches that will be explored include keyframing systems, kinematics, motion of articulated figures, and procedural and behavioral systems. This course includes the implementation of techniques presented in lecture. Students are encouraged to devise new techniques, implement them, and determine their effectiveness. Students will be required to implement and document a large software project related to computer animation.

CS 07390: Introduction To Computer Game Design And Development 3 s.h.
Prerequisites: (CS 04222 or CS 04225) and (Math 01210 or MATH 01235)
This is a junior/senior level course that introduces the technology, science, and art involved in the creation of computer games. Games will be examined in a systems context to understand gaming and game design fundamentals. The theory and practice of developing computer games will be investigated from a blend of technical, aesthetic, and cultural perspectives. Extensive study of past and current computer games will be used to illustrate course concepts. Group game development and implementation projects will culminate in classroom presentation and evaluation.

CS 07422: Theory Of Computing 3 s.h.
Prerequisites: CS 04222 and MATH 01131 and CS 07210
This is an advanced course in the theoretical foundations of computer science, building on the introduction provided in the Foundations of Computer Science course. It studies models of computers, such as finite automata and Turing machines, formal languages, and computability, as well as the fundamentals of complexity theory and NP-completeness.

CS 07424: Introduction to Agile Software Engineering 3 s.h.
Prerequisites: CS 07321
This course introduces the techniques and roles incorporated into the agile software engineering methodology. It uses the detailed knowledge about each of the major software engineering phases gathered in Software Engineering I, to explore the development of faster and more adaptable software. Proficiency in programming is expected of the students entering this course.

CS 07430: Human-Computer Interaction 3 s.h.
Prerequisite: CS 07321
This course teaches the fundamental concepts of Human Computer Interaction (HCI) and user-centered design. Students will learn how to create effective interfaces to both software and hardware systems that are both effective and usable. Students will study modeling, user testing, user interaction analysis techniques, and prototyping. Team projects are required.

CS 07450: Artificial Intelligence (AI) 3 s.h.
Prerequisites: (MATH 03160 or MATH 03150) and CS 04222 and CS 07210
AI studies methods for programming “intelligent” behavior in computers. Students study the data representation methods and algorithms used in AI, and survey research areas such as puzzle solving, game-playing, natural language processing, expert systems, and learning. In addition to readings, discussion, and problem solving in AI, students will be expected to program in one of the languages commonly used in AI, such as LISP or Prolog.

CS 07460: Computer Vision 3 s.h.
Pre-reqs: CS 04.222, Math 01.210, and Stat 02.290
This course examines the fundamental issues in computer vision and major approaches that address them. The topics include image formation, image filtering and transforms, image features, mathematical morphology, segmentation, camera calibration, stereopsis, dynamic vision, object recognition and computer architectures for vision.

CS 07470: Theory And Applications Of Pattern Recognition 3 s.h.
This class will introduce a broad spectrum of pattern recognition algorithms along with various statistical data analysis and optimization procedures that are commonly used in such algorithms, with particular emphasis to engineering applications. Although mathematically intensive, pattern recognition is nevertheless a very application driven field. This class will therefore cover both theoretical and practical aspects of pattern recognition, Bayes decision theory for optimum classifiers, density estimation techniques, discriminant analysis, basic optimization techniques, introduction to basic neural network structures, unsupervised clustering techniques and more state of the art algorithm independent techniques.

CS 07480: Introduction to Data Mining 3 s.h.
Prerequisites: CS 04222 and STAT 02290 or STAT 02360 or STAT 02361 or STAT 02360 and STAT 02260
This course teaches the fundamental concepts of Data Mining. Students will learn how to program systems to gather and analyze large data sets to discover important patterns.
CS 07555: Natural Language Processing 3 s.h.
This course presents methods for allowing computers to understand and generate sentences in human languages (such as English) and prepares the student to do research in natural language processing. Topics include syntax, semantics, pragmatics, and knowledge representation.

CS 10310: Introduction to Web Development 3 s.h.
Prerequisites: MIS 02338 or CS 04430; and CS 04210 or CS 04114 and CS 01210.
This course, which is part of the BA in Computing and Informatics, teaches students the basic techniques of web site development, including some of the tools, languages, and platforms that are commonly used for web sites. This course does not count as a restricted elective for the BS in Computer Science.

CS 10340: Systems Administration 3 s.h.
Prerequisites: CS 01211 AND CS 01210 OR permission of the instructor.
This course is designed to introduce students to the universal principles of systems administration that apply to all platforms and the major operating system families: Linux/Unix and Windows. The students will have hands on experience with the installation, configuration, administration, and management of core servers and core server operating systems.

CS 10342: Web Server Platforms 3 s.h.
Prerequisites: CS 10.310 OR permission of the instructor.
This course is designed to prepare students to install, configure, and maintain Web Servers. Students will learn about the installation, access control, security, performance, managing, and troubleshooting of web server hardware, software, and services.

CS 10344: Concepts of Computing Technologies 3 s.h.
Prerequisites: CS 01210 or CS 06410; and CS 01211 or CS 07351.
This course, which is part of the B.A. in Computing and Informatics program, examines the role, proper architecture, and potential contributions of Information technologies and systems – what they are, how they should be configured, and how they affect users of the technologies. This course covers a range of topics such as architectural planning, system and network administration, identity and authentication systems, change and problem administration, configuration of computing systems, data center and facilities management, capacity planning, document and content control, maintaining servers for system availability and uptime, systems monitoring and performances tuning, as well disaster recovery and system continuity.

CS 10430: Computing and Informatics Capstone Experience 3 s.h.
Prerequisites: CS 10.310 AND CS 04225 AND CMS 04205
This course is designed to introduce students to all aspects of software production from the early stages of system specification through to systems maintenance. This course provides an - exposure to the software development process by which user needs are translated into a tangible software product.

CS 99300: Computer Field Experience 3 to 9 s.h.
Prerequisites: permission of instructor (note: only 3 credits for CFE can be applied towards the restricted electives)
Students are assigned projects in a professional environment.

INTR 01265: Computers And Society 3 s.h.
Prerequisites: CMS 06202
This interdisciplinary course focuses upon the effects of computer systems on individuals and institutions. How computer systems are developed and operated will be related to an analysis of current trends in American society. A study of present and probably future applications of computers in such areas as management, economic planning, data collection, social engineering, education and the military will be followed by an exploration of the relationship of computer systems to problem solving orientations, bureaucratization, centralization of power, alienation, privacy, autonomy and people's self concept. This course is open to students at any level who satisfy the prerequisite and have course work in computer science or sociology or permission of instructor.

INTR 01266: Computer And Society - Wi 3 s.h.
Prerequisites: CMS 06202
This interdisciplinary course focuses upon the effects of computer systems on individuals and institutions. How computer systems are developed and operated will be related to an analysis of current trends in American society. A study of present and probably future applications of computers in such areas as management, economic planning, data collection, social engineering, education and the military will be followed by an exploration of the relationship of computer systems to problem solving orientations, bureaucratization, centralization of power, alienation, privacy, autonomy and peoples' self-concept. This course is open to students at any level who satisfy the prerequisite and have course work in computer science or sociology or permission of instructor.
**Course Descriptions**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>EDSU 28100</td>
<td>Leadership Theory</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>EDSU 28105</td>
<td>Leadership Seminar I</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>SNUR 92430</td>
<td>Methods And Materials In Health Teaching For School Nurses</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>SNUR 92444</td>
<td>Practicum In School Nursing</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>SNUR 92445</td>
<td>Internship In Health Teaching For School Nursing</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>SNUR 92448</td>
<td>Health Teaching Methods For School Nursing Seminar</td>
<td>2 s.h.</td>
</tr>
<tr>
<td>SNUR 92466</td>
<td>School Health Services</td>
<td>3 s.h.</td>
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<tr>
<td>ECE 09100</td>
<td>Signals, Systems And Music</td>
<td>3 s.h.</td>
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</tbody>
</table>

This course is an introduction into the academic study of leadership from a theoretical perspective that broadly examines the historical, social, and political context of leadership as a concept and process.

This seminar joins leadership theory and practice by requiring students to explore leadership issues in an active, hands-on way. The course will provide students with a more in-depth understanding of leadership as it relates to various settings, including their major discipline, and will require students to write persuasively in a leadership way.

This seminar provides students with a greater understanding of and appreciation for leadership as a change process along with various factors influencing that process. Focuses on the development of skills needed to manage change in organizations.

This course emphasizes the school nurse’s expanding role as a classroom health teacher as well as a resource person to the school staff. Discussions and experiences will center on theories of teaching and learning, planning for teaching, curriculum development, the New Jersey Core Curriculum Content Standards (NJCCCS), teaching strategies, educational resources, classroom management, assessment, and the integration of health teaching into varied school subjects. A K-12 classroom experience is included to facilitate the integration of theory into the clinical practice.

The purpose of this field experience is to provide an opportunity for the student to engage in a mentoring relationship with an experienced, certified school nurse. The student will have the opportunity to observe and participate in the various roles, functions, and activities of the school nurse. A college supervisor will visit the student in the field placement situation. Meetings of all students enrolled in the Practicum are held periodically at the college. Pre-registration consultation with instructor is required.

The purpose of this field experience is to provide an opportunity for the student to utilize INTASC principles, the NJ Comprehensive Health Education and Physical Education Curriculum Framework and the NJ Core Curriculum Content Standards to teach health classes in a classroom setting. A college supervisor will visit the student in the employed or field placement situation. This course is taken concurrently with SNUR 92.448. Pre-registration consultation with program advisor is required one semester prior.

This seminar focuses on four major areas: issues in health education, instructional strategies and classroom management, analysis and assessment of the Internship in Health Teaching for School Nursing experience, and preparation for school nurse employment.

The framework for School Health Services and Policies within the functions of the school nurse will be discussed, as well as specific functions and roles to include that of the school nurse within the comprehensive school counseling program and the interface between health services and nationally utilized school guidance counseling standards and indicators. Particular emphasis will be placed on school and community activities relating to students, their families and other educational personnel.

This course is an introduction to the analysis and creative production of electronic music. The student will experience music using the principles of music theory, electronic signal analysis and system development. Both lecture and laboratory sessions are presented culminating in the development and production of electronic music using recorded sound, software generated signals and electronically produced signals.
Course Descriptions

ECE 09201: Network I
Prerequisites: CS 04103 and (MATH 01311 or MATH 01141) and (PHYS 02200 or PHYS 00220) and MATH 01235
Covers basic network principles, network laws and analysis methods, including steady-state and transient responses of
passive networks, with independent and dependent sources. Op amps are covered as examples of active electronic networks.
Computer-aided analysis and simulation tools are presented as methods to augment network analysis and design.

ECE 09202: Network II
Prerequisites: ECE 09201 Minimum Grade of C
Extends network analysis principles including ac sources, transformers, and polyphase networks. The Laplace transform
is developed as a method for obtaining the transient and steady-state response of a network. The frequency response of a
transfer function is analyzed using Bode plots. The Fourier transform technique is used to determine the response of
networks to periodic inputs. Computer-aided analysis and simulation tools are presented as methods to augment network
analysis and design.

ECE 09203: Principles of Electric Circuit Analysis
Prerequisite(s): CS 04103 OR CS 04113 AND MATH 01131
The fundamental principles of circuit and network theory constitute the very foundation on which the field of electrical
engineering stands. From a simple household item such as a toaster or flashlight, to the most advanced devices, large scale
electric power distribution and transmission systems, including such emerging topics as smart grid, photovoltaic energy
generation to electric vehicle technology, all operate based on the basic concepts of circuit and network theory. This core
course, which constitutes the primary prerequisite of most other ECE courses, is designed to provide the students not only
with a comprehensive foundation of circuit and network theory, but also the basic skills of circuit analysis, design and
testing. Starting with Ohm’s Law, this course first discusses resistive and DC circuits and introduces Kirchhoff’s Laws,
Thevenin and Norton equivalents of networks, mesh and nodal analysis, followed by independent and dependent sources,
and operational amplifiers. The second half of the course focuses on AC circuits and memrators. Laplace transforms will
be introduced for transient and steady state response of networks, followed by various applications of AC circuits, such as
filters. Computer-aided analysis and simulation tools are also presented as contemporary methods of network analysis and
design.

ECE 09204: Clinical And Medical Technology In Today’S Medicine
Prerequisite: MATH 01123
This is a general education laboratory science course intended to provide students with a survey of current and emerging
clinical and medical technologies. The course will first introduce signals of biological origin, discussing how they are
generated, how they can be measured and how they are processed; followed by an overview and operation principles of
clinical and medical devices that have been developed to measure and analyze various physiological systems. The course will
also include an overview of medical imaging technologies as well as other current and emerging technologies, such as DNA
sequencers and microarrays. Safety and ethical considerations in design and use of these technologies will also be discussed.
The course will have a laboratory component allowing students to interact with real-world biological signals, systems and
devices. Specifically, students will be able to acquire, analyze and interpret their own vital signals, such as signals of
cardiovascular, respiratory or neurological origin.

ECE 09205: Principles and Applications of ECE for Nonmajors
Prerequisites: CS 04103, PHYS 00222, MATH 01230
This course covers basic concepts of Electrical and Computer Engineering (ECE) topics for non-majors. An emphasis is
placed on practical applications using ECE hardware and analytical techniques to be able to design, analyze (or simulate),
build, and test practical circuits. The content includes basic circuit current (DC) and alternating current (AC) circuit
principles, circuit law and analysis methods, diodes, transistors, operational amplifiers, power supplies, analog filters and
micro-mechanics (DC motors).

ECE 09241: Introduction to Digital Systems
Digital Systems dominate the globe, from a simple stopwatch to a cellphone to the international space station, each of
these are dependent on Digital Systems. Digital systems, at the most elementary level, are composed of 0’s and 1’s and
rudimentary logic functions. This core course takes a hands-on approach, starting with how to physically build basic logic
functions (AND, OR, NOT) from transistors all the way to how to combine these functions to make complex digital systems,
during the course students will learn how numbers and information are stored and manipulated in a digital system and
how these basic principals can be expanded to create a computer processor. The focus of the course will be on
alternative number systems (Binary, Octal, Hexadecimal), Boolean algebra, minimization, combinational circuit design, and
sequential circuit design. Both synchronous and asynchronous network design and state machines will be covered. Students
will get hands-on experience using modern development tools to design, test, and implement digital systems.
ECE 09243: Computer Architecture 3 s.h.
Prerequisite: ECE 09241 and CS 04103 or CS 04113
Computers and systems are ubiquitous. Processors are encountered at every computational scale ranging from embedded microprocessors in smart phones and speakers, through desktop, laptop, and tablet computers with extensive memory and I/O, to supercomputers composed of arrays of processors. This core course provides a foundation for understanding computer architecture and the interplay between the central processor, memory and input/output. The course will cover a range of analysis and design techniques and include a survey of representative modern architectures. One will be selected to provide the basis for further inquiry and to provide a platform for project-based learning.

ECE 09303: Engineering Electromagnetics 3 s.h.
Prerequisites: (ECE 09203, Principles of Electric Circuit Analysis AND PHYS 00222, Introduction to Electricity and Magnetism minimum Grade C AND MATH 01235 Mathematics for Engineering Analysis I).
Engineering electromagnetics covers applications of electrostatics, magnetostatics, quasistatics, and electromagnetic wave propagation in contemporary electrical engineering practice. The course also covers numerical modeling/analysis of electromagnetic systems using appropriate software and laboratory-based measurements.

ECE 09311: Electronics I 3 s.h.
Prerequisites: ECE 09203 Minimum Grade of C
The first course in electronic devices and circuit design covers the fundamentals of circuits involving diodes, bipolar junction transistors and field effect transistors in a simulation and laboratory environment. The basics of circuit operation and modeling are covered along with applications to multistage amplifier design. The SPICE software is used as a simulation tool.

ECE 09321: Systems And Control I 3 s.h.
Prerequisites: ECE 09341 Minimum Grade of C
The first course in control systems introduces the fundamental concepts of linearity, time-invariance, stability and the transfer function. Mathematical and circuit equivalence of different systems (electrical, mechanical, fluidic, and thermal) are established. A thorough treatment of stability through the Routh-Hurwitz, root locus and Nyquist criterion is given. Frequency response analysis by means of the Bode plot is also covered. Software simulation primarily with MATLAB and laboratory experiments will complement and supplement the theory.

ECE 09322: Systems And Controls II 3 s.h.
Prerequisites: ECE 09321
This course is a continuation of Systems and Controls I with the focus on multi-input, multi-output systems. The fundamental concepts of linearity and time-invariance are introduced. The state-space description and the concept of a matrix transfer function are studied in depth, especially with respect to stability. The concepts of controllability, observability, and realizations are covered. Numerical techniques are continuously emphasized. Optimal control and nonlinear systems are also discussed. Software simulation, primarily with MATLAB and laboratory experiments, will complement and supplement the theory.

ECE 09331: Electrical Communication Systems 4 s.h.
Prerequisites: ECE 09202 Minimum Grade of C and MATH 01236 and ECE 09241 and ECE 09311
This is a junior level undergraduate course that covers the fundamentals of analog and digital communication systems. Analog and digital modulation techniques are covered along with optimal receivers, concept of a matched filter, error rate and intersymbol interference. Appropriate mathematical background in Fourier transforms, probability and random variables are taught. The student is exposed to software and hardware designs.

ECE 09341: Signals And Systems 2 s.h.
Prerequisites: (ECE 09203 Principles of Electric Circuit minimum Grade C AND MATH 01235 Mathematics for Engineering Analysis I).
Continuous and discrete systems are used in every branch of engineering. Communication systems (for the transmission of voice, video and data), robotic systems, energy systems, biometric systems (Identification of a person based on physiological traits), systems that aid the handicapped and system-on-chip circuits are just a few examples that use the fundamental principles taught in this course. This course provides students with a foundation in linear dynamical systems and provides the appropriate background to engage in more advanced subjects like controls, signal processing and communications. This course will discuss the fundamental tools associated with the analysis of continuous (Laplace transform, Fourier transform and Fourier series) and discrete (z-transform) signals and systems. The concepts of impulse response, frequency response, convolution are taught with the appropriate background in complex numbers and variables. Simple analog and digital filters and their practical uses form a major component of the laboratory component.
ECE 09342: Introduction to Embedded Systems 3 s.h.
Prerequisite: ECE 09243 Minimum Grade of C

With more Embedded systems being sold each year, the demand for Engineers who understand these systems is ever increasing. This course introduces students to microprocessors and microcontrollers from instruction sets and architecture to peripherals and software. Several processor architectures and instruction sets are briefly covered as well as assembly language; however, the majority of the course focuses on embedded software. At the end of this course students will be able to develop embedded systems to solve real design problems. The focus of this course will be on using embedded peripherals (analog to digital converters, communications, timers, interrupts, PWM, etc.). Students will work hand on with their own embedded systems from the beginning of the course and will learn how to design basic embedded systems using modern integrated development environments. There will be a strong emphasis on project based learning and each student will be required to make a significant contribution to a final project.

ECE 09351: Digital Signal Processing 3 s.h.
Prerequisites: ECE 09341 Minimum Grade of C

This class is concerned with processing of digital and/or discrete time signals using linear time invariant systems, hence digital signal processing - DSP. It is DSP that makes communication systems, medical diagnosis and monitoring systems, engine diagnostics, seismic/tectonic/oceanographic analysis systems, all of audio-visual entertainment systems and many other countless systems possible. This course has been designed to deepen the real-world perspective at the forefront in each topic discussed, without sacrificing any of the elegant mathematics that underlies all DSP techniques. The primary goals of this course are to (1) introduce time and frequency domain concepts and the associated mathematical tools that are fundamental to all DSP techniques; and (2) provide a thorough understanding and working knowledge of design, implementation, analysis and comparison of digital filters for processing of discrete time signals. The class will discuss the following topics: representation of signals and systems in time and frequency domains, the z-transform, filter structures, filter design and implementation, random signal analysis and spectral estimation, finite wordlength effects and wavelet transforms for time-frequency analysis.

ECE 09360: Electrical Engineering Clinic Consultant I 1 s.h.
Prerequisites: ENGR 01.202, MATH 01.236

This course provides the student with disciplinary background and preparation for consulting work in support of multidisciplinary clinic projects. Work and topics will be directed by the clinic discipline manager.

ECE 09362: Electrical Engineering Clinic Consultant II 1 s.h.
Prerequisites: ECE 09.360

This course provides the student advanced disciplinary background and preparation for consulting work in support of multidisciplinary clinic projects. Work and topics will be directed by the clinic discipline manager.

ECE 09363: Modules In Electrical And Computer Engineering 1 s.h.
Prerequisite: ENGR 01301

The field of electrical and computer engineering is very diverse and is growing exponentially. This course is designed to serve as a feedback and feed-forward mechanism not only to reinforce certain topics previously discussed elsewhere in the curriculum, but also to introduce new and/or emerging topics that are not covered elsewhere in the curriculum. The course is taught as a series of modules covering topics that are not part of any particular course, (e.g., power systems, smart power grid), topics to be reinforced, (engineering probability and statistics, random signals, transform techniques), and emerging topics that are not yet fully integrated into the curriculum. Therefore, different offerings of this course will likely have different topical content, chosen based on the feedback of the faculty and students during curriculum assessment, as well as important emerging topics that push the boundaries of electrical and computer engineering.

ECE 09400: Electrical Engineering Clinic Consultant 1 s.h.
Prerequisites: ENGR 01202

This course provides an opportunity for consulting work in support of a multidisciplinary clinic project. Work will be managed by the discipline manager.

ECE 09401: High Speed Interconnects 3 s.h.

High speed interconnects are pervasive in electronic systems. From the smallest integrated circuits to the largest worldwide networks, the ability to interconnect components, subsystems and systems is of critical importance. This course will provide a fundamental understanding of the various techniques used to achieve high-speed interconnects. Topics to be covered include: transmission lines, metal waveguides, dielectric waveguides, antennas, and electromagnetic compatibility.
ECE 09402: Topics in Electrical and Computer Engineering 1 to 3 s.h.
This course covers special topics in individual areas of Electrical and Computer Engineering. Specific prerequisites are determined by the nature of the course when it is announced.

ECE 09403: Sustainable Design In Engineering 3 s.h.
This is a senior level undergraduate elective course that covers the fundamentals of sustainable design in engineering with an emphasis on electricity and energy. Topics include energy fundamentals (forms, fuels, conversion technologies), energy use and its impacts on a globalizing economy, life cycle assessment tools and environmental management techniques, ISO14001 implementation in industry (US vs. European experience), application of sustainable engineering practice via an eco-design software tool. The student is exposed to sustainable designs in product manufacturing and energy/electricity production.

ECE 09404: Principles of Biomedical Systems and Devices 3 s.h.
Prerequisites: ECE 09311 (Electronics I) AND ECE 09351 (Digital Signal Processing).
As a survey of biomedical engineering, this class will introduce various systems of the human physiology from an engineering perspective. In particular, students will be introduced to signals of biological origin obtained from these systems; biosensors, transducers and bioelectrodes used to acquire such signals, along with medical quality amplifiers for measuring biopotentials. Electrical safety of medical devices; measurements of the blood pressure, blood flow, and respiratory system will also be discussed. Along with a carefully designed set of experiments, this course will provide the fundamental principles of biomedical engineering from an electrical and mechanical engineering perspective.

ECE 09405: Product Engineering 3 s.h.
This course treats product engineering from a variety of perspectives including engineering and non-engineering viewpoints to explore important elements for modern design. Techniques and tools of rapid prototyping, including virtual reality, are treated. Important course concepts are reinforced through product design experiences.

ECE 09406: Forensic Engineering And Product Liability 3 s.h.
This course examines engineering failure from both the forensics and liability perspectives. Forensic engineering seeks to discover the reason for product or system failure. Product liability seeks to assign and quantify blame for that failure. Methods of forensic engineering are presented. The implications of product liability on the design process are considered from several perspectives. The course is complemented with practical applications.

ECE 09407: Interaction Design 3 s.h.
Prerequisites: ENGR 01302
This course examines interaction design from several perspectives. The role of ergonomics is treated along with techniques of input and output interfacing. Methods and tools for virtual implementation are presented. The course is complemented with practical applications.

ECE 09408: Power System Engineering 3 s.h.
Prerequisites: ECE 09303: Engineering Electromagnetics.
This is an upper level elective course that covers the fundamentals of power system engineering with an emphasis on the modern electricity grid and new energy technologies. Topics include: History and Key inventions in the development of the electric power industry, mechanical and electromagnetic fundamentals, three-phase circuits and transformers, AC machinery, synchronous machines and induction motors, DC machines, transmission lines, power flow, system reliability, advanced generation technologies, utility industry deregulation, and options for a sustainable electric power system in the future.

ECE 09409: Introduction to Virtual Reality 3 s.h.
Prerequisites: ECE Majors: CS 04103 or CS 04113 Non ECE Majors: Permission of Instructor
Introduction to Virtual Reality (VR) covers the architecture of current generation systems for creating 3D VR environments. Topics included are application/hardware architecture, pipeline development, geometric transformations in a 3D coordinate system, geometry and pixel shading, lighting systems, texturing and VR development. Students will be exposed to current VR technologies and next generation algorithms.

ECE 09411: Modern Solid State Devices 3 s.h.
This is an introductory course in the fundamentals of solid state electronic devices. The course will cover the physical structure of silicon and compound semiconductor materials and the conduction processes in these materials. The p-n junction and its applications will be studied along with the principles of transistor devices. The course will address analog and switching applications and introduce basic laser operations.
Course Descriptions

ECE 09412: Electronic Packaging 3 s.h.
Prerequisites: ECE 09311: Electronics I.
This is an introductory course in the fundamentals of electronic packaging. It focuses on the complex interaction of materials science, mechanics of materials, and electrical signal processing. The course will progress from the basic materials used in chip packaging and board construction, through mechanical design and testing, to the electrical modeling of the interconnect structure, and finally to reliability assessment. The laboratory exercises will mirror this four-part organization by providing opportunities for laboratory experience in each of the four areas.

ECE 09413: Principles of Nondestructive Evaluation 3 s.h.
Prerequisites: ENGR 01401 or ENGR 01402
Principles of nondestructive evaluation provides an introduction to contemporary and emergent methods for the non-invasive inspection of infrastructure composed of modern engineering materials. The course covers system design and the processing and analysis of nondestructive evaluation signals. Case studies on engineering design for testing are provided.

ECE 09414: VERY LARGE SCALE INTEGRATION 3 s.h.
Prerequisites: ECE 09412
This course provides an introduction to the design and implementation of Very Large Scale Integrated (VLSI) circuits for complex digital systems with a focus on CMOS technology. Application Specific Integrated Circuit (ASIC) and Full-custom techniques will be explored and used to design basic cells and regular structures such as data-path and memory arrays. The emphasis is on modern design issues in power, interconnected and clocking. Topics include: VLSI Design Flow; Transistor-Level CMOS Physical Design; Gate Function and Timing Characteristics; High-Level Digital Functional Blocks; and CMOS Digital Chip Design. Students will design and verify circuits using commercial Computer Aided Design (CAD) tools.

ECE 09421: Introduction To Systems Engineering 3 s.h.
Prerequisite: ECE 09321
Systems Engineering is the interdisciplinary approach and means to enable the realization of today's complex, dynamic products and systems. Individual products such as Cell phones, aircraft, automobiles, computers and even household appliances are made up of parts developed by many people with varied skill sets, often working for different companies and from remote locations. Other systems such as transportation, energy generation and distribution, medical, communications, emergency response and similar are very complex as they are composed of many varieties of products and systems. Systems Engineering is an integrating function that addresses all the disciplines and specialty groups resulting in a structured development process that proceeds from concept to production to operation including maintenance & support, and eventual disposal. Systems Engineering considers both the business and the technical needs, including environmental and safety, of all customers with the goal of providing a quality product that meets the user needs. It focuses on defining customer needs and required functionality early in the development cycle, documenting requirements, proceeding with design synthesis and system validation while considering the complete problem that includes - operations, cost & schedule, performance, training & support, sustainment, test, disposal, and manufacturing. The course is designed to expose the student to the system engineering process to complement their technical skill set and to cover topics that are often not covered in other classes. The course will include frequent guest lecturers who are practicing experts in the systems engineering domain. The course will utilize the latest in processes and software tools from industry such as SysML modeling and architectural documentation tools. Students will participate in a semester long project to gain hands-on experience with the course concepts.

ECE 09422: Systems and Control II 3 s.h.
Prerequisites: ECE 09321
This course is a continuation of Systems and Controls I with the focus on multi-input, multi-output systems. The fundamental concepts of linearity and time-invariance are introduced. The state-space description and the concept of a matrix transfer function are studied in depth, especially with respect to stability. The concepts of controllability, observability, and realizations are covered. Numerical techniques are continuously emphasized. Optimal control and nonlinear systems are also discussed. Software simulation, primarily with MATLAB and laboratory experiments, will complement and supplement the theory.

ECE 09430: Introduction to RF Electronics 3 s.h.
Prerequisite: ECE 09303
Introduction to RF Electronics covers the fundamental principles behind radio-frequency (RF) design and analysis. Topics will include distributed parameter analysis, single- and multi-port networks, filter design, matching and bias networks, active devices, and amplifier design. The course also covers numerical modeling/analysis of RF sub-systems using appropriate software and laboratory-based measurements. Designing, building, and testing an RF sub-system (of receiver) is part of the course.
**ECE 09431: Optical Fiber Communications**  
*Prerequisites: ECE 09311: Electronics I.*  
Optical communications is an integral part of the world-wide telecommunications system. This course will consider the numerous technologies that comprise such systems as well as the techniques to design, analyze, simulate, and test such systems. Topics include: theory of optical waveguiding, waveguide structures, materials, dispersion, signal degradation in fibers, laser diodes, optical amplifiers, optical coupling, photodetectors, noise, receiver operation, and numerical and analytical techniques for performance calculations and system evaluation.

**ECE 09432: Wireless Communications**  
*Prerequisites: ECE 09351: Digital Signal Processing.*  
This course will cover the fundamentals of cellular systems, the technologies that are used to implement such systems, radio propagation effects, modulation techniques and the analysis and systems performance evaluation of wireless links.

**ECE 09433: Electrical Communications Systems**  
*Prerequisite(s): ECE 09351 and ECE 09342.*  
This is a senior level undergraduate course that covers the fundamentals of analog and digital communication systems. Analog and digital modulation techniques are covered along with optimal receivers, concept of a matched filter, error rate and intersymbol interference. Appropriate mathematical background in Fourier transforms, probability and random variables are taught. The student is exposed to software and hardware designs.

**ECE 09443: Computer Architecture II: Specialized Systems**  
*Prerequisites: ECE 09443.*  
The second course in computer architecture treats architecture elements of special-purpose digital systems. Use of macro functions is stressed.

**ECE 09444: Architectures For Digital Signal Processing**  
*Prerequisites: ECE 09351 and ECE 09342.*  
This is a senior level undergraduate elective course that covers the fundamentals of the implementation of digital signal processing algorithms using special purpose hardware. Topics include fixed and floating point arithmetic, assembly language programming, sampling, digital filter implementation, finite wordlength effects, quantization noise and fast Fourier transform implementation. The student is exposed to application designs in communications, speech and image processing.

**ECE 09451: Introduction To Digital Image Processing**  
*Prerequisites: ECE 09351.*  
Introduction to Digital Image Processing covers the analysis and contemporaneous applications of the enhancement, restoration, compression and recognition of monochromatic images. Both classical and state-of-the-art algorithms will be employed in conjunction with appropriate software for analyzing real-world images.

**ECE 09452: Adaptive Filters**  
*Prerequisites: ECE 09351.*  
This is a senior-level undergraduate elective course that covers the fundamentals and implementation of adaptive filtering algorithms using software and special purpose hardware. Topics include random signals, least-mean squares method, recursive least squares method, filter structures and finite wordlength effects. The student is exposed to applications in communications, signal separation, radar, noise cancellation and seismic signal processing.

**ECE 09453: Introduction To Artificial Neural Networks**  
*Prerequisites: ECE 09351 (Digital Signal Processing).*  
This course covers the design of a variety of popular neural network architectures and their contemporary engineering applications. Neural network architectures that will be studied in detail include the multilayer perceptron, radial basis function and the Hopfield networks. State-of-the-art software will be used for network design. VLSI implementations of neural networks will be discussed.

**ECE 09454: Theory and Applications of Pattern Recognition**  
*Prerequisite: ECE 09351.*  
This class will introduce a broad spectrum of pattern recognition algorithms along with various statistical data analysis and optimization procedures that are commonly used in such algorithms, with particular emphasis to engineering applications. Although mathematically intensive, pattern recognition is nevertheless a very application driven field. This class will therefore cover both theoretical and practical aspects of pattern recognition, Bayes decision theory for optimum classifiers, density estimation techniques, discriminant analysis, basic optimization techniques, introduction to basic neural network structures, unsupervised clustering techniques and more state of the art algorithm independent techniques.
Bioinformatics is the field of applying computational techniques, from mathematics, statistics, and machine learning, to the vast amounts of biological - but most specifically genomic - data. While some refer to bioinformatics only in the context of collection, storage, organization and access of such biological data within large databases, this course's view of bioinformatics will include - in fact focus on - systems and devices that generate such data, and development of methodologies and models to analyze the vast quantities of data generated by such systems and devices. The course will provide basic biological background of genomics, will introduce the students to commonly used bioinformatics databases and computational tools (such as search, alignment, and protein visualization tools) used to analyze genomic data from such databases. The focus of the course will be on basic bioinformatics systems and devices, such as high throughput next generation sequencers and genechips, followed by an in-depth discussion of the theory of basic genomic signal processing and computational intelligence techniques used in bioinformatics, including hidden Markov models and optimization algorithms for sequence alignment and gene prediction, clustering and classification algorithms.

**ECE 09468:** Introduction To Discrete Event Systems

*Prerequisites: ECE Majors: ECE 09243 Non ECE Majors: Permission of Instructor*

This course introduces fundamentals of discrete event system models and their applications in modeling, control, analysis, validation, simulation, and performance evaluation of computer systems, hardware/software co-design, manufacturing/de-manufacturing processes, communication networks, and transportation, etc. The mathematical and graphical models include graphs, finite state machine, Petri Nets, timed models, stochastic timed models, and Markov chains, etc.

**ECE 09469:** Introduction To System-On-Chip Verification

*Prerequisites: ECE Majors: ECE 09243 Non ECE Majors: Permission of Instructor*

This course introduces fundamentals of hardware design verification, including traditional functional simulation and assertion-based verification. Topics covered include functional simulation, coverage metrics, testbench design and automation, and assertion-based verification. Property specification language (PSL) is also introduced.

**ECE 09471:** Instrumentation

*Prerequisites: ECE 09311: Electronics I.*

Elements of instrumentation systems are treated including transducers, signal conditioning, and signal processing. Elements of modern instrumentation systems including standards (IEEE-488, SCPI) and smart sensors are considered. Course is complemented with an instrumentation application.

**ECE 09472:** Smart Grid

*Prerequisites: ECE 09342 AND ECE 09321*

The ways in which electricity is generated, transmitted, distributed, stored, and used, are the subject of revolutionary and evolutionary changes compared to the electricity grid we have today. Smart Grid goals include the improvement of grid reliability, reduction in outages, faster return on service, ability to integrate a broad range of renewable energy sources, and to include customers in the ability to effect load decisions based on grid demand and energy pricing. This course will address grid fundamentals, tools and technologies, and then address major Smart Grid subsystems including conventional and alternative generation, storage technologies, transmission and distribution systems, standards, demand management, real-time pricing, grid stability, control technologies, measurement including Smart Sensors and Advanced Metering
Intrastructure. Physical and cyber vulnerabilities will also be addressed. The course will include a project to reinforce Smart Grid elements and involve students in this technology, which has significant international economic implications.

ECE 09473: Smart Sensors 3 s.h.
Prerequisites: ECE 09342 AND ECE 09311 AND ECE 09321
Elements of Smart Sensors and Smart Sensor systems are treated. Instrumentation fundamentals covered include transducers, signal conditioning, and data acquisition, communication, along with important considerations and associated standards. Relationship of smart sensors to integrated system health monitoring (ISHM) and similar Intelligent Sensor applications are addressed. The course will include a project to reinforce Smart Sensor elements.

ECE 09481: Backplane Design 3 s.h.
This course provides an overview of backplane design for a variety of digital systems. It surveys current technologies with treatment of emerging and updated standards. Methods of analysis, synthesis, and verification of backplane systems are presented. The course is complemented with project work for typical applications.

ECE 09482: Introduction to Memristors and Nanoelectronic VLSI 3 s.h.
Prerequisites: ECE 09243
This course is an advanced course in the extension of analog/digital electronic systems, dealing with CMOS devices and emerging nanoelectronic devices and technologies. Since the importance of emerging nano systems goes beyond traditional circuit theory and EE in general, this course aims to provide students with an opportunity of understanding the fundamental concepts of a set of emerging nanodevices, with particular emphases on memristors and memristive systems, and their potential applications and impacts on the next generation VLSI systems. The course will also emphasize hands-on programming and application to examples as an important means to understand and benefit from the material. Software tools such as Matlab/SPICE/Cadence will be extensively used throughout the learning and design experiments.

ECE 09483: Digital Design with VDHL 3 s.h.
The course uses VHDIL to model and simulate digital systems. Specialized features of the language are presented to allow getting optimum results from simulations. Example VHDIL applications are explored and a project is used to complement the course.

ECE 09484: Mixed Signal Technology 3 s.h.
This course will extend the student's background in circuit design to include the devices and technologies used in mixed analog-digital VLSI chips for high volume applications such as hard-disk drives, cordless telephones and TVs. The course will begin with device models, fabrication technology and layout as applied to mixed analog-digital circuits. Device modeling requirements for analog work will be covered as well as models used in most modern circuit simulators. Fabrication technologies will be examined that have been developed specifically for mixed signal VLSI chips. The techniques for layout of mixed signal circuits that emphasize a high degree of analog device matching and minimum digital-to-analog interference will be covered.

ECE 09485: Introduction to Engineering Cyber Security 3 s.h.
Prerequisite: ECE 09243: Computer Architecture
This course addresses the need to better prepare students for the expansion in the interest of Things (IoT) by imparting fundamental concepts and capabilities in the management of cyber security. Cyber security is key to developing large-scale, wide-area systems, which can provide the degree of security required to further implementation highly-vulnerable, highly-visible systems such as the Smart Grid. To gain this understanding, the course addresses a number of key components: standards including network and encryption techniques (RSA, etc.) and security processes, methods of cyber attack, and some methods of software and hardware security enhancement. Course principles are reinforced by a significant project experience.

ECE 09486: Introduction to Portable Platform Development 3 s.h.
Prerequisite(s): ECE 09243 and CS 04103 and/or Approval of instructor
The total number of Android and IOS devices is estimated to be over 1.6 billion devices (2013) and continues to grow. The ubiquitous nature of these devices means that they are now the default choice of platforms for hardware and software developers. This course details the ARM core architecture, which underpin the majority of mobile devices, along with the basic operation system and application software environments. Principles of effective app development using available SDK tools and project management techniques are presented. The hardware vs. software trade space will also be considered. The course content is reinforced with a significant development project.
Course Descriptions

ECE 09490: Emerging Topics in Computer Engineering 1 to 3 s.h.
Prerequisite(s): Specific prerequisites are determined by the nature of the course content when it is announced.
This course covers special topics in emerging areas of Computer Engineering such as Computer Networks, Mobile Robotics, and Embedded Systems. Specific prerequisites are determined by the nature of the course when it is announced.

ECE 09495: Emerging Topics in Computational Intelligence, Machine Learning and Data Mining 1 to 3 s.h.
Prerequisite(s): Specific prerequisites are determined by the nature of the course content when it is announced.
As the amount of data we generate grow astronomically, so does the need for approaches, algorithms, techniques and the hardware that can be used for effective processing, storing, and analysis of such massive volumes of data. Computational intelligence, machine learning and data mining all deal with automated analysis of large volumes of data in search of known or hidden structures, patterns and information. While well-established approaches that now form the foundations of these topics are discussed in other specifically named courses, this course will provide an introductory treatment of emerging topics - fueled by rapid growth of research and development in these areas - that have not yet reached the mainstream textbooks. Hence, due to its very nature, the specific content of this class will be different every time it is offered, focusing on the most recent developments in these areas.

ECE 09498: Seminar: Engineering Frontiers 1 s.h.
Prerequisite(s): ENGR 01401
The Seminar in Engineering Frontiers will provide students with a glimpse into contemporaneous cutting edge technology and research in electrical and computer engineering. Course content and topics will change with each offering to maintain currency with the frontiers of engineering technology.

ENGR 01101: Freshman Engineering Clinic I 2 s.h.
This course presents an introduction to the practice of engineering through application problems drawn from engineering disciplines chosen to amplify work drawn from supporting courses. It includes topics such as: technical communication formats; analytical tools; computer-based tools: introduction to design; engineering ethics; teamwork.

ENGR 01102: Freshman Engineering Clinic II 2 s.h.
Prerequisite(s): ENGR 01101 and MATH 01130
This course, a continuation of Freshman Engineering Clinic I, provides expanded treatment of the practice of engineering through applications drawn from engineering disciplines. Project work includes a variety of technical communication topics, analytic and computer-based tools, including the design process, engineering ethics, safety, and team work.

ENGR 01201: Sophomore Engineering Clinic I 4 s.h.
Prerequisite(s): ENGR 01102 and COMP 01111 and PHYS 00220 and MATH 01131
This course, a continuation of the Engineering Clinic series, provides expanded treatment of the practice of engineering through applications drawn from various engineering disciplines and industry. Project work includes a variety of technical communication topics, analytic and computer-based tools, including the design process, engineering ethics, safety and teamwork. The composition component presents critical thinking, reading, writing, research and argumentation.

ENGR 01202: Sophomore Engineering Clinic II 4 s.h.
Prerequisite(s): ENGR 01201
This course is a continuation of the Engineering Clinic sequence that provides design and design support experiences. The clinic also integrates information from supporting courses. The goal of the public speaking component is to enable students to participate effectively in oral communication, especially as related to technical presentations.

ENGR 01271: Statics 2 s.h.
Prerequisite(s): MATH 01131 and PHYS 00220
The course deals with the study of engineering statics which includes the statics of structural systems. The study of structural systems includes equilibrium, structural analysis, and geometric properties of structural members.

ENGR 01272: Solid Mechanics 2 s.h.
Prerequisites: ENGR 01271
The course deals with the study of solid mechanics including stress and strain, mechanical properties of materials, and beam and bar analysis. The study of beam and bars includes axial forces, torsion, bending, shear, combined loading, buckling, and design.
ENGR 01281: Material Science
Prerequisite(s): PHTS 00220 and CHEM 06100
This course develops the material structure and property relations. Atomic bonding, lattice structures, crystalline and polymeric structures and properties, imperfections, dislocations, phase diagrams, and quantitative analysis are presented. Properties of metals and alloys, ceramics, polymers, composites, and electrical materials are discussed.

ENGR 01282: Manufacturing Processes
Prerequisite(s): ENGR 01281
This course develops the fabrication processes for engineering materials. Discussion of heat treatment of metals will be followed by manufacturing methods for metals and alloys. Casting, powder metallurgy, hot and cold forming, welding and joining, and material removal techniques for metals will be followed by fabrication techniques for non-metals, ceramics, and composites.

ENGR 01283: Materials Science And Manufacturing
Prerequisite(s): CHEM 06100
This course is intended to give students a strong background in materials science and manufacturing. The course covers the behavior of materials, starting from an atomic level, and building to how atomic level structures influence macroscopic failure in both metals and polymers. The rheology of various materials becomes the transition into how they are developed into useful products through various manufacturing methods including casting, extrusion, molding, sintering, machining and through composite fabrication techniques.

ENGR 01290: Dynamics
Prerequisite(s): ENGR 01271
Study of kinematics and kinetics of a particle, including work-energy and impulse-momentum methods. Systems of particles are considered. Kinematics and kinetics of plane motion of rigid bodies are introduced with respect to absolute and relative motions in various reference frames. Concept of mass moment of inertia is introduced.

ENGR 01299: Special Topics In Engineering
This course is designed to introduce students to emerging topics in the engineering field. Consent of the instructor is necessary, and prerequisites are determined by the nature of the topic.

ENGR 01301: Junior Engineering Clinic I
Prerequisite(s): ENGR 01202 and MATH 01235 and (CHEM 06202 or ECE 09311 or ENGR 01272 or ENGR 01273
This is one course in a sequence of courses that will provide a meaningful research and design experience for a team of undergraduate students under the direction of an engineering faculty advisor. The research topic will be chosen by mutual agreement of the undergraduate students and their advisor. The sequence will include a thorough literature search and review, the development of a clear and concise problem statement, consultations with other faculty and professional experts, and the derivation of publishable results. The research will culminate in a final written report and oral presentation.

ENGR 01302: Junior Engineering Clinic II
Prerequisite(s): ENGR 01301
This is one course in a sequence of courses that will provide a meaningful research and design experience for a team of undergraduate students under the direction of an engineering faculty advisor. The research topic will be chosen by mutual agreement of the undergraduate students and their advisor. The sequence will include a thorough literature search and review, the development of a clear and concise problem statement, consultations with other faculty and professional experts, and the derivation of publishable results. The research will culminate in a final written report and oral presentation.

ENGR 01341: Fluid Mechanics I
Prerequisite(s): MATH 01230 and PHTS 00220 and (CHE 06201 with min C- grade or ENGR 01271)
The course deals with general fluid flow and with fluid flow in pipe systems. Topics covered in the area of general fluid flow include hydrostatics, laws of fluid motion, kinematics, dynamics, energy balance, and dimensionless groups. Topics covered in the area of pipe flow include incompressible flow, compressibility, pumps, viscosity, boundary layers, turbulence, and losses. The course includes appropriate laboratory experiments and computer applications.

ENGR 01342: Engineering Fluid Mechanics
Prerequisite(s): MATH 01230 and PHTS 00220 and (CHE 06201 with min C- grade or ENGR 01271)
This course is designed for multidisciplinary engineering students required to have an introductory knowledge of fluid flow. This course includes all of the topics of Fluid Mechanics I (ENGR 01.341) and is equivalent to ENGR 01.341. Topics covered in the area of general fluid flow include hydrostatics, Mass and Energy Balances, incompressible inviscid and viscous flows, momentum balances and dimensionless groups. Topics covered in the area of pipe flow include incompressible and compressible flows, fluid machinery including pumps and turbines, viscous flows, boundary layers, turbulence, and pressure losses. The course includes appropriate laboratory experiments and computer applications.
Course Descriptions

ENGR 01391: Independent Study In Engineering 0 to 4 s.h.
This course is designed for engineering students. They will conduct work under the supervision of an appropriate faculty member on engineering projects. The execution of the proposed project, including the preparation and presentation of an acceptable report of work, will be required.

ENGR 01401: Senior Engineering Clinic I 2 s.h.
Prerequisites: ENGR 01302
This course provides a culminating experience to the Engineering Clinic sequence. The goal of this sequence of courses is to give teams of undergraduate engineering students a meaningful, leading-edge, team-based, multidisciplinary project experience. The sequence will include a thorough literature search and review, the development of a clear and concise problem statement, consultations with other faculty and professional experts, and delivery of a final written report and oral presentation.

ENGR 01402: Senior Engineering Clinic II - Wi 2 s.h.
Prerequisites: ENGR 01401
This course provides a culminating experience to the Engineering Clinic sequence. The goal of this sequence of courses is to give teams of undergraduate engineering students a meaningful, leading-edge, team-based, multidisciplinary engineering project experience. The sequence will include a thorough literature search and review, the development of a clear and concise problem statement, consultations with other faculty and professional experts, and delivery of a final written report and oral presentation.

ENGR 01410: Introduction To Finite Element Analysis 3 s.h.
Prerequisite(s): (ENGR 01272 or ENGR 01237) and MATH 01235
Fundamental concepts for the development of finite element analysis are introduced. The element stiffness matrices are developed using shape functions defined on the elements. Aspects of global stiffness formation, consideration of boundary conditions, and nodal load calculations are presented. Mesh division and problem modeling considerations are discussed in detail. Topics of scalar field problems and natural frequency analysis are covered. Computer applications are included.

ENGR 01411: Introduction To Engineering Optimization 3 s.h.
Prerequisite(s): MATH 01235
Objective function for minimization and setting up the constraints are presented for engineering problems. Solution techniques using gradient based methods, zero order methods, and penalty techniques are discussed. Formulation and solution of linear programming, non-linear programming, integer and discrete programming problems in engineering are covered. Algorithms are implemented in computer programs for problem solution.

ME 10453: Introduction To Analytic Dynamics 3 s.h.
Prerequisite(s): ENGR 01291 and MATH 01235
Newton/Euler and Lagrangian formulations for three-dimensional motion of particles and rigid bodies. Modern analytical rigid body dynamics equation formulation and computational solution techniques applied to mechanical multibody systems. Kinematics of motion, generalized coordinates and speeds, analytical and computational determination of inertia properties, generalized forces, Lagrange’s equations, holonomic and nonholonomic constraints, constraint processing, computational simulation.

ENGL 02101: Literary Studies For English Majors 3 s.h.
This course serves as an introduction to upper-level courses in the English Department and is required for freshman English majors. Using readings from all three genres, students will develop the skills and practice necessary for an analytical reading of literature and for writing critical essays about literature, using both primary and secondary sources.

ENGL 02110: Readings In British Literature 3 s.h.
Designed to give the student some idea of the scope and depth of English literature, this course deals with a limited number of writers from the earliest periods of English literature through the twentieth century. Such writers as Chaucer, Shakespeare, Milton, Swift, Wordsworth, Austen, Bronte, Dickens, Lawrence, Shaw, and Woolf are read and discussed.

ENGL 02112: Readings In Asian Literature 3 s.h.
This course provides students with some knowledge of and sensitivity to the literary traditions of India, China, and Japan. The course includes selected ancient, modern, and contemporary works from each of these three Asian cultures. Similarities and differences among these cultures, as well as between Asian and Western cultures, will be explored. Such works as the Ramayana, Shakuntala, and the Analects of Confucius, poetry of Li Po, short stories by Lu Hsun, Japanese haiku, Noh plays and short stories by modern Japanese writers will included.
ENGL 02113: Readings In U.S. Literature 3 s.h.
This broad review of American literature concentrates on some of the most important writings of the nineteenth and twentieth centuries, emphasizing the diversity of the American experience and including a focus on the issues of race, class, and gender. This introductory course includes works by authors such as Emerson, Thoreau, Douglass, Poe, Hawthorne, Melville, Whitman, Dickinson, Chopin, Wharton, Fitzgerald, Hemingway, Hurston, Hughes, Ellison, Wright, Morrison, and more recent writers.

ENGL 02116: Readings In Non-Western Literature 3 s.h.
Designed to give the student some knowledge of and sensitivity toward literature from around the world (exclusive of Europe and the United States), the course covers a limited number of ancient and modern works from Asia, the Near East, Africa, and Latin America. It emphasizes those perceptions, beliefs, and values that are different from ours.

ENGL 02123: Experiencing Literature 3 s.h.
This course increases students’ understanding and enjoyment of literature. By studying the major forms of literature—drama, novel, poetry, and short story—students will understand some of the distinguishing characteristics of each form, the special demands each form imposes upon the thoughtful reader, and some of the most useful ways to respond to these demands.

ENGL 02151: Readings In Shakespeare 3 s.h.
A general-education course, this class studies six to eight representative plays by Shakespeare, including examples of all four genres - comedy, tragedy, history, and romance. The course will consider closely character, theme, language, and theatrical values. This course may not be offered annually.

ENGL 02200: Women In Literature 3 s.h.
This course examines the aesthetic, historical, and social implications of a wide range of diverse texts written by women from medieval times to the present, examining the accomplishments of such significant women writers as Pizan, Murasaki, Woolstonecraft, Eliot, Jacobs, Wharton, Chopin, Woolf, Stein, Plath, Rich, Morrison, Lessing, and other more recent writers.

ENGL 02205: Adolescent Literature 3 s.h.
This course, a 200-level elective, examines contemporary understandings of adolescence as a developmental state betwixt and between childhood and adulthood through literature that is about adolescents and their concerns. The class will explore texts adults believe suitable for adolescents that may or may not have been written with them in mind but that are regularly taught or given to young adults, as well as literature written especially for them (Y.A. Literature). Central to this course is the idea that adolescence is a culturally constructed category of identity that varies across regions, time, race, class, gender and sexuality.

ENGL 02216: African American Literature Through Harlem Renaissance 3 s.h.
Intended for English, Africana Studies, and American Studies majors and minors as well as for students majoring in Liberal Studies: Humanities and Social Sciences and student pursuing a concentration in Women’s and Gender Studies, this course examines African American literature from its beginnings in the colonial period through the Harlem Renaissance. We will engage in close readings of seminar vernacular, autobiographical, poetic, creative, and critical texts, exploring the relationship between literary expression and the highly charged American social, cultural, and political histories that form its context. We will study African and African American writers, including Phillis Wheatley, Olaudah Equiano, Harriet Jacobs, Frederick Douglas, William Wells Brown, Frances Harper, W.E.B. DuBois, Booker T. Washington, Charles Chesnutt, Paul Laurence Dunbar, Zora Neale Hurston. Langston Hughes, and Jean Toomer.

ENGL 02217: U.S. Latino/A Literature 3 s.h.
This course surveys the development of contemporary U.S. literature written in English by Latino/a and Hispanic writers. Reading selections include poems, personal essays, short fiction, novels, and drama. This course may not be offered annually.

ENGL 02220: The Modern Short Story 3 s.h.
This course traces the development of the modern short story as a distinct form of literature. Students read and analyze stories by writers of various nationalities, and explore a wide range of themes and fictional techniques.

ENGL 02231: World Mythology 3 s.h.
World Mythology provides an introduction to variety of mythologies, which may include to Mesopotamian, Egyptian, Indian, Norse, Irish, Native Americans, and Greek and Roman mythologies. This course will discuss and analyze the narratives, characters and themes in those mythologies, as well as there similarities to and influences on British and American literatures.
Course Descriptions

ENGL 02234: Genre Studies: Drama In English
3 s.h.
Prerequisites: COMP 01111 or COMP 01105
The survey studies representative plays written in English from several periods and cultures. It focuses on the conventions of drama as a genre of literature.

ENGL 02235: Genre Studies: Poetry
3 s.h.
Prerequisite: College Composition I or Intensive College Composition I.
This survey studies the conventions, history, and formal development of poetry as a literary genre, requires students to have a command of poetry's basis elements (such as verse form, rhythm, and meter), and considers a wide range of poems written in English. This course is offered annually.

ENGL 02301: Literary Study Off-Campus
3 s.h.
This course permits students to study literature at important literary sites in the United States and abroad under the supervision of a faculty leader. Study includes preparatory reading, attendance at theatrical productions, tours of literary locales, theatres, writers' homes, and visits to the area's other important historical and cultural sites. Travel and program costs are borne by the students.

ENGL 02309: British Literature To Romanticism
3 s.h.
Prerequisites: COMP 01112
Intended for English majors and minors as well as for students majoring in Liberal Studies: Humanities and Social Sciences, this course surveys the key developments and trends in British literature and language from the eighth through the eighteenth century, from the Anglo-Saxon epic to the advent of commercial theatre and the rise of the novel. By examining representative canonical and noncanonical literary works, the course considers traditional periods and new theories and classifications of British literature. Students will consider the historical and theoretical contexts of assigned readings and, in addition to providing their competences on required papers and tests, will complete a signature assignment that will demonstrate a synthesis of critical thinking, reading, and writing.

ENGL 02311: British Literature Since Romanticism
3 s.h.
Prerequisites: COMP 01112
This course, intended for English majors and minors as well as for students majoring in Liberal Studies: Humanities and Social Sciences, surveys the key developments and trends in British literature and language from the late eighteenth century to the present by examining representative canonical and emerging literary works. It closely studies the relationship between literature and the specific social, political, and economic concerns it reflects. The course surveys literature of the Romantic, Victorian, modernist, and postmodern periods, including poets, novelists, dramatists, and prose essayists. It includes Irish and some contemporary post-colonial writers. Students will learn about historical and theoretical contexts underlying the assigned readings, and, in addition to providing their competence on required papers and tests, will complete a signature assignment that will demonstrate a synthesis of critical thinking, reading, and writing.

ENGL 02313: Us Literature To Realism
3 s.h.
Prerequisites: COMP 01112
Intended for English and American Studies majors and minors as well as for students majoring in Liberal Studies: Humanities and Social Sciences, this survey highlights literature in the colonial, revolutionary, and early national periods and the first half of the nineteenth century, and emphasizes writers such as Edwards, Wheatley, Bradstreet, Franklin, Emerson, Thoreau, Jacobs, Poe, Douglass, Melville, Hawthorne, Dickinson, and Whitman. Students will study the relationship between literature and the specific social, political, and economic concerns it reflects. Students will learn about historical and theoretical contexts underlying the assigned readings and, in addition to providing their competence on required papers and tests, will complete a signature assignment that will demonstrate a synthesis of critical thinking, reading, and writing.

ENGL 02315: Us Literature Since Realism
3 s.h.
Prerequisites: COMP 01112
Intended for English and American Studies majors and minors as well as for students majoring in Liberal Studies: Humanities and Social Sciences, this survey highlights subjects such as the rise of realism and naturalism, the modernist revolution, and postmodernism. This course also investigates and defines the major themes and the developing forms of American fiction, drama, and poetry in a survey of such authors as Twain, Howells, James, Chopin, Wharton, Hurston, Crane, Dreiser, Frost, O'Neill, Hemingway, Faulkner, Eliot, Stevens, Williams, Stein, Lowell, Bartheleme, Morrison, Alexie, Cisneros, and Erdrich. Students will learn about historical and theoretical contexts underlying the assigned readings and, in addition to providing their competence on required papers and tests, will complete a signature assignment that will demonstrate a synthesis of critical thinking, reading, and writing.
ENGL 02316: African American Literature Since Harlem Renaissance 3 s.h.
Prerequisites: COMP 01111 and COMP 01112 and ENGL 02101
Intended for English, Africana Studies, and American Studies majors and minors as well as for students majoring in Liberal Studies: Humanities and Social Sciences and students pursing a concentration in Women’s and Gender Studies, this course examines themes and issues commonly found in African American literature published since the Harlem Renaissance. We will analyze such theories of racial consciousness as invisibility, Black Power, and the Black Aesthetic, bearing in mind how certain historical, political, social, and cultural factors influenced the literature. While understanding the complex notions of race will be our focus, we will also consider how (or if) racial identity blends with other key components of the self such as gender, class, and nationality. We will read a variety of texts-from novels and plays to poetry and song lyrics-by authors Richard Wright, Gwendolyn Brooks, Ralph Ellison, Lorraine Hansberry, Malcolm X, August Wilson, Toni Morrison, Edwidge Danticat, Percival Everett, and others.

ENGL 02317: Children'S Literature: Texts And Contexts 3 s.h.
Prerequisites: ENGL 02101 which may be taken concurrently, COMP 01111 or COMP 01105, and COMP 01112
This course will introduce students to a range of literature written for children from the eighteenth through the twenty-first century. Students will place the literary works in historical and cultural context to analyze how changing constructions of childhood and adulthood shape the texts children read. This course may not be offered annually.

ENGL 02322: Literature Of The American Renaissance 3 s.h.
Prerequisites: COMP 01111 and COMP 01112 and ENGL 02101
This course focuses on the literature of the American Renaissance (1830-1860). This study of works by writers like Cooper, Bryant, Irving, Poe, Emerson, Douglass, Thoreau, Hawthorne, Melville, Longfellow, Whitman, Stowe, Jacobs, and Dickinson will cover the three major characteristics of the period: the movement from classicism to romanticism in the early writers; the development of literary nationalism, and an increasing interest in exploring what it means to be an American; and, finally, the beginnings of literary realism with the approach of the Civil War. This course may not be offered annually.

ENGL 02324: American Realism And Naturalism 3 s.h.
Prerequisites: ENGL 02101 which allows concurrency, and (COMP 01111 or COMP 01105) and COMP 01112
Students will read U.S. fiction produced between 1865 and 1914, studying its rejection of popular romanticism and its advocacy of a representational style concurrent with an increasingly urban, industrial society. Realist writers may include W.D. Howells, Mark Twain, Henry James, Charles Chesnutt, Kate Chopin, and Willa Cather. Naturalist writers may include Stephen Crane, Theodore Dreiser, Jack London, and early Edith Wharton.

ENGL 02327: Modern American Poetry 3 s.h.
Prerequisites: COMP 01111 and COMP 01112 and ENGL 02101
This course studies poets as varied as Eliot, Williams, Crane, Stevens, Frost, Rich, Moore, Plath, Brooks, Bly, and Ginsberg. Among our concerns are subject, form, and critical reactions. ENGL 02330 3 s.h.

ENGL 02330: Classical Literature In Translation 3 s.h.
Prerequisites: COMP 01111 and COMP 01112 and ENGL 02101
This course covers works by Homer, Aeschylus, Sophocles, Euripides, Plato, Thucydides, Lucretius, Virgil, Horace, Ovid, and Catullus. Students learn why these figures are truly classic: they provide the indispensable foundation for much of Western intellectual history. This course may not be offered annually.

ENGL 02338: Special Topics In Non-Western Literature 3 s.h.
Prerequisites: COMP 01111 and COMP 01112
This course focuses on significant literary works generally omitted from the Western canon. In this course students will gain an in-depth understanding and appreciation of the literature and cultures outside of North America and Europe. The changing topic and texts will be chosen by faculty and may cover the literature of Africa, Asia, Latin America, and/or the Caribbean. This course may not be offered annually.

ENGL 02340: Literary Theory 3 s.h.
Prerequisites: COMP 01111 and COMP 01112 and ENGL 02101
Literary Theory provides an introduction to a variety of theories about both the roles of literature and how it should be read. The course may cover Ancient Greek, neo-Platonist, Renaissance, Romantic, Victorian, New Critical, Psychoanalytical, Marxist, Feminist, Deconstructive and other postmodern theories. Students will both analyze these theories and use them for interpreting a variety of literary texts.
ENGL 02345: Shakespeare I  
Prerequisites: COMP 01112  
This course, intended for English majors, minors, Theatre majors, and students majoring in Liberal Studies: Humanities and Social Sciences, is a survey of the major plays of Shakespeare's career. It considers traditional and emerging critical approaches to the plays as dramatic texts. It covers representative plays from each of the major Shakespearean genres (tragedy, comedy, history, romance) with an emphasis on the historical, formal, and theoretical contexts underlying character, theme, style, language, genre, and performance. It examines the social, cultural, and political contexts of Shakespeare's plays, with a special emphasis on performance and adaptation in both the early modern era and the twenty-first century.

ENGL 02392: Independent Study (English)  
3 to 6 s.h.  
The course gives students an opportunity to study independently in order to strengthen their background in a particular area of literary studies.

ENGL 02393: English Seminar I - Writing Intensive  
Prerequisites: ENGL 02101  
This course is required of all English majors in the junior year. Each seminar deals with a particular writer, theme, or problem in literature or language and is designed to develop the students' ability to write clearly, logically, and cogently.

ENGL 02394: English Seminar II - Writing Intensive  
Prerequisites: ENGL 02101 and ENGL 02393  
This capstone course is required of all English majors in their senior year. Each seminar enables a small group of students to investigate intensively an area of literature under a professor competent in the field. While subjects vary annually, all seminars emphasize individual guidance, class discussion, oral and written reports, and require a long research paper.

ENGL 02410: Internship In English  
3 s.h.  
This course provides the opportunity for students majoring in English to apply the skills they have developed in the course of their studies in a supervised work situation. Students will create a portfolio, keep journals, and meet with the faculty internship coordinator regularly. This course may be utilized within the 24-hour free elective distribution only.

ENGL 02417: Special Topics In Literature  
Prerequisites: ENGL 02101 and COMP 01112  
This course focuses on significant literary works, themes, periods, writers, or genres not normally taught or covered in the traditional upper-level electives. Repeatable when topics vary. This course may not be offered annually.

ENGL 02421: The English Novel  
Prerequisites: COMP 01111 and COMP 01112  
This course studies the English novel from its inception to the present. It analyzes style, structure, characterization, and theme; it stresses the novel as a relevant social document. Richardson, Fielding, Austen, Bronte, Thackeray, Dickens, Hardy, Lawrence, and Joyce are among those novelists taught. This course may not be offered annually.

ENGL 02423: The American Novel  
Prerequisites: COMP 01111 and COMP 01112 and ENGL 02101  
This course investigates the development of American novelists' contributions to this art form by focusing on the themes and techniques of major American works. It focuses on writers such as Hawthorne, Melville, Twain, Howells, James, Wharton, Dreiser, Cather, Hemingway, Fitzgerald, Faulkner, and Wright.

ENGL 02424: American Dramatists  
Prerequisites: COMP 01111 or COMP 01115 and COMP 01112  
Intended for students in English, American Studies, Theatre, and Liberal Studies: Humanities/Social Science, this course analyzes canonical, neglected, and contemporary plays from 20th and 21st centuries. Its goals is to study American drama after 1900, emphasizing its formal and thematic developments. As an upper-level English elective, it requires students to think and write critically about the history and traditions of American drama. This course may not be offered annually.

ENGL 02425: Contemporary Literature  
Prerequisites: COMP 01111 and COMP 01112  
This course, an upper-level elective, explores literature written within the students' lifetimes, enabling students to gain fluency in different ways of reading and different kinds of writing. Students will explore the social relevance of texts and of the act of reading as they examine the recent developments in the literary tradition, especially as they may relate to issues of race, class, gender, sexuality, political hegemonies, and current literary theory. This course may not be offered annually.
ENGL 02430: Anglo-Saxon And Medieval Literature 3 s.h.
Prerequisites: ENGL 02101
This course studies the foundations of English language and literature from its beginnings through the fifteenth century, proceeding from the relatively limited selection of Anglo-Saxon poetry and prose to the profusion of literary genres extant in the Middle Ages. Although almost all texts will be read in translation, some attention will be devoted to understanding the major characteristics of the Anglo-Saxon language and Middle English. Selections from continental writers of the period may also be included. This course may not be offered annually.

ENGL 02440: Chaucer 3 s.h.
Prerequisites: COMP 01111 and COMP 01112 and ENGL 02101
This course serves as an introduction to the poetry of Chaucer, to the language which he used, and to the times in which he lived. Typically, readings are taken from The Canterbury Tales and Troilus and Criseyde. This course may not be offered annually.

ENGL 02441: English Renaissance Literature 3 s.h.
Prerequisites: COMP 01111 and COMP 01112 and ENGL 02101
The content of this course may vary from year to year according to the needs and interests of the students. Studies may be made of the epic, the lyric, drama (non-Shakespearean), fiction, or other literary types, always against a background of Renaissance ideas. This course may not be offered annually.

ENGL 02445: Shakespeare II 3 s.h.
Prerequisite: COMP 01111 and COMP 01112 and ENGL 02101
This course, intended for English majors and minors, is an in-depth exploration of the dramatic and non-dramatic works of Shakespeare. Building on the foundation of Shakespeare I, this course focuses on new and emerging critical approaches to Shakespeare, and examines Shakespear's major and minor works in the social, cultural, religious, and political contexts of early modern Europe.

ENGL 02460: Restoration And 18th-Century British Literature 3 s.h.
Prerequisites: COMP 01111 and COMP 01112 and ENGL 02101
This course studies poetry, non-fiction prose, and drama from 1660 to 1798. This course may not be offered annually.

ENGL 02471: English Romanticism 3 s.h.
Prerequisites: COMP 01111 and COMP 01112 and ENGL 02101
This course studies the major figures of the English Romantic period. It pays particular attention to the poetry of Blake, Wordsworth, Coleridge, Byron, Shelley, and Keats, in an effort to define, analyze, and understand this important literary and social movement. This course may not be offered annually.

ENGL 02472: Victorian Literature 3 s.h.
Prerequisites: COMP 01111 and COMP 01112
This course concentrates upon the major works of English poetry and non-fictional prose from 1830 to 1900. Readings center upon such major figures as Tennyson, Browning, Arnold, Carlyle, Ruskin, Mill, and Newman. Lectures and discussions clarify the readings and indicate the relation of the literature to the most important intellectual movements of the century. This course may not be offered annually.

ENGL 02473: Twentieth Century British Literature 3 s.h.
Prerequisites: COMP 01111 and COMP 01112 and ENGL 02101
This course studies and discusses the works of leading poets, playwrights, and novelists—such figures as Woolf, Shaw, Lawrence, Yeats, Joyce, Stoppard, Hughes, Heaney, and Friel. It places some emphasis on the relationship between this literature and the historical, economic, and social background of the period. This course may not be offered annually.

ENGL 02482: Modern European Literature 3 s.h.
Prerequisites: COMP 01111 and COMP 01112
This course emphasizes the relation between literature and contemporary life—political, social, and philosophic. It studies movements such as realism, expressionism, relativism, and existentialism, examining such authors as Ibsen, Strindberg, Pirandello, Zamiatin, Sartre, Camus, Kafka, Beckett, Ionesco, and Weiss. This course may not be offered annually.

ENGL 05301: American English Grammar 3 s.h.
This course emphasizes traditional grammar and seeks to give the student a practical understanding of the structure of contemporary American English grammar. Procedures include lecture, class discussion, and the working out of grammatical problems, including sentence diagramming.
AFRI 16440: Special Topics In Foreign Languages And Literatures  
Prerequisites: appropriate language proficiency as determined by the professor
This course brings new perspectives and themes to the established Foreign Languages and Literatures curriculum. Each semester the instruction of this course rotates among faculty members who select topics according to their current scholarly interests. In this way, the course expands options for upper-level electives.

ARAB 12101: Elementary Arabic I  
3 s.h.
This is a comprehensive foundation course for beginning students of Modern Standard Arabic. It offers an essential grounding for developing successful communication strategies by practicing listening comprehension and speaking skills with the sounds and characteristics of Arabic. It will also provide students with opportunities to read and write simple Arabic prose to meet their communication needs. It introduces students to the culture and history of the Arabic speaking world.

ARAB 12102: Elementary Arabic II  
Prerequisites: ARAB 12101
(Continuation of Elementary Arabic I) This course provides an expanded overview of the syntax, structures and vocabulary of Modern Standard Arabic, including extended practice in the four skill areas of listening comprehension, speaking, reading and writing. It introduces students to the culture and history of the Arabic-speaking world.

ARAB 12201: Intermediate Arabic I  
Prerequisites: Elementary Arabic II (ARAB 12.102) OR PERMISSIONS OF THE INSTRUCTOR.
This course continues to provide an expanded overview of the syntax, structures, and vocabulary of modern Arabic to students who have completed the Elementary Arabic course sequence and acquired the basic knowledge of Arabic language. It also provides students with enhanced opportunities to learn and experience the culture and history of the Arabic-speaking world.

ARAB 12202: Intermediate Arabic II  
Prerequisites: Intermediate Arabic I (ARAB 12.201) OR Permission of the Instructor.
This course continues to provide an expanded overview of the syntax, structures, and vocabulary of modern Arabic to students who have completed the Intermediate Arabic I and acquired the basic knowledge of Arabic language. It also provides students with enhanced opportunities to learn and experience the culture and history of the Arabic-speaking world.

ARAB 12440: Special Topics In Foreign Languages And Literatures  
Prerequisites: appropriate language proficiency as determined by the professor
This course brings new perspectives and themes to the established Foreign Languages and Literatures curriculum. Each semester the instruction of this course rotates among faculty members who select topics according to their current scholarly interests. In this way, the course expands options for upper-level electives.

CHIN 07101: Elementary Chinese I  
3 s.h.
This is a beginning course in Chinese (Mandarin) for students who have not previously studied the language. It covers the mechanics of the Chinese language, including intensive practice in listening comprehension and speaking. It will also introduce students to basic Chinese reading and writing skills.

CHIN 07102: Elementary Chinese II  
Prerequisites: CHIN 07101
This is a beginning course in Chinese (Mandarin) for students who have taken Elementary Chinese I. It covers the mechanics of the Chinese language including intensive practice in listening comprehension and speaking. It will also offer exercises for students to develop skills in reading and writing the language.

CHIN 07201: Intermediate Chinese I  
Prerequisites: CHIN 07101 and CHIN 07102
This intermediate level Chinese language course provides students the opportunity to develop further their listening comprehension and competence in spoken Chinese, their ability to engage in more substantial conversations in a variety of learning, work, and social settings. It will also help students build and utilize their knowledge of the Chinese way of life culture in conjunction with learning the notions and functions of the language. The course also focuses on students' ability to read and write simple Chinese prose for their communication needs.
### CHIN 07211: Intermediate Chinese II 3 s.h.
**Prerequisites:** CHIN 07101 and CHIN 07102 and CHIN 07201

Intermediate Chinese II continues to provide students the opportunity to develop further their competence in listening comprehension and in spoken Chinese, their ability to engage in more substantial conversations in additional learning, work and social settings. It will advance and enrich their knowledge of Chinese culture enabling them to understand how to function in a culturally appropriate manner and to develop and appreciate more subtlety in language use. The course continues to help students improve their ability to read and write simple Chinese prose for their communication needs.

### CHIN 07400: Independent Study - Chinese III 3 s.h.

### CHIN 07440: Special Topics In Foreign Languages And Literatures 3 s.h.
**Prerequisites:** appropriate language proficiency as determined by the professor

This course brings new perspectives and themes to the established Foreign Languages and Literatures curriculum. Each semester the instruction of this course rotates among faculty members who select topics according to their current scholarly interests. In this way, the course expands options for upper-level electives.

### FREN 02100: Masterpieces Of French Literature In English Translation 3 s.h.

This course introduces students to the reading of French literary works in English translation. Students acquire a vocabulary of basic critical terms necessary for the discussion and analysis of narrative works, poetry and theatrical texts. Through close reading of several texts per genre, students develop critical thinking skills and improve expository speaking and writing skills. This course may be offered abroad.

### FREN 02101: Elementary French I 3 s.h.
**Prerequisites:** FREN 02101

This is a beginning course in French for students who have not previously studied French. This course covers the mechanics of the French language including intensive practice in listening comprehension, speaking, reading and writing.

### FREN 02102: Elementary French II 3 s.h.
**Prerequisites:** FREN 02101

(Continuation of French I) This course focuses on the students' continued development of communicative competence in French with emphasis on the four skill areas of speaking, reading, writing and listening comprehension.

### FREN 02201: Intermediate French I 3 s.h.
**Prerequisites:** FREN 02201

This course is open to students who have had some limited contact with the French language. It offers expanded practice in listening comprehension, speaking, reading and writing.

### FREN 02205: Oral French 3 s.h.
**Prerequisites:** FREN 02211

An intermediate-level conversation course which develops a broad range of active vocabulary as well as verbal patterns leading to greater facility in manipulating the spoken language.

### FREN 02211: Intermediate French II 3 s.h.
**Prerequisites:** FREN 02201

This course is open to students who have had some limited contact with the French language. It offers expanded practice in listening comprehension, speaking, reading and writing.

### FREN 02212: French Reading And Composition 3 s.h.
**Prerequisites:** FREN 02211

This course offers a broad grammar review based on readings, practical use of the language, written compositions and dictations.

### FREN 02300: French Phonetics 3 s.h.
**Prerequisites:** FREN 02211

This course provides a scientific study of French based upon the international phonetic system. It emphasizes diction and phonetic transcription and the correction of individual problems in pronunciation.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FREN 02311</td>
<td>Advanced French Conversation</td>
<td>3 s.h.</td>
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<tr>
<td>Prerequisites: FREN 02212</td>
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<tr>
<td>This course provides practice in speaking French at conversational speed. It emphasizes clarity and fluency of expression. Classes include discussions in French on topics of contemporary interest. The class uses both formal and informal methods to broaden students' vocabulary and enhance their speaking skills.</td>
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</tbody>
</table>

| FREN 02315  | Introduction To French Literature                | 3 s.h.  |
| Prerequisites: FREN 02212 |
| This course presents selected representative works of French literature within their social and cultural setting from the Middle Ages to the 19th century in original French texts. The course enhances listening comprehension, speaking, reading and writing proficiency through literature. |

| FREN 02320  | French Civilization And Culture                 | 3 s.h.  |
| Prerequisites: FREN 02212 |
| This course provides students with a more profound insight into the varied aspects of contemporary France, its civilization and culture. |

| FREN 02324  | Appreciation Of French Literature               | 3 s.h.  |
| Prerequisites: FREN 02212 |
| This course introduces students to the reading of French literary texts. Students acquire a vocabulary of basic critical terms necessary for the discussion and analysis of narrative works, poetry and theatrical texts. Through close reading of at least one text per genre, students develop critical approaches with emphasis on the *Explication de Texte* method. |

| FREN 02325  | Readings In Contemporary French Literature      | 3 s.h.  |
| Prerequisites: FREN 02212 |
| This course deals with the main currents shaping contemporary French literature. It selects readings which best bring into focus the characteristics of the time. It emphasizes reading as communication, with analysis and practice of the techniques of effective reading in French. |

| FREN 02326  | The French Novel                                | 3 s.h.  |
| Prerequisite: FREN 02212 |
| This course consists of an analysis of the French novel from the beginning to the present day. Students read and discuss selected major works. |

| FREN 02400  | History Of The French Language                  | 3 s.h.  |
| Prerequisites: FREN 02212 |
| This course gives students an overview of the historical evolution of French from its Latin roots to present-day varieties spoken in France and the Francophone cultures. It provides an introduction to the science of linguistics. |

| FREN 02410  | Advanced French Composition                     | 3 s.h.  |
| Prerequisites: FREN 02212 |
| This course provides a systematic study of the problems of translation and of the practical application of written patterns, thus encouraging greater command of writing skills. It gives considerable attention to stylistics. |

| FREN 02420  | Evolution Of French Civilization                | 3 s.h.  |
| Prerequisite: FREN 02212 |
| This course surveys French history, art and social institutions as well as the contributions of France to Western Civilization. |

| FREN 02421  | The French Short Story                          | 3 s.h.  |
| Prerequisites: FREN 02212 |
| This course analyzes the French short story in its various aspects. It studies in detail selected works of major authors in the genre. |

| FREN 02435  | Individual Study (French)                      | 3 to 6 s.h. |
| Prerequisites: FREN 02212 |
| Students may contract with an instructor to be examined on assigned readings in various areas of French literature. Non-minors may do the readings in translation; French minors must do the readings in French. No more than 3 semester hours may be taken in any one semester. |
FREN 02440: Special Topics In Foreign Languages And Literatures 3 s.h.
Prerequisites: appropriate language proficiency as determined by the professor
This course brings new perspectives and themes to the established Foreign Languages and Literatures curriculum. Each semester the instruction of this course rotates among faculty members who select topics according to their current scholarly interests. In this way, the course expands options for upper-level electives.

GERM 03100: Masterpieces Of German Literature In English Translation 3 s.h.
This course introduces students to German literature in English translation. Using readings from a range of literary genres, students acquire knowledge of the basic critical terms necessary for the discussion and analysis of narrative works, poetry and theatrical texts. Through close reading of such works, students develop an appreciation of the cultural and sociopolitical forces that inform German-speaking civilization. This course may be offered abroad.

GERM 03101: Elementary German I 3 s.h.
This beginning course is open to students who have not previously studied German. This course covers mechanics of the language, including intensive practice in listening comprehension, speaking, reading and writing.

GERM 03102: Elementary German II 3 s.h.
Prerequisites: GERM 03101
(Continuation of Elementary German I) This course focuses on the students' continued development of communicative competence in German with emphasis on the four skill areas of speaking, reading, writing and listening comprehension.

GERM 03201: Intermediate German I 3 s.h.
Prerequisites: GERM 03102
This course is open to students who have had some limited contact with the German language. It offers expanded practice in listening comprehension, speaking, reading and writing.

GERM 03211: Intermediate German II 3 s.h.
Prerequisites: GERM 03201
This course is open to students who have had some limited contact with the German language. It offers expanded practice in listening comprehension, speaking, reading and writing.

GERM 03212: German Reading And Composition 3 s.h.
Prerequisites: GERM 03211
This course offers a broad grammar review based on readings, practical use of the language, written compositions and dictations.

GERM 03311: Advanced German Conversation 3 s.h.
This advanced conversation course uses topics from the contemporary German press. It emphasizes clarity and fluency of expression and includes discussions in German on topics of contemporary interest which lead to the active expansion of vocabulary.

GERM 03320: German Civilization And Culture 3 s.h.
This course surveys German history, arts and social institutions as well as Germany's contributions to Western civilization.

GERM 03435: INDEPENDENT STUDY GERMAN 3 s.h.

GERM 03440: Special Topics In Foreign Languages And Literatures 3 s.h.
Prerequisites: appropriate language proficiency as determined by the professor
This course brings new perspectives and themes to the established Foreign Languages and Literatures curriculum. Each semester the instruction of this course rotates among faculty members who select topics according to their current scholarly interests. In this way, the course expands options for upper-level electives.

ITAL 04101: Elementary Italian I 3 s.h.
This introductory course is open to students who have not previously studied Italian. This course studies Italian language structures and patterns and offers practice in articulating these patterns. It also gives some attention to other language skills, such as listening comprehension, speaking, reading and writing.
## Course Descriptions

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ITAL 04102</td>
<td>Elementary Italian II</td>
<td>3 s.h.</td>
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<tr>
<td><strong>Prerequisites:</strong> ITAL 04101</td>
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<td></td>
<td>(Continuation of Elementary Italian I) This course focuses on the students' continued development of communicative competence in Italian with emphasis on the four skill areas of speaking, reading, writing and listening comprehension.</td>
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<tr>
<td>ITAL 04201</td>
<td>Intermediate Italian I</td>
<td>3 s.h.</td>
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<tr>
<td><strong>Prerequisites:</strong> ITAL 04102</td>
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<tr>
<td></td>
<td>This course is open to students who have had some limited contact with the Italian language. It surveys grammar and language patterns and offers expanded practice particularly in speaking and reading in the language.</td>
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<tr>
<td>ITAL 04211</td>
<td>Intermediate Italian II</td>
<td>3 s.h.</td>
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<tr>
<td><strong>Prerequisites:</strong> ITAL 04201</td>
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<tr>
<td></td>
<td>This course is open to students who have had some limited contact with the Italian language. It surveys grammar and language patterns and offers expanded practice particularly in speaking and reading in the language.</td>
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<tr>
<td>ITAL 04440</td>
<td>Special Topics In Foreign Languages And Literatures</td>
<td>3 s.h.</td>
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<tr>
<td><strong>Prerequisites:</strong> appropriate language proficiency as determined by the professor</td>
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<td></td>
<td>This course brings new perspectives and themes to the established Foreign Languages and Literatures curriculum. Each semester the instruction of this course rotates among faculty members who select topics according to their current scholarly interests. In this way, the course expands options for upper-level electives.</td>
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<tr>
<td>JAPA 08101</td>
<td>Elementary Japanese I</td>
<td>3 s.h.</td>
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<td>This is a comprehensive foundation course for beginning students of modern Japanese. It offers an essential grounding for developing successful communication strategies by practicing listening comprehension and speaking skills, emphasizing the sounds and speech patterns of Japanese. It will also provide students with opportunities to read and write simple Japanese prose to meet their communication needs. It introduces students to the culture and history of the Japanese-speaking world.</td>
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<tr>
<td>JAPA 08102</td>
<td>Elementary Japanese II</td>
<td>3 s.h.</td>
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<tr>
<td><strong>Prerequisites:</strong> JAPA 08101</td>
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<tr>
<td></td>
<td>This course provides an expanded overview of the syntax, structures and vocabulary of modern Japanese, including extended practices in the four skill areas of listening comprehension, speaking, reading and writing. It introduces students to and amplifies their knowledge of the culture and history of Japan.</td>
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<tr>
<td>JAPA 08201</td>
<td>Intermediate Japanese I</td>
<td>3 s.h.</td>
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<tr>
<td><strong>Prerequisite:</strong> JAPA 08102</td>
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<tr>
<td></td>
<td>This course continues to provide an expanded overview of the syntax, structures, and vocabulary of modern Japanese to students who have completed the Elementary Japanese course sequence and acquired basic knowledge of the Japanese language. It also provides students with enhanced opportunities to learn and experience the culture and history of Japan.</td>
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<tr>
<td>JAPA 08211</td>
<td>Intermediate Japanese II</td>
<td>3 s.h.</td>
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<tr>
<td><strong>Prerequisite:</strong> JAPA 08201</td>
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<td></td>
<td>This course is a continuation of Intermediate Japanese I (JAPA 08.201) and focuses on learning modern Japanese with equal emphasis on speaking, listening comprehension, reading and writing. It also provides students further opportunities to learn and experience in depth the culture and history of Japan.</td>
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<tr>
<td>JAPA 08212</td>
<td>Intermediate Japanese III</td>
<td>3 s.h.</td>
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<tr>
<td><strong>Prerequisite:</strong> Intermediate Japanese II (JAPA 08.211)</td>
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<td>This course focuses on the students' continued development of communicative competence in Japanese, with practice in the four skill areas of speaking, reading, writing, and listening comprehension. The course also targets preparation and practice for the Japanese Language Proficiency Test (JLPT). In addition, it provides further opportunities for in-depth study of the culture and history of Japan.</td>
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<tr>
<td>LAT 09101</td>
<td>Elementary Latin I</td>
<td>3 s.h.</td>
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<td></td>
<td>This is a beginning course in Latin. It emphasizes Latin grammar and vocabulary. Students will also read representative Latin prose selections, including the writings of Caesar.</td>
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<tr>
<td>LAT 09102</td>
<td>Elementary Latin II</td>
<td>3 s.h.</td>
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<tr>
<td><strong>Prerequisites:</strong> Latin 09101</td>
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<tr>
<td></td>
<td>This is a beginning course in Latin continuing from Elementary Latin I. It emphasizes Latin grammar and vocabulary. Students will also read representative Latin prose selections, including the writings of Caesar.</td>
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</tbody>
</table>
Course Descriptions

LAT 09440: Special Topics In Foreign Languages And Literatures 3 s.h.
Prerequisites: appropriate language proficiency as determined by the professor
This course brings new perspectives and themes to the established Foreign Languages and Literatures curriculum. Each semester the instruction of this course rotates among faculty members who select topics according to their current scholarly interests. In this way, the course expands options for upper-level electives.

RUSS 06101: Elementary Russian I 3 s.h.
This beginning course is open to students who have not previously studied Russian. It covers mechanics of the language, practice in articulating Russian speech patterns and reading in Russian.

RUSS 06102: Elementary Russian II 3 s.h.
Prerequisites: RUSS 06101
(Continuation of Elementary Russian I) This course focuses on the emphasis on the students' continued development of communicative competence in Russian with emphasis on the four skill areas of speaking, reading, writing and listening comprehension.

RUSS 06201: Intermediate Russian I 3 s.h.
Prerequisites: RUSS 06102
This course is open to students who have had some limited contact with the Russian language. It surveys grammar and offers expanded practice, particularly in speaking and reading.

RUSS 06211: Intermediate Russian II 3 s.h.
Prerequisites: RUSS 06.201
This course is open to students who have had some limited contact with the Russian language. It surveys grammar and offers expanded practice, particularly in speaking and reading.

RUSS 06345: Russian Literature In Translation I 3 s.h.
This course studies the major works of Russian prose, poetry and drama of the 18th and 19th Centuries in the context of political, cultural and intellectual history.

RUSS 06347: Women In Russian Literature (In Translation) 3 s.h.
This course presents the image and role of Russian women from the 18th to the 20th centuries as reflected in Russian literature. The language of instruction is English.

RUSS 06440: Special Topics In Foreign Languages And Literatures 3 s.h.
Prerequisites: appropriate language proficiency as determined by the professor
This course brings new perspectives and themes to the established Foreign Languages and Literatures curriculum. Each semester the instruction of this course rotates among faculty members who select topics according to their current scholarly interests. In this way, the course expands options for upper-level electives.

SPAN 05100: Masterpieces Of Hispanic Literature In English Translation 3 s.h.
This course introduces students to the reading of Hispanic literary works in English translation. Students acquire a vocabulary of basic critical terms necessary for the discussion and analysis of narrative works, poetry and theatrical texts. Through close reading of several texts per genre, students develop critical thinking skills and improve expository writing and speaking skills. This course may be offered abroad.

SPAN 05101: Spanish I 3 s.h.
(No prerequisite) This course introduces the Spanish language and focuses on the students' development of communicative competence in Spanish with emphasis on the four skill areas of listening, comprehension, speaking, reading and writing.

SPAN 05102: Spanish II 3 s.h.
Prerequisites: SPAN 05101
(Continuation of Spanish I) This course focuses on the students' continued development of communicative competence in Spanish with emphasis on the four skill areas of speaking, reading, writing and listening comprehension.

SPAN 05104: Accelerated Business Spanish I 3 s.h.
This course introduces the Spanish language and focuses on the students' development of communicative competence in Spanish with emphasis on the four skill areas of listening comprehension, speaking, reading and writing. It is also designed to introduce students to the Spanish-speaking business world through practical activities and business-related vocabulary and concepts. The course is designed to complement the business student's curriculum in a practical, accelerated method of delivery.
## Course Descriptions

<table>
<thead>
<tr>
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<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 05106</td>
<td>Accelerated Business Spanish II</td>
<td>3 s.h.</td>
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<tr>
<td></td>
<td><strong>Prerequisites:</strong> SPAN 05104 and/or SPAN 05101</td>
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<td></td>
<td>(Continuation of Accelerated Business Spanish I) This course focuses on the students’ continued development of communicative competence in Spanish with emphasis on the four skill areas of listening comprehension, speaking, reading and writing. It is also designed to continue introducing students to the Spanish-speaking business world through practical activities and business-related vocabulary and concepts. The course is designed to complement the business student’s curriculum in a practical, accelerated method of delivery.</td>
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<tr>
<td>SPAN 05201</td>
<td>Spanish III</td>
<td>3 s.h.</td>
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<td></td>
<td><strong>Prerequisites:</strong> SPAN 05102</td>
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<td></td>
<td>(Continuation of Spanish I and II) This course focuses on the students’ continued development of communicative competence in Spanish with emphasis on the four skill areas of speaking, reading, writing and listening comprehension.</td>
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<tr>
<td>SPAN 05203</td>
<td>Accelerated Business Spanish III</td>
<td>3 s.h.</td>
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<td></td>
<td><strong>Prerequisites:</strong> SPAN 05106 and/or SPAN 05102</td>
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<td></td>
<td>(Continuation of Accelerated Business Spanish I and II) This course focuses on the students’ continued development of communicative competence in Spanish with emphasis on the four skill areas of listening comprehension, speaking, reading and writing. It is also designed to increase students’ understanding of the Spanish-speaking business world through practical activities and business-related vocabulary and concepts. The course is designed to complement the business student’s curriculum in a practical, accelerated method of delivery.</td>
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<tr>
<td>SPAN 05211</td>
<td>Spanish Reading And Conversation</td>
<td>3 s.h.</td>
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<td></td>
<td><strong>Prerequisites:</strong> SPAN 05201</td>
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<td></td>
<td>This course focuses on the students’ continued development of communicative competence in Spanish with practice in the four skill areas of speaking, reading, writing and listening comprehension, in addition to greater emphasis on reading skills and oral production.</td>
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<tr>
<td>SPAN 05212</td>
<td>Spanish Reading And Composition</td>
<td>3 s.h.</td>
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<td></td>
<td><strong>Prerequisites:</strong> SPAN 05211</td>
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<td></td>
<td>This course focuses on the students’ continued development of communicative competence in Spanish with special emphasis on written communication. Students will produce descriptive, narrative and expository texts.</td>
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<tr>
<td>SPAN 05221</td>
<td>Accelerated Business Spanish Reading &amp; Conversation</td>
<td>3 s.h.</td>
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<td></td>
<td><strong>Prerequisites:</strong> SPAN 05203 and/or SPAN 05201</td>
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<td></td>
<td>This course focuses on the students’ continued development of communicative competence in Spanish with practice in the four skill areas of listening comprehension, speaking, reading and writing. It places greater emphasis on reading skills centered on business-related texts and also on oral production concerning business-related situations. In addition, it is designed to increase students’ understanding of the Spanish-speaking business culture through practical activities and business-related vocabulary and concepts. It complements the business student’s curriculum through a practical, accelerated method of delivery.</td>
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<tr>
<td>SPAN 05350</td>
<td>Introduction To Anthropological Linguistics</td>
<td>3 s.h.</td>
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<td>Students in this interdisciplinary course will engage in the scientific study of language with particular reference to the relationships among the languages, thoughts, and cultures of speech communities living all over the world, including within the United States, France, India, Canada, Spain, Japan and Peru, among others. Additional course topics include the process of human language acquisition, structures of human language, bilingualism and the ways in which race, class, gender, and other social characteristics may be displayed through the use of language.</td>
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<tr>
<td>SPAN 05300</td>
<td>Spanish Phonetics</td>
<td>3 s.h.</td>
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<td></td>
<td><strong>Prerequisites:</strong> SPAN 05212</td>
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<td></td>
<td>This course provides a scientific study of Spanish pronunciation based upon the international phonetic system. It emphasizes exercises in diction and phonetic transcription and the correction of individual problems in pronunciation.</td>
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<tr>
<td>SPAN 05301</td>
<td>Appreciation Of Hispanic Literature</td>
<td>3 s.h.</td>
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<td></td>
<td><strong>Prerequisites:</strong> SPAN 05212</td>
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<td></td>
<td>This course introduces students to the reading of Hispanic literary texts. Students acquire a vocabulary of basic critical terms necessary for the discussion and analysis of narrative works, poetry, and theatrical texts. Through close reading of at least one text per genre, students develop critical approaches with emphasis on the &quot;comentario de textos&quot; method.</td>
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## Course Descriptions

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>SPAN 05302:</td>
<td>Introduction To Hispanic Linguistics</td>
<td>3 s.h.</td>
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<tr>
<td>Prerequisites:</td>
<td>SPAN 05301</td>
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<td></td>
<td>This course will introduce students to the major subfields of Hispanic linguistics, including phonology (sound structure), morphology (word structure), syntax (sentence structure), semantics (structure of meaning), pragmatics (language use), language change and sociolinguistics (language use among speakers with different social and geographical backgrounds).</td>
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<tr>
<td>SPAN 05305:</td>
<td>Oral Spanish</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>Prerequisites:</td>
<td>SPAN 0521</td>
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<td></td>
<td>This course is open to students who wish to improve their spoken Spanish skills. Its design reflects the objectives of current national trends in encouraging oral Spanish production as outlined and measured by the ACTFL standards. Students will develop greater grammatical accuracy and control, the ability to describe and narrate, and greater facility in the production of sentences and oral paragraphs.</td>
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<tr>
<td>SPAN 05312:</td>
<td>Spanish For Business A</td>
<td>3 s.h.</td>
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<tr>
<td>Prerequisites:</td>
<td>SPAN 05212 or SPAN 05221</td>
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<td></td>
<td>This course is designed to help students interact with Hispanic communities on a business level, by improving their verbal and written skills, and exposing them to authentic print and visual media from the world of banking, advertising, and commerce. It stresses the development of functional language skills for real-life purposes within an accurate cultural context that reflects the variety of the Hispanic world.</td>
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<tr>
<td>SPAN 05313:</td>
<td>Spanish For Medical Personnel</td>
<td>3 s.h.</td>
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<tr>
<td>Prerequisites:</td>
<td>SPAN 0521</td>
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<td></td>
<td>This course is designed to give students and practicing medical personnel the conversational and cultural tools they need to interact with Hispanic communities in a clinical setting. It stresses the development of functional language skills while addressing the special concerns of medical personnel with Spanish-speaking patients and their families in hospitals, emergency rooms, doctors' offices and clinics.</td>
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<tr>
<td>SPAN 05314:</td>
<td>Spanish For Business B</td>
<td>3 s.h.</td>
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<tr>
<td>Prerequisites:</td>
<td>SPAN 05212 or SPAN 05221</td>
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<tr>
<td></td>
<td>This course is designed to help students interact with Hispanic communities on a business level, by improving their verbal and written skills, and exposing them to authentic print and visual media. Areas of study include the various hispanic business cultures concerning human resources, labor relations, marketing, finance, goods and services, imports and exports.</td>
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<tr>
<td>SPAN 05320:</td>
<td>Spanish Civilization And Culture</td>
<td>3 s.h.</td>
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<tr>
<td>Prerequisites:</td>
<td>SPAN 05301</td>
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<tr>
<td></td>
<td>This course provides an overview of the religious, political, artistic and social history of Spain.</td>
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<tr>
<td>SPAN 05321:</td>
<td>Survey Of Spanish Literature I</td>
<td>3 s.h.</td>
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<tr>
<td>Prerequisites:</td>
<td>SPAN 05301</td>
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<td></td>
<td>This course studies texts, beginning with the Middle Ages and continuing to the mid-eighteenth century, examining their relevance in the historical and literary movements of their time.</td>
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<tr>
<td>SPAN 05322:</td>
<td>Survey Of Spanish Literature II</td>
<td>3 s.h.</td>
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<tr>
<td>Prerequisites:</td>
<td>SPAN 05301</td>
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<tr>
<td></td>
<td>This course is a continuation of SPAN 05.321 covering works from the mid-eighteenth century to the present.</td>
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<tr>
<td>SPAN 05323:</td>
<td>Survey Of Spanish American Literature I</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>Prerequisites:</td>
<td>SPAN 05301</td>
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<tr>
<td></td>
<td>This course is a historical overview of Spanish American literature in its cultural, sociological, biographical and formal make-up across many different genres from the Conquest to the precursors of Spanish American Modernism.</td>
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<tr>
<td>SPAN 05324:</td>
<td>Spanish American Civilization And Culture</td>
<td>3 s.h.</td>
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<tr>
<td>Prerequisites:</td>
<td>SPAN 05301</td>
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<tr>
<td></td>
<td>This course is an overview of cultural, social, political and economic history of the different major periods that have shaped Spanish America through tradition, process and crisis.</td>
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<tr>
<td>SPAN 05325:</td>
<td>Readings In Contemporary Spanish Literature</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>Prerequisites:</td>
<td>SPAN 05301</td>
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<td></td>
<td>This course examines Peninsular works of various genres from contemporary Spanish writers.</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
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<tr>
<td>SPAN 05326</td>
<td>Spanish Novel</td>
<td>3 s.h.</td>
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<td>Prerequisites: SPAN 05301</td>
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<tr>
<td>This course studies the novel in Spain and its most outstanding characteristics, with reading and discussion of some of the best known writers from the Golden Age to the 19th century.</td>
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<tr>
<td>SPAN 05327</td>
<td>Spanish American Poetry</td>
<td>3 s.h.</td>
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<tr>
<td>Prerequisites: SPAN 05301</td>
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<tr>
<td>Students are introduced to the various movements and philosophies of Spanish American poetry which begin to take shape in Spanish American Modernism and continue through the twentieth and twenty-first centuries. Students will examine its genesis and evolution as it adapts and reacts to socio-cultural, geographic and political issues.</td>
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<tr>
<td>SPAN 05328</td>
<td>Spanish-American Theater</td>
<td>3 s.h.</td>
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<tr>
<td>Prerequisites: SPAN 05301</td>
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<tr>
<td>This course examines Spanish-American drama in both its textual and performance aspects, tracing its relationships to ethics, society, history, culture and contemporary public issues. Representative works from the European tradition as well as non-traditional, regional and vanguard theater will be examined.</td>
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<tr>
<td>SPAN 05329</td>
<td>Survey Of Spanish American Literature II</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>Prerequisites: SPAN 05301</td>
<td></td>
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<tr>
<td>This course is a historical overview of Spanish American literature in its cultural, sociological, bibliographical and formal make-up across many different genres from the consolidation of Spanish American Modernism to Contemporary literature.</td>
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<tr>
<td>SPAN 05340</td>
<td>Introduction To Spanish Translation</td>
<td>3 s.h.</td>
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<tr>
<td>Prerequisites: SPAN 05212</td>
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<tr>
<td>Beyond acquiring the basic skills necessary for professional Spanish-to-English and English-to-Spanish translation, students of this course will improve their Spanish and English reading comprehension skills, sharpen their insight into the linguistic nature of both Spanish and English, gain knowledge regarding the ways in which both languages communicate cultural values and become acquainted with social and geographical variations of both languages. In addition, students will acquire experience in translating general material, such as from magazines, newspapers, and letters, and specialized material from the fields of literature, business, medicine, law, and the social sciences.</td>
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<tr>
<td>SPAN 05381</td>
<td>Contemporary Spanish Theater</td>
<td>3 s.h.</td>
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<tr>
<td>Prerequisites: SPAN 05301</td>
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<tr>
<td>This course introduces students to recent trends in Peninsular drama beginning with the initial manifestations of formal renovation towards the beginning of the twentieth century and continuing through to present-day Spain.</td>
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<tr>
<td>SPAN 05383</td>
<td>Spanish-American Short Story</td>
<td>3 s.h.</td>
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<tr>
<td>Prerequisites: SPAN 05301</td>
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<tr>
<td>This course analyzes a selection of Spanish American short stories and their relation to culture, aesthetics and modernity, covering a wide variety of authors, both canonical and vanguard.</td>
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<tr>
<td>SPAN 05400</td>
<td>History Of The Spanish Language</td>
<td>3 s.h.</td>
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<tr>
<td>Prerequisites: SPAN 05301</td>
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<tr>
<td>This course gives students an overview of the historical evolution of Spanish from its Latin roots to present-day varieties spoken in Spain and Latin America. It provides an introduction to the science of linguistics.</td>
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<tr>
<td>SPAN 05409</td>
<td>Advanced Spanish Grammar (WI)</td>
<td>3 s.h.</td>
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<tr>
<td>Prerequisite(s): COMP 01112 and SPAN 05301 and 300 level course in Spanish</td>
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<tr>
<td>This course focuses on the continued improvement of writing Spanish with emphasis on narration and description situated in time. It provides an advanced grammar review and practice in the process of writing and in the expression of nuances and idioms in Spanish.</td>
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<tr>
<td>SPAN 05410</td>
<td>Advanced Spanish Grammar And Composition</td>
<td>3 s.h.</td>
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<tr>
<td>Prerequisites: SPAN 05301</td>
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<tr>
<td>This course helps perfect students’ skills in writing Spanish and in the knowledge of its grammatical structures. It provides exercises in translating modern authors and in composition.</td>
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<tr>
<td>SPAN 05411</td>
<td>Advanced Spanish Conversation</td>
<td>3 s.h.</td>
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<tr>
<td>Prerequisites: SPAN 05301</td>
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<tr>
<td>This course is open to students who wish to improve their spoken Spanish skills. Students will develop enhanced grammatical precision, the ability to produce connected and cohesive discourse and communicative strategies in a variety of conversational situations.</td>
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### Course Descriptions

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>SPAN 05426</td>
<td>Spanish-American Novel</td>
<td>3 s.h.</td>
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<tr>
<td><strong>Prerequisites:</strong> SPAN 05301</td>
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<tr>
<td>This course deals primarily but not exclusively with contemporary Spanish American novels, analyzing their political, historical, social and cultural importance. Also examined are critical aspects such as voice, narratology, discourse and gender.</td>
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<tr>
<td>SPAN 05435</td>
<td>Spanish Individual Study</td>
<td>3 to 9 s.h.</td>
</tr>
<tr>
<td><strong>Prerequisites:</strong> SPAN 05301</td>
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<tr>
<td>This course gives students an opportunity to study independently in order to strengthen their background in a particular area of Hispanic studies.</td>
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<tr>
<td>SPAN 05440</td>
<td>Special Topics In Foreign Languages And Literatures</td>
<td>3 s.h.</td>
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<tr>
<td><strong>Prerequisites:</strong> SPAN 05301</td>
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<tr>
<td>This course brings new perspectives and themes to the established foreign languages and literatures curriculum. Each semester the instruction of the course rotates among faculty members with select topics according to their current scholarly interests. In this way, the course expands options for upper-level electives.</td>
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<tr>
<td>SPAN 05481</td>
<td>The Generation Of 1898</td>
<td>3 s.h.</td>
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<tr>
<td><strong>Prerequisites:</strong> SPAN 05301</td>
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<tr>
<td>This course studies the origin, development and influence of the so-called &quot;Generation of `98,&quot; its philosophy and outstanding characteristics. Students read and discuss works of some of the major authors.</td>
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<tr>
<td>SPAN 05482</td>
<td>Contemporary Spanish Novel</td>
<td>3 s.h.</td>
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<tr>
<td><strong>Prerequisites:</strong> SPAN 05301</td>
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<tr>
<td>This course studies the contemporary novel of twentieth and twenty-first century Spain, examining its most outstanding characteristics. Texts from several important periods, such as Posguerra, Transición and present-day Spain among others will be studied. Areas of emphasis include voice, narratology, discourse and gender.</td>
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<tr>
<td>SPAN 05499</td>
<td>Study Abroad</td>
<td>1 to 6 s.h.</td>
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<tr>
<td>The Department encourages students to study abroad. This course is designed to give firsthand knowledge of the social, cultural and historical life of Spain and Spanish American countries. The University offers a study abroad program. For further information contact the director of The International Center or the department chairperson.</td>
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<tr>
<td>SPAN 05540</td>
<td>Special Topics In Foreign Languages And Literatures</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>This course brings new perspectives and themes to the established Foreign Languages and Literatures curriculum. Each semester the instruction of this course rotates among faculty members who select topics according to their current scholarly interests. In this way, the course expands options for upper-level electives.</td>
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<tr>
<td>SWHL 17101</td>
<td>Elementary Swahili I</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>This beginning course is open to students who have not previously studied Swahili. It covers the mechanics of the language, including intensive practice in listening, comprehension, speaking, reading and writing. Students will also be introduced to East African life and culture.</td>
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<tr>
<td>SWHL 17102</td>
<td>Elementary Swahili II</td>
<td>3 s.h.</td>
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<tr>
<td><strong>Prerequisites:</strong> SWHL 17101</td>
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<tr>
<td>This beginning course is open to students who have some limited study of Swahili. It offers expanded coverage of the mechanics of the language, including intensive practice in listening, comprehension, speaking, reading and writing. Students will develop additional knowledge of East African life and culture.</td>
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<tr>
<td>ZULU 16101</td>
<td>Elementary Zulu I</td>
<td>3 s.h.</td>
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<tr>
<td>This beginning course is open to students who have not previously studied Zulu. It covers the mechanics of the language, including intensive practice in listening, comprehension, speaking, reading and writing.</td>
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<tr>
<td>ZULU 16102</td>
<td>Elementary Zulu II</td>
<td>3 s.h.</td>
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<tr>
<td><strong>Prerequisites:</strong> ZULU 16101</td>
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<tr>
<td>This beginning course is open to students who have had some limited contact with the Zulu language. It offers expanded practice in listening, comprehension, speaking, reading and writing.</td>
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</table>
Course Descriptions

ENST 94101: Environmental Studies: Physical Perspectives 3 s.h.
This is a multidisciplinary course that examines the basic principles of biology, chemistry, geology and physics as they relate to environmental studies. Many environmental problems will be discussed. The reasons for these problems, as well as possible solutions will be explored during the course. Environmental concerns in New Jersey will provide the backbone for specific examples. Students will consider the implications and challenges of environmental problems, as well as think in a multidisciplinary way about resolving some of these pressing our endangered earth today.

ENST 94102: Environmental Studies: Social Perspectives 3 s.h.
This introductory course examines the relationship between the physical environment, social policy and human populations from a social science perspective. A human ecology approach will be used to study this relationship and analyze a variety of environmental issues. The first part of the course introduces the anthropology and the philosophy of the human ecological perspective. During the second part of the course, the physical social, psychological and political aspects of environmental issues will be examined.

ENST 94301: Environmental Ethics 3 s.h.
This is a multidisciplinary course that addresses ethical issues and concerns regarding the environment; the relationships between individual, society and the natural environment; the importance of common attitudes and prevailing world-views for understanding and responding to environmental challenges; and the need to for changes in those attitudes and world-views. Students will be encouraged to think about the profound ethical, political, economic, religious, scientific, and technological implications of these environmental challenges.

ENST 94302: Technology and the Environment 3 s.h.
Prerequisite(s): Completion of at least one course offered by the Department of Geography & Environment
This course examines the relationships between technology and both natural and human environments. We will consider multiple spatial and temporal scales ranging from huge infrastructure projects like dams and the sweeping environmental impacts they introduce to the frontiers of genetic modification, working on individual cells. The format of the course emphasizes discussion, active learning, multimedia analysis, critical & analytical writing, and conducting a research investigation into a topic of your choice related to the class. Students will develop fluency in the critical assessment of technologies, the policies and practices creating them, and the impacts they make on the human environment relationship.

ENST 94321: Field Methods And Research Design In Environmental Studies 4 s.h.
Prerequisites: ENST 94101 and STAT 02260
This course fosters an environment where students become familiar with the theories and processes involved in implementing field studies. The general approach aspect reflects the practice of applied methods needed to conduct field assignments, administer instruments to conduct preliminary data collection from various populations, analyze data, and report data. A considerable amount of time will be spent on understanding research studies and assimilating data.

ENST 94400: Environmental Impact Assessment 3 s.h.
Prerequisites: Must have completed any 4-credit lab course as well as two other courses housed within the Department of Geography & Environment
This is a three-credit, senior-level course designed to introduce students to a systematic process for predicting and evaluating the significant environmental consequences of a proposed action or undertaking. The range of environmental impact assessments and techniques including infrastructure projects, such as power plants, highways, pipelines, dams, mines, airports, incinerators and landfills will be explored. Assessment processes have also been used to consider the implications of new technologies, plans, and policies that may result in significant social, economic and biophysical effects. Finally, the course focuses on how assessment processes and techniques are designed or should be designed to be effective, efficient and fair.

ENST 94401: Seminar In Environmental Studies I 3 s.h.
Prerequisite: ENST 94121
Students participate in planning a research project, collecting data, and preparing a report suitable for publication. Research topics are selected according to student interests.

ENST 94402: Seminar In Environmental Studies II 3 s.h.
Students participate in planning a research project, collecting data, and preparing a report suitable for publication. Research topics are selected according to student interests.

ENST 94403: Independent Study - Environmental Studies 1 to 6 s.h.
Course Descriptions

GEOG 16100: Earth, People, And The Environment 3 s.h.
This course provides a broad survey of the geographic approach to knowledge about the world and the field of geography. The course introduces the natural order of the physical environment, human modification of environments, organization of society, and regional studies. The course places particular emphasis on contemporary environmental problems and the role of geography in helping to understand and address local, regional, and global issues.

GEOG 16110: Cultural Geography 3 s.h.
This course focuses upon the varied and changing cultural environments of the world. Through a synthesis of data from many disciplines (i.e., anthropology, ecology, earth sciences, history, etc.), major cultural differences and areal patterns are identified and analyzed.

GEOG 16130: Earth Sciences Laboratory I 4 s.h.
Intended to develop an understanding of the physical factors of the Earth as human habitat and human adjustments to them, this course emphasizes the analysis of world distributional patterns of landforms, climate, vegetation, soils, and water features, and causes of relationships of these patterns. The integrated laboratory components provide student participation and experiences in observing, measuring, gathering data, analyzing underlying principles in such sub-fields as geomorphology, climatology, pedology, remote sensing, hydrology, geology, and mapping sciences. Students will be exposed to field techniques during one mandatory Saturday field trip. This course fulfills the General Education laboratory science requirement.

GEOG 16131: Principles Of Earth Science 3 s.h.
This course examines the basic concepts of astronomy, meteorology, geology and the principles derived from these concepts.

GEOG 16133: Meteorology 4 s.h.
This course studies the basic principles of meteorology, acquainting students with the physical principles underlying weather phenomena. Students use weather instrumentation in weather observations and analyze weather maps and observe and record daily weather changes.

GEOG 16140: World Regional Geography 3 s.h.
A survey of the entire world that uses the regional approach to geographical analysis, this course provides students with a basic foundation of geographic knowledge and concepts applicable to the contemporary world. It stresses resource distribution, environmental characteristics, population problems, food and water supplies, cultural variations and developmental strategies.

GEOG 16160: Intro To Mapping And Geographic Information Sciences 3 s.h.
This course provides the student with the conceptual tools required for intelligent and critical use interpretation and analysis of maps. In addition, the course furnishes the student with an introduction to and overview of the mapping sciences. Students learn the concepts, methods, and techniques common to the several branches of the mapping sciences and are introduced to cartography, satellite remote sensing, computer-assisted cartography, and geographical information systems. Because of its increasing importance, special emphasis is placed on geographical information systems.

GEOG 16240: Us & Canada 3 s.h.
A regional study of the United States and Canada in terms of the areal distribution of physical features, population patterns and economic activities, this course stresses an analysis of the forces stimulating change within the regional patterns.

GEOG 16241: Geography Of New Jersey 3 s.h.
A systematic and regional approach to the geography of this, the most densely populated state, this course analyzes the physical environment and cultural milieu in terms of their complex interactions. The course highlights problems of resource utilization and environmental concerns.

GEOG 16250: Selected Topics In Geography And Environment 1 to 3 s.h.
This course is designed to introduce students to emerging topics in the Geography and Environmental Studies. The content will vary based on the topic chosen by the instructor. However, a given topic will not be repeated sooner than 3 years. Consent of the instructor is necessary, and prerequisites are determined by the nature of the topic.

GEOG 16260: Fundamentals of Geographic Information Systems (GIS) 3 s.h.
Prerequisites: GEOG 16160
Fundamentals of Geographic Information Systems introduces students to the concepts and applications associated with creating, maintaining, analyzing, displaying, and interpreting geospatial data. Through the completion of activities and assignments, students gain experience with the fundamental tools for geospatial analysis, coupled with the knowledge of how best to apply them to real-world issues in the natural and human landscapes.
GEOG 16261: Cartography 3 s.h.
Prerequisite: GEOG 16160
This course studies the elements of cartography with emphasis on the map as a basic form of communication. It explores contemporary design concepts and various graphic techniques. Students create cartographic compositions using the latest in geographical information system and cartographic software using the facilities of the department's computer teaching laboratory.

GEOG 16290: History & Methods of Modern Geography 3 s.h.
Prerequisite: Any two of the following courses: GEOG 16100, GEOG 16110, GEOG 16130, GEOG 16140, GEOG 16160
This course provides the theoretical foundation to the field of geography. It explores the different bodies of thought and methodological practices which have shaped the character of geography from the late 19th century to the present. This exploration will cross the traditional sub-disciplinary divisions of human geography, physical geography and GIScience, examining the ways in which all three have been woven together and pulled apart by broad intellectual trends in the discipline. When the course is finished, students should be able to place their own research into disciplinary context, and gain a useful perspective on the similarities and differences between contemporary geographic subfields, and their methods, as contingent, historical products.

GEOG 16301: Economic Geography 3 s.h.
This course is a survey of world patterns of economic development, including the distribution patterns of population, natural and agricultural resources, and manufacturing and service endeavors. Emphasis is placed on spatial variations in types of economic organization and patterns of land and resource utilization. This course may not be offered annually.

GEOG 16302: Urban Geography 3 s.h.
A study of the geographic principles related to the distribution, growth, function, structure and regional setting of urban centers, this course emphasizes spatial aspects of contemporary urban problems in the U.S.

GEOG 16303: Political Geography 3 s.h.
Studying political units as spatial phenomena, this course focuses upon the wide range of geographic factors affecting past and present variations of world political organizations and the interrelationships of regional political units. It analyzes "Geopolitik," "The Heartland Theory," and other political-geographic concepts, as well as selected problem areas. This course may not be offered annually.

GEOG 16304: Population Geography 3 s.h.
This course provides a spatial analysis of population parameters as they exist in the contemporary world, examining demographic, cultural and economic variables and how they affect certain population groups. This course may not be offered annually.

GEOG 16307: Geography Of Transportation 3 s.h.
This course examines the major environmental features of Asia, stressing problems of population pressure and land utilization. The course studies individual culture realms and selected countries intensively. This course may not be offered annually.

GEOG 16308: GEOG MANUFACTURING 3 s.h.
GEOG 16312: CULTURAL LANDSCAPES 3 s.h.
GEOG 16330: Geology I 4 s.h.
This course introduces students to the study of the Earth's interior and to the processes shaping the Earth's surface. It emphasizes both theoretical understanding and practical application through a combination of lecture and laboratory exercises. Students will learn field methods during a mandatory three-day field trip. This course fulfills the General Education laboratory science requirement.

GEOG 16331: Geology Of The National Parks 3 s.h.
This travelling geology course introduces students to the geology, and along the way geography, of the western United States using national parks and national monuments as field laboratories. Students will learn the basics of western geology while visiting some of the most spectacular natural regions in the world including Death Valley, the Grand Canyon, Yellowstone, Grand Teton, Crater Lake and Yosemite National Parks.
GEOG 16332: Geomorphology

Prerequisite: GEOG 16330 OR GEOL 14100

A study of the evolution of land forms, this course examines the processes and physical factors which determine the development of the various types of landscape throughout the world by using case studies.

GEOG 16334: The Geoscience Of Natural Disasters

There are thousands of examples in which the forces of nature have suddenly claimed human lives and destroyed manmade constructions on a large scale. This course will introduce the nature, causes, risks, effects, and prediction of natural disasters including earthquakes, volcanic eruptions, landslides, subsidence, global climate change, severe weather, coastal erosion, floods, mass extinctions, and meteorite impacts. It will cover geologic principles and case histories of natural disasters and human responses (societal impact, mitigation strategies, and public policy).

GEOG 16335: Field Studies In Geography

This course provides students with field research skills necessary to geographic research. It emphasizes techniques of field observation and recording, using a combination of lecture-discussion and field practice. This course may not be offered annually.

GEOG 16338: Climatology

A study designed to develop an understanding of the elements and controls associated with various climatic phenomena, this course examines the consequences of climatic variations and interrelationships with other physical and cultural environmental features. It focuses on the physical and applied aspects of climatology. This course may not be offered annually.

GEOG 16340: Geology II

This course emphasizes historical geology, paleontology, structural geology, ocean basins, and applications of remote sensing. Students will be exposed to practical examples in the laboratories and a mandatory three-day field trip.

GEOG 16342: Geography Of Europe

An intensive study of the physical and cultural characteristics of the European continent and the individual countries of which it is comprised, this course examines such topics as regional integration, international problems, changing patterns of economic development, political stability and shifting population patterns. This course may not be offered annually.

GEOG 16343: Geography Of Asia

This course examines the major environmental features of Asia, stressing problems of population pressure and land utilization. The course studies individual culture realms and selected countries intensively. This course may not be offered annually.

GEOG 16344: Geography Of Latin America

This course studies the physical and cultural bases of Latin America’s geographic patterns, giving special emphasis to problems of resource development, population trends, and economic activity. This course may not be offered annually.

GEOG 16345: Geography Of Africa

An analysis of the diverse environmental factors, cultural groupings and national states comprising the African continent, this course emphasizes the problems of resource development and political stability of the newly emerging nations. This course may not be offered annually.

GEOG 16346: Geography Of The C.I.S. (Former Soviet Union)

This course studies in depth the geography of the former Soviet Union by focusing on regional variations in population distribution, cultural and ethnic inputs and physical environmental constraints. It emphasizes the respective roles of past centralized planning under Communist doctrine, practical experiences and resource distribution as they influenced economic development and, in effect, changed the geography of the area to a major degree in the 20th century. It further examines the consequences of the break-up of the U.S.S.R. on the 15 separate countries. This course may not be offered annually.

GEOG 16347: Geography Of The Middle East

This course is a survey of the physical environmental factors as they affect the patterns of settlement, land utilization and economic development of the regions and individual countries that comprise the Middle East. This course emphasizes the geographic bases for the current Arab-Israeli dispute. This course may not be offered annually.
### Course Descriptions

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<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>GEOG 16350</td>
<td>Quantitative Methods</td>
<td>3 s.h.</td>
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<tr>
<td>GEOG 16355</td>
<td>Foundation In Geographic Knowledge</td>
<td>3 s.h.</td>
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<tr>
<td>GEOG 16360</td>
<td>Applications of Geographic Information Systems</td>
<td>3 s.h.</td>
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<tr>
<td>GEOG 16361</td>
<td>Geovisualization</td>
<td>3 s.h.</td>
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<tr>
<td>GEOG 16366</td>
<td>Geospatial Modeling</td>
<td>3 s.h.</td>
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<tr>
<td>GEOG 16370</td>
<td>Remote Sensing/ Air Photo Interpretation</td>
<td>3 s.h.</td>
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<tr>
<td>GEOG 16371</td>
<td>Remote Sensing II</td>
<td>3 s.h.</td>
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<tr>
<td>GEOG 16375</td>
<td>Remote Sensing Of The Environment</td>
<td>3 s.h.</td>
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<tr>
<td>GEOG 16390</td>
<td>Geography Research Clinic/Studio</td>
<td>1 to 6 s.h.</td>
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</table>

GEOG 16350: **Quantitative Methods**
This course examines the application of inferential statistical methods to geographic research. It also offers an introduction to techniques designed especially for analysis of spatial patterns and distribution. This course may not be offered annually.

GEOG 16355: **Foundation In Geographic Knowledge**
This course will develop a deep and fluent understanding of geography and its evolution in America's intellectual and educational landscape. It will focus on the themes and essential elements in geography education with the goal of facilitating students' understanding of geography's evolutionary history and the relationships between geographic phenomena and other programs and disciplines. Students will learn how to include geographic thinking to solve real-world problems. The course may not be offered every semester.

GEOG 16360: **Applications of Geographic Information Systems**
*Prerequisite(s): GEOG 16260*
Applications of Geographic Information Systems builds upon the foundational concepts introduced in pre-requisite courses to examine the concepts and techniques of advanced geospatial analysis. Building upon series of techniques, coupled with real-world applications, students employ geospatial data and methods to compile, analyze, visualize, and interpret results, as well as examine critical issues related to data management and maintenance. The course is intended to prepare the student for both the professional GIS workforce and advanced research with GIS.

GEOG 16361: **Geovisualization**
This course explores geovisualization and related GIS and cartographic techniques. Geovisualization communicates geospatial information in ways that allow for data exploration and decision-making processes. Techniques covered include temporal modeling of processes over time and 3D fly-thru of virtual terrain. The techniques are applied to real-world problem solving in fields such as environmental modeling, planning, archeology, crime mapping and natural resource management.

GEOG 16366: **Geospatial Modeling**
*Prerequisite(s): GEOG 16365*
This course introduces advanced techniques in the GIS data manipulation, geostatistics and geospatial modeling. The fundamental theories behind the analytical and modeling techniques are covered in detail. The theoretical knowledge will be enforced by a series of intensive computer exercises using real data sets. It covers descriptive and predictive GIS modeling techniques, including logit modeling (logistic regression), spatial statistics, geo-statistics, environmental diversity indices, Boolean logic, and map algebra.

GEOG 16370: **Remote Sensing/ Air Photo Interpretation**
This course introduces students to techniques of spatial analysis using satellite imagery and aerial photography. It intersperses practical exercises in photo interpretation and digital image processing with demonstrations that include a wide range of photographic and non-photographic source material, including infra-red thermal and micro-wave images, digital orthographic photos as well as LANDSAT and other satellite platforms.

GEOG 16371: **Remote Sensing II**
This course emphasizes the integration of remotely sensed data into geographic information systems (GIS). It includes applications of advanced remote sensing techniques and data processing for use in regional planning and land resource management. This course may not be offered annually.

GEOG 16375: **Remote Sensing Of The Environment**
*Prerequisite: GEOG 16260*
This course emphasizes the integration of remotely sensed data into geographic information systems (GIS). It includes applications of advanced remote sensing techniques and data processing for use in environmental planning and land resource management. This course may not be offered annually.

GEOG 16390: **Geography Research Clinic/Studio**
This course presents a project-based experience for students working with a faculty mentor. Modeled on the engineering clinic and a traditional planning studio, students apply knowledge gain through their previous coursework to solve a particular research, policy or planning problem. Projects will be solicited from local agencies and businesses and students will work as individuals or within teams to provide viable solutions.
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>GEOG 16391:</td>
<td>Directed Geographic Field Experiences</td>
<td>3 s.h.</td>
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<td>This course offers an introduction to geographic field research methods, class field trips to places chosen by instructor and students. Students will complete a field research project taken on a topic chosen in consultation with the instructor. This course may not be offered annually.</td>
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<tr>
<td>GEOG 16460:</td>
<td>INTRO GEO INFO SYS</td>
<td>3 s.h.</td>
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<td>GEOG 16462:</td>
<td>Web-Based Gis Mapping</td>
<td>3 s.h.</td>
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<td>Prerequisite: GEOG 16260 OR GEOG 06160</td>
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<td>This course introduces web-based mapping technologies and applications. Students will gain the skills of creating their own map services which can then be used to create custom web-based maps. The course will focus on both open-source and commercial software packages to produce mapping and data services. Students will also explore the client-side offerings to produce mapping applications. The course culminates in a final web mapping project.</td>
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<tr>
<td>GEOG 16490:</td>
<td>Undergraduate Research Seminar In Geography-Wi(Senior Seminar)</td>
<td>3 s.h.</td>
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<td>Prerequisites: COMP 01112 and GEOG 16290</td>
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<td>Students participate in planning a research project, collecting data and preparing a report suitable for publication including cartographic materials. Research subjects are selected according to student interest. This course is regularly offered and may be available as a hybrid or online format.</td>
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<td>GEOG 16491:</td>
<td>Independent Study in Geography</td>
<td>1 to 4 s.h.</td>
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<td>Students have an opportunity to pursue individual specialized topics under the guidance of a staff member. This course may not be used as a substitute for a course offered by the department.</td>
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<td>GEOG 16533:</td>
<td>Workshop In Geography</td>
<td>1 to 3 s.h.</td>
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<td>This course is designed for in-service teachers who wish to further develop their competencies in new teaching techniques and technologies in geography, including computer-assisted instruction and computer cartography. Contemporary geographic topics will be explored within a regional context of each major world region. Students will actively participate in applying new concepts, current data, and innovative techniques in geography by designing and presenting sample lessons at their grade level. (Summer only)</td>
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<tr>
<td>GEOG 16562:</td>
<td>Geographic Information Systems (Gis) Topics And Applications</td>
<td>3 s.h.</td>
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<td>Geographic Information Systems (GIS) Topics and Applications provides an extended exploration into Geospatial science and analysis at the graduate level. Students develop advanced GIS skills through a project-based approach culminating in a final project and presentation. The course deepens the understanding of raster and vector data structures as well as the ability to work with computational algorithms used in GIS analysis. Students learn through lectures, demonstrations, computer laboratory sessions and a project paper and presentation.</td>
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<tr>
<td>GEOG 16591:</td>
<td>INDEP STUDY GEOG</td>
<td>3 s.h.</td>
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<tr>
<td>PLAN 31280:</td>
<td>Foundations of Planning &amp; Environmental Design</td>
<td>3 s.h.</td>
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<td>This course provides students with a conceptual foundation to the field of planning. Topics include the history and development of planning, the politics of planning, planning analysis and implementation, urban design, environmental planning and planning implementation process and management. Particular emphasis is placed on the current trends in the field including ecological based planning, redevelopment and sustainable communities.</td>
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<td>PLAN 31380:</td>
<td>City Planning I</td>
<td>3 s.h.</td>
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<td>Prerequisite: PLAN 31280</td>
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<td>This course presents an overview of the field of planning as practiced in today's American Society. Topics include the history and development of planning, the politics of planning, planning analysis and implementation, urban design, and environmental planning. Particular emphasis is placed on the changing trends of planning including green building and sustainable communities.</td>
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<tr>
<td>PLAN 31383:</td>
<td>Metropolitan/Regional Planning</td>
<td>3 s.h.</td>
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<td>Prerequisite: PLAN 31280</td>
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<td>This course studies the philosophy, history, techniques, and problems of metropolitan and regional planning. Although it focuses on large scale-planning in the United States, the course makes some comparative analysis of planning in other countries. It emphasizes geographic techniques in regional analysis, as well as the roles of federal, state, and local agencies in planning. Students learn and use simulation and gaming techniques in the preparation of regional plans. This course may not be offered annually.</td>
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</tbody>
</table>
### Course Descriptions

**PLAN 31384:** Water Resources Planning  
*Prerequisite: PLAN 31280*  
This course explores water management planning and the public decision making process in metropolitan areas. Topics covered include analysis of systems, resources and issues affecting water supply and treatment.

**PLAN 31385:** New Jersey Applied Planning Practice  
*Prerequisite: PLAN 31280*  
This course will cover planning in New Jersey, its legal basis and how it is practiced. It will cover the specifics of the local planning boards, zoning board of appeals, master planning, planning procedures and processes. Topics such as affordable housing, regional planning coordination, smart growth, and physical design will be addressed.

**PLAN 31386:** Land Use And Conservation  
*Prerequisite: PLAN 31280*  
This course examines people’s changing perceptions of the economic use potential of land focusing on how land is a combination of physical, economic, political and cultural interactions. The course explores the basics of land use law, property rights, land use conflicts and the various avenues for land conservation and open space preservation.

**PLAN 31389:** Environmental / Sustainable Planning  
*Prerequisite: PLAN 31280*  
Environmental/Sustainable Planning addresses the advances and trends that are occurring related to environmental and sustainability issues within the field of planning from a local to global perspective. The course will explore some of the national trends of environmental and sustainable planning focusing on programs such as the U.S. Green Building Council’s LEED (Leadership in Energy and Environmental Design) programs for fostering green building and smart growth development. The course will also cover some specific New Jersey environmental planning issues such as the Pinelands, open space preservation and smart growth initiatives.

**PLAN 31486:** Community Planning & Site Design  
*Prerequisite: PLAN 31280*  
Community Planning & Site Design deals with the design, arrangement, appearance and functionality of building sites, neighborhoods, towns and cities, as well as the shaping and uses of safe public space. The course covers the practices of urban design, landscape architecture, housing and the siting of buildings within the environment. Topics include: sustainable design, smart growth, new urbanism, transit oriented development, and neighborhood design. The course is both theoretical as well as applied providing experience in drafting plans in a studio setting.

**ATR 00105:** Introduction to Athletic Training  
*Prerequisite(s): (HES 00241 or PHED 35241) or (HES 00242 or PHED 35242) or (BIOL 10210 or BIOL 10212)*  
This course is designed as an initial experience for students considering a career in athletic training. Students will be introduced to various domains, competencies, and proficiencies related to athletic training. An in-depth look at the field of athletic training and the requirements of the athletic training program will be discussed. An observational field experience is required.

**ATR 00218:** Prevention Care Orthopedic Injuries  
*Prerequisite(s): (HES 00241 or PHED 35241) or (HES 00242 or PHED 35242) or (BIOL 10210 or BIOL 10212)*  
An examination of current practices and procedures in the basic pathology, prevention and care of athletic injuries. The laboratory experience exposes students to wound care, padding, and the art and science of athletic injury taping. An observational clinical field experience will be required.

**ATR 00219:** Pathology and Evaluation of Orthopedic Injuries I  
*Prerequisite(s): (ATR 00218 or PHED 35218) Corequisite(s): (ATR 00238 or PHED 35238)*  
This course provides an examination of the etiology, epidemiology, pathology, and assessment of injuries and illnesses to the lower extremity. Structural, functional, and surface anatomy will be reviewed. In addition to didactic classroom time, students are also instructed, given time to practice and evaluated on pertinent athletic training psychomotor competencies and clinical proficiencies within a practical laboratory experience. There is an observational field experience associated with this class.

**ATR 00220:** Pathology and Evaluation of Orthopedic Injuries II  
*Prerequisite(s): (ATR 00219 or PHED 35219) Corequisite: ATR 00239*  
This course provides an examination of the etiology, epidemiology, pathology and assessment of injuries and illnesses to the upper extremity, head, axial skeleton, chest, and thorax. Structural, functional and surface anatomy will be reviewed. In addition to didactic classroom time, students are also instructed, given time to practice and evaluated on pertinent athletic training psychomotor competencies and clinical proficiencies within a practical laboratory experience. There is an observational field experience associated with this class.
Course Descriptions

ATR 00238: Pathology and Evaluation of Orthopedic Injuries I (Lab) 2 s.h.
Prerequisite(s): (ATR 00218 or PHED 35218) Corequisite(s): ATR 00319
This laboratory course is designed to teach the psychomotor and clinical proficiency skills necessary to perform a competent evaluation of the lower extremity and low back region. It must be taken and successfully completed in conjunction with Pathology and Evaluation of Orthopedic Injuries I before a student may continue matriculating through the Athletic Training Education Program.

ATR 00239: Pathology and Evaluation of Orthopedic Injuries II (Lab) 2 s.h.
Prerequisite(s): (ATR 00219 or PHED 35219) and (ATR 00318 or PHED 35318) Corequisite(s): ATR 00220
This laboratory course is designed to teach the psychomotor and clinical proficiency skills necessary to perform a competent evaluation of the upper extremity, head, cervical and thoracic regions. It must be taken and successfully completed in conjunction with Pathology and Evaluation of Orthopedic Injuries II before a student may continue matriculating through the Athletic Training Education Program.

ATR 00334: Advanced Emergency Care 3 s.h.
This is a sophomore level course designed primarily for athletic training majors and other allied health professionals. Students are trained in CPR for the professional rescuer as well as other advanced emergency skills. An additional observation experience in a local emergency room is required. There also is an optional lifeguarding component available in this class.

ATR 00338: Clinical Techniques in Athletic Training 2 s.h.
Prerequisite(s): (ATR 00220 or PHED 35220) Corequisite(s): ATR 00338
This course, designed for first semester juniors, will review and evaluate psychomotor competencies and clinical proficiencies previously discussed in pre-professional course work. Students meet once per week in the Athletic Training Laboratory to practice and be evaluated on their psychomotor and clinical proficiency skills. Opportunities are also provided to discuss topics pertinent to the student’s clinical residency assignment.

ATR 00339: Clinical Techniques in Athletic Training II 2 s.h.
Prerequisite(s): (ATR 00338 or PHED 35338) Corequisite(s): ATR 00339
This course, designed for second semester juniors, will review and evaluate psychomotor competencies and clinical proficiencies previously discussed in Therapeutic Modalities and topics relevant to previous course work. Students meet once per week in the Athletic Training Laboratory to practice and be evaluated on their psychomotor and clinical proficiency skills. Opportunities are also provided to discuss topics pertinent to the student’s clinical residency assignment.

ATR 00340: Clinical Techniques in Athletic Training III 2 s.h.
Prerequisite(s): (ATR 00339 or PHED 35339) Corequisite(s): ATR 00340
This course, designed for first semester seniors, will review and evaluate psychomotor competencies and clinical proficiencies previously discussed in Therapeutic Exercises and topics relevant to previous course work. Students meet once per week in the Athletic Training Laboratory to practice and be evaluated on their psychomotor and clinical proficiency skills. Opportunities are also provided to discuss topics pertinent to the student’s clinical residency assignment.

ATR 00341: Clinical Techniques in Athletic Training IV 2 s.h.
Prerequisite(s): (ATR 00340 or PHED 35340) Corequisite(s): ATR 00341
This course, designed for second semester seniors, will review and evaluate clinical proficiencies previously discussed in General Medical Conditions and Pharmacology and related topics relevant to previous course work. Students meet once per week in the Athletic Training Laboratory to practice and discuss topics pertinent to their clinical assignment. The clinical assignment enables students to develop and assimilate patient care skills under the direct supervision of a certified athletic trainer and/or approved clinical instructor within the athletic training room, exposure to intercollegiate athletics and/or at approved affiliated sites.

ATR 00347: Applied Biomechanics 3 s.h.
Prerequisite(s): (ATR 00219 or PHED 35219) and (ATR 00220 or PHED 35220)
This course is designed to acquaint students with the fundamental principles involved with biomechanics and human movements. This course will discuss the kinetic and kinematics concepts and how they are applied to balance, posture, locomotion and functional activity.

ATR 00348: Residency in Athletic Training I 3 s.h.
Prerequisite(s): (ATR 00220 or PHED 35220) and acceptance in the Professional Phase of the Athletic Training Education Program Corequisite(s): ATR 00338
This clinical education course, designed for first semester juniors, will review and evaluate, within a clinical assignment, those clinical proficiencies discussed in previous and concurrent course work using a learning-over-time model. The clinical assignment enables students to develop and assimilate patient care skills under the direct supervision of a certified athletic trainer and/or approved clinical instructor within the athletic training room, exposure to intercollegiate athletics and/or at approved affiliated sites. During this course, the student will be formally evaluated by an Approved Clinical Instructor only.
ATR 00339: Residency in Athletic Training II 3 s.h.
Prerequisite(s): (ATR 00338 or PHED 35338) and (ATR 00358 or PHED 35358) Corequisite(s): ATR 00339
This clinical education course, designed for second semester juniors, will review and evaluate, within a clinical setting, those clinical proficiencies discussed in previous and concurrent course work using a learning-over-time model. The clinical assignment enables students to develop and assimilate patient care skills under the direct supervision of a certified athletic trainer and/or approved clinical instructor within the athletic training room, exposure to intercollegiate athletics and/or at approved affiliated sites. During this course, the student will be formally evaluated by an Approved Clinical Instructor only. This course must be taken and successfully completed in conjunction with ATR 00339 Clinical Techniques in Athletic Training II before a student may continue matriculating through the Athletic Training Education Program.

ATR 00340: Residency in Athletic Training III 3 s.h.
Prerequisite(s): (ATR 00339 or PHED 35339) and (ATR 00359 or PHED 35359) Corequisite(s): ATR 00340
This clinical education course, designed for first semester seniors, will review and evaluate, within a clinical setting, those clinical proficiencies discussed in previous and concurrent course work using a learning-over-time model. The clinical assignment enables students to develop and assimilate patient care skills under the direct supervision of a certified athletic trainer and/or approved clinical instructor within the athletic training room, exposure to intercollegiate athletics and/or at approved affiliated sites. During this course, the student will be formally evaluated by an Approved Clinical Instructor only. This course must be taken and successfully completed in conjunction with ATR 00340 Clinical Techniques in Athletic Training III before a student may continue matriculating through the Athletic Training Education Program.

ATR 00341: Residency in Athletic Training IV 3 s.h.
Prerequisite(s): (ATR 00340 or PHED 35340) and (ATR 00360 or PHED 35360) Corequisite(s): ATR 00341
This clinical education course, designed for second semester seniors, will review and evaluate, within a clinical setting, those clinical proficiencies discussed in previous and concurrent course work using a learning-over-time model. The clinical assignment enables students to develop and assimilate patient care skills under the direct supervision of a certified athletic trainer and/or approved clinical instructor within the athletic training room, exposure to intercollegiate athletics and/or at approved affiliated sites. During this course, the student will be formally evaluated by an Approved Clinical Instructor only. This course must be taken and successfully completed in conjunction with ATR 00341 Clinical Techniques in Athletic Training III before a student may continue matriculating through the Athletic Training Education Program.

ATR 00405: Organization & Administration in Athletic Training 3 s.h.
Prerequisite(s): (ATR 00339 or PHED 35339)
This lecture/laboratory course is designed to meet the entry level competencies for the athletic training student in the area of organization and administration of athletic training. It covers liability, budgeting, athletic training facility design, insurance, administration of medical record keeping systems, data tabulation and interpretation, emergency transportation systems, athletic training facility management, impact of state and national governing body regulations, athletic injury insurance administration and communication, conflict resolution and mediation. The senior level course is designed to meet educational competencies in pharmacology and general medicine for the undergraduate athletic training student. This course will focus on issues in pharmacology and general medicine pertinent to the allied health profession of athletic training. Issues such as the drug approval process, side effects of medications, general medical evaluation will be explored during this course. There is a general medical clinical field experience with the athletic training programs medical director associated with this course.

ATR 00430: Senior Seminar in Athletic Training 2 s.h.
Prerequisite(s): (ATR 00340 or PHED 35340)
This senior seminar is an examination of the individual’s responsibility to promote athletic training as a profession, remain abreast of current theory and practice, disseminate health and athletic training information, and to enhance the professional growth of self and others.

ATR 00447: Therapeutic Modalities in Athletic Training - Laboratory Experiences 2 s.h.
Prerequisite(s): (ATR 00220 or PHED 35220) Corequisite(s): ATR 00475
This laboratory course is designed to teach the psychomotor and clinical proficiency skills necessary to develop psychomotor skills relevant to the use of Therapeutic Modalities. This laboratory course must be taken and successfully completed in conjunction with Therapeutic Modalities in Athletic Training before a student may continue matriculating through the Athletic Training Education Program.
ATR 00475: Therapeutic Modalities for Athletic Training 3 s.h.
Prerequisite(s): (ATR 00220 or PHED 35220) and (ATR 00329 or PHED 35239)
Corequisite(s): ATR 00447
This course focuses on the cognitive, affective and psychomotor competencies involved in developing appropriate therapeutic modality programs for the injured person. This course uses current research to discuss the theory and clinical applications of all potential modalities used in the athletic training room. This course implements a problem-solving approach for the return of functional integrity to the injured person through the use of therapeutic modalities. A laboratory experience is part of this class.

ATR 00476: Therapeutic Exercises in Athletic Training - Laboratory Experiences 2 s.h.
Prerequisite(s): (ATR 00475 or PHED 35475) Corequisite(s): ATR 00478
This laboratory course is designed to teach the psychomotor and clinical proficiency skills necessary to develop psychomotor skills relevant to the use of Therapeutic Exercises. This laboratory course must be taken and successfully completed in conjunction with Therapeutic Exercises in Athletic Training before a student may continue matriculating through the athletic training Education Program.

ATR 00477: Psychosocial Aspects of Physical Activity 3 s.h.
Prerequisite(s): PSY 01107 and (ATR 00479 or PHED 35479)
This course, designed for seniors in Athletic Training, addresses several CAATE proficiencies related to the psychosocial aspect of physical activity and injury. Topics include but are not limited to theories related to the psychological and emotional aspects of trauma and forced inactivity, the use of motivational activities towards rehabilitation, basic principles of mental preparation, relaxation, and visualization, as well as theories and techniques of interpersonal and cross-cultural communication among athletic trainers, their patients, and others involved in the health care of the patient.

ATR 00478: Therapeutic Exercises in Athletic Training 3 s.h.
Prerequisite(s): (ATR 00475 or PHED 35475) and (ATR 00447 or PHED 35447) Corequisite(s): ATR 00476
This course covers the cognitive, affective and psychomotor competencies involved in developing appropriate rehabilitation exercise protocols for the injured person. This course uses current research to discuss the physiological and biomechanical concepts involved in the clinical practice of rehabilitation. This course implements a holistic and problem-solving approach for the return of functional integrity to the injured person. A laboratory experience is part of this class.

ATR 00479: Pharmacology and General Medicine in Athletic Training 3 s.h.
Prerequisite(s): (ATR 00478 or PHED 35478)
This senior level course is designed to meet educational competencies in pharmacology and general medication for the undergraduate athletic training student. The course will focus on issues in pharmacology and general medicine pertinent to the allied health profession of athletic training. Issues such as the drug approval process, side effects of medications, general medical evaluation will be explored during this course. There is a general medical clinical field experience with the athletic training program’s medical director associated with this course.

ATR 00505: Research Methods in Athletic Training 3 s.h.
This graduate level course familiarizes students with research concepts and their application in developing quality-driven research within the Athletic Training Profession. The emphasis of this course is for the student to learn how to assess the literature, develop a relevant research question, be familiar with different methodological and basic statistical designs, interpretations of results, writing a discussion and publication procedures.

ATR 00510: Advanced Topics in Clinical Evaluation through Cadaver Anatomy 3 s.h.
This graduate level course offers students the opportunity to dissect the upper and lower extremity of the human body. In addition students will dissect the head, next and truck. Students will identify various structures on the cadaver that are related to musculoskeletal pathology and evaluation. A pre-lab will be done related to the pathology associated with each dissection. A lab fee will be required for participation in this course.

HES 00100: Teaching Concepts of Driver Education 3 s.h.
Prerequisite(s): (ATR 00235 or PHED 35235) and (HPE 00325 or HLTH 37325) or (ATR 00235 or PHED 35235) and (HPE 00326 or HLTH 37326)
The course is designed for individuals seeking New Jersey Driver Education teacher endorsement. The content includes learning to teach motor vehicle operation, driving environment and the student development of teaching techniques emphasizing safety, risk perception, and decision-making processes applied in a vehicle. Learning how to instruct others in performing behind-the-wheel driving will be scheduled outside of class time.
HES 00109: Adventure and Experiential Learning 2 s.h.
This course in adventure and experiential learning activities is designed to provide the prospective students with the skills and knowledge necessary to conduct adventure and experiential learning activities in a variety of settings. A function of this course is to introduce strategies appropriate for facilitating experiential and adventure experiences for varied settings and groups. We believe that these types of activities are becoming increasingly relevant in today's society, especially in occupational wellness. Thus, the skill and knowledge proficiency is a necessary component of leadership in a variety of settings.

HES 00116: Safety First Aid Basic Understanding of Athletic Injuries 3 s.h.
Prerequisite(s): Acceptance into one of the following programs; Athletic Training, Health Promotion and Fitness Management, or Health and Physical Education Teacher Certification.
This course is designed for the individual who is interested in gaining CPR and First Aid certification and a basic understanding of athletic injuries. The first part of this class will allow students to understand and demonstrate appropriate techniques in performing American Red Cross Community CPR and First Aid techniques required for certification. The second component of the course will enable students to understand basic concepts in athletic injury: anatomy, recognition, and basic care.

HES 00200: Basic Nutrition 3 s.h.
Students study human nutrition through the basic knowledge of nutrients and the physiological processes involved in the utilization of food. They also develop an understanding of the ways in which age, health, social, and economic factors and other variables affect nutritional needs and food practices. A computerized dietary analysis may be one of the course requirements.

HES 00241: Structure and Function of the Human Body I 3 s.h.
Prerequisite: Acceptance into one of the following programs; Athletic Training, Health Promotion and Fitness Management, or Health and Physical Education Teacher Certification.
This course investigates basic anatomical and physiological concepts of the human body. It includes cellular structure and function, metabolism, and the skeletal, nervous, muscular, circulatory and respiratory systems.

HES 00242: Structure and Function of the Human Body II 3 s.h.
Prerequisite(s): (HES 00241 or PHED 35241) and acceptance into one of the following programs; Athletic Training, Health Promotion and Fitness Management, or Health and Physical Education Teacher Certification.
This course continues the study of the human body begun in HES 00241. It investigates the urinary, endocrine, reproductive, digestive and integumentary systems.

HES 00243: Motor Control and Learning 3 s.h.
Prerequisites: C or higher in BIOL 10210 and BIOL 10212
This course provides a thorough understanding of motor control and motor learning of human movement. Motor control deficiencies in people with neurological diseases will also be covered. Laboratory activities will be used to support the information learned in class.

HES 00271: Movement and Meaning in Sports 3 s.h.
This course helps students understand themselves and how they relate physically to their environment. Through movement students discover, understand, control and adjust to their environment and gain an understanding of space, time and force. The course discusses exercise and sport forms. This course may not be offered annually.

HES 00272: Technology and Assessment of Health and Exercise Science 3 s.h.
Prerequisite: Acceptance into one of the following programs; Athletic Training, Health Promotion and Fitness Management, or Health and Physical Education Teacher Certification.
This course will prepare students in the Department of Health and Exercise Science to use computers and technology for organizing information, amplifying presentation, developing written documents, assessing client/students, gathering information, and completing research. Students will evaluate software, use peripheral devices, explore internet applications, and use non-computer media applications as they apply to their discipline. An introduction to simple statistical designs will also be a component of this course.

HES 00301: Research Methods in Health and Exercise Science 3 s.h.
Prerequisite(s): STAT 02100
The course details design and application of research methodology that considers the cognitive, affective, and psychomotor performance as they relate to health and human performance. Published research, review of literature, methodology, research skills, scientific writing, and the interpretation of published research in the discipline will be included.
HES 00329: Laboratory in Personal Training Techniques 1 s.h.
Prerequisite(s): (HES 00401 or PHED 35401)
This course prepares the student, with an exercise science background, to work successfully as a personal fitness trainer for individual clients. During this highly experiential learning course, students will develop their ability to combine their exercise science knowledge, counseling and educational skills, and fitness techniques to prescribe exercise for a variety of populations. Upon successfully completing this course, students will be prepared to qualify for national certifications in personal training.

HES 00343: Kinesiology 3 s.h.
Prerequisite(s): (BIOL 10210 and BIOL 10212) or (HES 00241 or PHED 35241) and (HES 00242 or PHED 35242), all with a grade of C- or higher.
Kinesiology, the study of human movement, integrates the sciences of anatomy, physiology and physics as they contribute to developing an appreciation for the art of movement. Opportunity is given for an individual study of a movement pattern with emphasis on the application of the mechanical principles of motion.

HES 00344: Exercise Physiology (without lab) 3 s.h.
Prerequisite(s): (BIOL 10210 and BIOL 10212) or (HES 00241 or PHED 35241) and (HES 00242 or PHED 35242), all with a grade of C- or higher.
A course in applied anatomy and physiology, this course studies the interrelationship of exercise and physiology. This course also covers the functions of the human body under the stress of physical activity.

HES 00345: Exercise Physiology (with lab) 4 s.h.
Prerequisite(s): (HES 00241 or PHED 35241) and (HES 00242 or PHED 35242) or (BIOL 10210 and BIOL 10212), all with a grade of C- or higher.
A course in applied anatomy and physiology, this course studies the interrelationship of exercise and physiology. This course also covers the functions of the human body under the stress of physical activity.

HES 00348: Human Disease and Epidemiology in Health and Exercise Science 3 s.h.
Prerequisites: C- or higher in HES 00345
This course examines the etiology, pathophysiology and epidemiology of diseases and conditions that are often seen by health and fitness professionals working with clients in human performance and exercise science settings. Included are cardiovascular disease, hypertension, asthma, Type 1 and Type 2 diabetes mellitus, overweight and obesity, osteoarthritis, rheumatoid arthritis, low back pain syndrome and cancer. In addition, concerns specific to children, the elderly and in pregnancy are also addressed.

HES 00373: Advanced Lifesaving/Cardiopulmonary Resuscitation 3 s.h.
This course is for advanced swimmers who wish to learn the skills and techniques necessary to become qualified lifeguards. This course covers swimming and rescue skills, personal safety skills, lifeguard techniques, cardiopulmonary resuscitation skills and knowledge, and management techniques for aquatic environments. Upon successful completion of the course the student will receive the American National Red Cross Certificate in Basic Cardiopulmonary Resuscitation and in Advanced Lifesaving. This course may not be offered annually.

HES 00374: Coaching Team Sports (Non-Majors) 3 s.h.
This course develops a sound philosophy in team sports for interscholastic programs in junior and senior high schools. This course presents skills, techniques, theory, rules, strategy and methods through laboratory, classroom experiences and audiovisual aids. This course may not be offered annually.

HES 00377: Teaching Health and Physical Education to the Handicapped 3 s.h.
This course is a restrictive elective course for special education majors and an elective for all other students. Students study the need for health and physical education for handicapped students as defined in P.L. 94-142. The course demonstrates several teaching styles that correlate physical education with other disciplines focusing on movement. Learning experiences in the gymnasium are used to reinforce methodology studied in the classroom. This course may not be offered annually.

HES 00378: Recreation and Leisure Studies for the Handicapped 3 s.h.
This course develops an understanding of the values and function of recreation in the lifestyle of handicapped individuals. It explores societal trends, legislation, and barriers which impact on recreation participation. It studies the implementation of leisure education, leisure counseling, recreation as a related service in P.L. 94-142, and the continuum of recreation services in community settings. Open to all students.
HES 00401: Exercise Prescription 3 s.h.
Prerequisite(s): (BIOL 10210 and BIOL 10212) or (HES 00344 or PHED 35344 or HES 00345 or PHED 35345) or (HES 00241 or PHED 35241 and HES 00242 or PHED 35242) and (ATR 00334 or PHED 35344 or HES 00345 or PHED 35345), all with grade C- or higher.

This course provides students with the knowledge and practical experience in exercise testing and prescription. The information enables students to establish scientific foundations of exercise testing and prescription, to identify the risk factors for disease development and to prescribe an exercise program based on exercise test results and personal limitations. Practical experience is provided for testing subjects in the laboratory.

HES 00402: EKG Interpretation and Basic Pharmacology in Health and Exercise Science 3 s.h.
Prerequisites: C- or higher in PHED 35401

This course provides a thorough understanding of EKG interpretation and basic pharmacology related to cardiac, pulmonary, and diabetic conditions for professionals in human performance and exercise science fields. Video streaming of EKG rhythms will provide students with practical experience. Case studies will be used to understand how medications are used to treat a variety of health issues and the influence of these medications on exercise prescription.

HES 00412: Exercise for Special Populations 3 s.h.
Prerequisite(s): (HES 00345 or PHED 35345) Corequisite(s): HES 00401

This course provides a study of exercise considerations for special populations. It covers the basic concepts of the physiologic effects of exercise and the application of these concepts to special cases. Cases included are respiratory and cardiovascular diseases, hypertension, obesity, diabetes, arthritis, osteoporosis, pregnancy, children/adolescents, and the elderly.

HES 00413: Senior Seminar in Human Performance in Clinical Settings 2 s.h.
Prerequisites: C- or higher in HES 00401

This application-oriented course is designed to review and assess the students' knowledge and skills which were developed throughout the Human Performance in Clinical Setting program. Students will progress through a series of online seminars reviewing the key concepts and skills learned in the program that are necessary for a career in the field of Human Performance in Clinical Settings. In addition, students will work in group settings to continue to practice and develop key skills necessary for their career.

HES 00415: Nutrition for Fitness 3 s.h.
Prerequisite(s): (HES 00200 or INAR 06200) and (BIOL 10210 and BIOL 10212) or (HES 00241 or PHED 35241 and HES 00242 or PHED 35242), all with a grade of C- or higher.

This advanced nutrition course explores the relationship between nutrition, physical fitness, performance and disease prevention. Specific topics include nutrition fraud, supplementation, ergogenic aids, diet planning for athletes and the relationship between nutrition and chronic diseases such as cancer and heart disease. In addition, students continue to develop their skills as nutrition counselors and educators.

HES 00456: Principles of Coaching 3 s.h.

Emphasizes the development of a sound coaching philosophy. Includes aspects related to team organization, supervision, equipment control and its administration and community ethics. Attention will be given to the sociology and psychology of sport.

HES 00473: Water Safety Instructor 3 s.h.

This course covers the American National Red Cross standardized program of skill proficiency, teaching methodologies, principles of class organization, safety factors in teaching swimming and practice teaching experiences. The course is for advanced swimmers who are interested in learning to teach swimming and water safety. Upon successful completion of this course students receive the American National Red Cross Certificate as a Water Safety Instructor. This course may not be offered annually.

HES 00480: Trends in School and Community Recreation 3 s.h.

This course, an elective course for all students, assists students to develop and enhance "a worthy use of leisure" by participation in school and community recreation as well as leisure service programs and activities.

HES 00492: Independent Study Health & Exercise Science 1 to 3 s.h.

HIL 00103: Health and Wellness 3 s.h.

This course stresses the concepts of lifetime health and physical fitness. It examines the positive effects of exercise upon the heart and blood vessels, obesity and proper diet, body mechanics, and how the body handles stress. The course also examines the negative effects of disease, including socially transmitted diseases, substance abuse including narcotics, alcohol and tobacco, and other contemporary health-related problems. Students learn to analyze their strengths and limitations while planning a personal wellness profile which best fits their needs and interest.
HLT 00170: Stress Management 3 s.h.
This course focuses on the nature of stress and the impact it has on a person's health. The student will study the relationship of the physiological, psychological and social factors which contribute to one's general stress balance and develop life skills to combat the negative impact of stress.

HLT 00180: Psychological Aspects of Health 3 s.h.
The course deals mostly with assisting students in meeting mental health problems in today's society. It emphasizes modification in behavior, effects of chemicals on behavior, the psychology of sex, the psychology of accident prevention and the psychological problems of aging. This course may not be offered annually.

HLT 00192: Contemporary Health I 3 s.h.
Prerequisite: Acceptance into one of the following programs Athletic Training, Health Promotion & Fitness Management, or Health & Physical Education Teacher Certification.
This is the first in a series of two general knowledge based survey courses which provide students with knowledge of current health issues which occur in the human life cycle. Topics which will be addressed are family life and human sexuality, personal growth and development, mental and emotional health, aging and death and dying.

HLT 00193: Contemporary Health II 3 s.h.
This is the second in a series of two general knowledge based survey courses which provide students with knowledge of current health issues which occur in the human lifecycle. Topics which will be addressed are alcohol, tobacco and other drugs, personal health, chronic and infectious diseases, environmental health and consumerism.

HLT 00200: Community and Public Health 3 s.h.
Community and Public Health examines the trends and components of the community health field. This course prepares students for the additional courses in the Community Health Advocacy and Education program. Topics include foundations of community health, epidemiology, health of the nation, community mental health, environmental health and occupational safety.

HLT 00209: Health Education for Elementary School Teachers 1 s.h.
Elementary education majors will be prepared to conduct thorough and effective health education in grades K-6. This course focuses on the nature and philosophy of health education and comprehensive school health programs as well as the teacher's role in curriculum, instruction and evaluation as they impact student health-related behavior.

HLT 00227: CONSUMER HEALTH DECISIONS 3 s.h.
This course examines the rights and responsibilities of a consumer faced with increasing amounts of information related to his or her overall well-being. It examines the major problem of health fraud and the components of scientific research. The role of advertising is explored, as well as sound principles for purchasing nutrition, fitness and other health-related products and services. Students learn important concepts related to health insurance and hospitals, traditional and alternative medical care and how to better manage the decisions they make.

HLT 00245: US Health Care Systems 3 s.h.
This course provides an overview of public health's role in healthcare history, delivery, financing and policy in the United States. Governmental agencies roles and policies and healthcare statistics are considered as the shape public health.

HLT 00262: Drugs, Alcohol, and Tobacco 3 s.h.
This course is designed to examine in depth the use and abuse of drugs, alcohol and tobacco including the origins and current status of use. Topics include types of drugs, physiological and psychological impact, assessment, monitoring and prevention programs. Federal and state laws are considered and drug policy is examined. Furthermore, the societal impact of drug use and abuse is examined. The content considers the topic from a health professional's position and is specific to the profession of wellness education.

HLT 00300: Implementation and Assessment in Public Health 3 s.h.
Prerequisite: HLT 00200
Implementation and Assessment in Public Health examines case studies and examples involving an array of public health applications. This course prepares students to conduct and evaluate community and public health programs. Topics include ethical components, qualitative data, evaluation design, data analysis and program planning and evaluation.

HLT 00301: Health and Diverse Populations 3 s.h.
Prerequisite: HLT 00200
The goal of this course is to enable students to understand the powerful influence of social, economic, geographic and demographic factors on the health-related attitudes, beliefs and actions of individuals and communities. Students explore the concepts of health literacy, health disparities, and the impact of public policy on the health status of different populations from a social justice perspective. Social Capital is explored as a model for effectively improving the health status of diverse populations.
Course Descriptions

HLT 00302: Global Health 3 s.h.
*Prerequisite: HLT 00200*
Global Health examines major health challenges and the solutions created to manage these challenges. Students will analyze current and emerging global health issues, including diseases, poverty, conflicts, emergencies, and global initiatives for prevention and promotion of well-being.

HLT 00303: Environmental Issues and Health 3 s.h.
*Prerequisite: HLT 00200*
This is a survey course of all types of environmental health risks, including air and water pollution, industrial byproducts, toxins, food safety and food-borne pathogens, radiation, lead and mercury poisoning, pesticides, and bio-terrorist threats. Students learn how to assess environmental risks, communicate reports of risk to the public, and advocate for policies and laws to promote environmental health.

HLT 00345: US Health Care Policy, Ethics, and Advocacy 3 s.h.
*Prerequisites: HES 00301, HLT 00245*
This course will explore the legal and ethical foundations of US public health system and the subsequent conflict between personal choice and the government and public health's role in protecting the health of the population. The course will take an in depth examination of public health policy creation that benefits the health of the population and the ethical considerations of the policy. Finally, the course will consider strategies that public health specialists utilize to advocate for the well-being of society. Case studies in obesity, HIV treatment, communicable diseases as well as other areas will be used throughout this course.

HLT 00390: Health Problems of the Young Child 3 s.h.
Designed primarily for the early childhood and kindergarten-primary education majors, this course covers observation, detection, prevention and alleviation of physical, emotional and social health problems and disorders of the 3-8 year old child. This course may not be offered annually.

HLT 00413: Senior Seminar in Human Performance in Clinical Settings 3 s.h.
*Prerequisites: C- or higher in HES 00401*
This application-oriented course is designed to review and assess the students' knowledge and skills which were developed throughout the Human Performance in Clinical Setting program. Students will progress through a series of online seminars reviewing the key concepts and skills learned in the program that are necessary for a career in the field of Human Performance in Clinical Settings. In addition, students will work in group settings to continue to practice and develop key skills necessary for their career.

HLT 00415: Public Health Methods and Interventions 3 s.h.
*Prerequisites: HPW 00440, HPW 00450, HES 00301*
This course will be a culminating experience and bring together content in public health. The course will explore needs assessments, program creation, evaluation techniques and reporting. Analysis of case studies will be an integral component of the course. Finally, students will have an opportunity to perform a needs assessment and create a program.

HLT 00420: Contemporary Issues in Nutrition 3 s.h.
*Prerequisite(s): (HES 00200 or INAR 06200)*
This upper-level nutrition course provides students with a forum to critically consider controversial issues in nutrition research, education and policy. The influence of governmental agencies, the food industry, the media, and consumer advocacy groups on the dietary guidelines provided for Americans is examined. Students are challenged to apply their nutrition knowledge and education skills as they provide a nutrition consultation for a client. This course is relevant for students desiring to enter the fields of public or community health upon graduation.

HLT 00485: EVAL PROCEDURES IN HEALTH 3 s.h.
This course applies knowledge and skill in developing measuring techniques for program effectiveness, through types of research procedures related to health. It includes competence in evaluating and interpreting health-related statistical data and material from various national and international health organizations. This course may not be offered annually.

HLT 00486: Problems and Issues in Health 3 s.h.
This course assists students in understanding current problems and issues in health solutions by examining past and possible future solutions. It stresses the latest health issues, such as AIDS, the cocaine problem, and teenage pregnancy. This course may not be offered annually.
HLTH 37170: Stress Management 3 s.h.
This course focuses on the nature of stress and the impact it has on a person's health. The student will study the relationship of the physiological, psychological and social factors which contribute to one's general stress balance and develop life skills to combat the negative impact of stress.

HLTH 37180: Psychological Aspects Of Health 3 s.h.
The course deals mostly with assisting students in meeting mental health problems in today's society. It emphasizes modification in behavior, effects of chemicals on behavior, the psychology of sex, the psychology of accident prevention and the psychological problems of aging. This course may not be offered annually.

HLTH 37192: Contemporary Health I 3 s.h.
Prerequisite: Acceptance into one of the following programs: Athletic Training, Health Promotion and Fitness Management, or Health and Physical Education Teacher Certification.
This is the first in a series of two general knowledge based survey courses which provide students with knowledge of current health issues which occur in the human life cycle. Topics which will be addressed are family life and human sexuality, personal growth and development, mental and emotional health, aging and death and dying.

HLTH 37193: Contemporary Health II 3 s.h.
Prerequisite: Acceptance into one of the following programs: Athletic Training, Health Promotion and Fitness Management, or Health and Physical Education Teacher Certification.
This is the second in a series of two general knowledge based survey courses which provide students with knowledge of current health issues which occur in the human lifecycle. Topics which will be addressed are alcohol, tobacco and other drugs, personal health, chronic and infectious diseases, environmental health and consumerism.

HLTH 37209: Health Education For Elementary School Teachers 1 s.h.
Elementary education majors will be prepared to conduct thorough and effective health education in grades K-6. This course focuses on the nature and philosophy of health education and comprehensive school health programs as well as the teacher's role in curriculum, instruction and evaluation as they impact student health-related behavior.

HLTH 37310: Foundations Of Health Promotion And Fitness Management 3 s.h.
This course examines the history, purpose and current practice of health promotion and fitness in organizational settings. Concepts of the field as they relate to corporations, hospitals, non-profit community health agencies and commercial providers are discussed. Students meet with professionals in the field and learn how health promotion and fitness are addressed in different organizations. Resources for professionals in the field are reviewed. Characteristics and skills of successful professionals in this field are addressed.

HLTH 37325: Teaching Concepts Of Health Education I 3 s.h.
Pre-requisite: PHED 35286
This is the first in a series of two combined pedagogy and health education content courses which provide students with knowledge along with general scope and understanding of current health issues which occur in the human lifecycle. This course also develops an understanding of the competencies essential for planning school health education programs. Students are given learning opportunities to develop sensitivity for the importance of integrating health education in various settings and to address the New Jersey Core Curriculum Content Standards for Comprehensive Health and Physical Education (Standards 2.1 through 2.4). Actual lesson planning and teaching experiences are required. Topics which will be addressed are Alcohol, Tobacco and Other Drugs, Personal Growth and Development, Mental and Emotional Health, Aging and Death and Dying.

HLTH 37326: Teaching Concepts Of Health Education II 3 s.h.
Pre-requisite: PHED 35286
This is the second in a series of two combined pedagogy and health education content courses which provide students with knowledge along with general scope and understanding of current health issues which occur in the human lifecycle. This course also develops an understanding of the competencies essential for planning school health education programs. Students are given learning opportunities to develop sensitivity for the importance of integrating health education in various settings and to address the New Jersey Core Curriculum Content Standards for Comprehensive Health and Physical Education (Standards 2.1 through 2.4). Actual lesson planning and teaching experiences are required. Topics which will be addressed are Family Life and Human Sexuality, Personal Health, Chronic and Infectious Diseases, Environmental Health and Consumerism.
Course Descriptions

HLTH 37327: Consumer Health Decisions 3 s.h.
This course examines the rights and responsibilities of a consumer faced with increasing amounts of information related to his or her overall well-being. It examines the major problem of health fraud and the components of scientific research. The role of advertising is explored, as well as sound principles for purchasing nutrition, fitness and other health-related products and services. Students learn important concepts related to health insurance and hospitals, traditional and alternative medical care and how to better manage the decisions they make.

HLTH 37329: Laboratory In Personal Training Techniques 1 s.h.
Prerequisites: PHED 35401
This course prepares the student, with an exercise science background, to work successfully as a personal fitness trainer for individual clients. During this highly experiential learning course, students will develop their ability to combine their exercise science knowledge, counseling and educational skills, and fitness techniques to prescribe exercise for a variety of populations. Upon successfully completing this course, students will be prepared to qualify for national certifications in personal training.

HLTH 37340: Administration Of Health Promotion And Fitness Programs 3 s.h.
Prerequisites: HLTH 37170 and HLTH 37192 and HLTH 37310 and HLTH 37350 and INAR 06200
This course identifies and explains the components of a successful health promotion and fitness program. Students learn how to conduct a needs assessment, set goals and objectives, design intervention strategies, promote the program, find resources, prepare a budget and evaluate a program. In addition, students sharpen their professional skills related to public speaking, time management and business writing.

HLTH 37350: Health Behavior 3 s.h.
Prerequisites: HLTH 37110 and successful completion of Praxis I exam.
This course examines the factors that influence an individual's choices and behaviors related to health and the process of motivating change within the individual to adopt healthful behaviors and discontinue unhealthful ones. Several theories of health behavior are examined and applied. The different roles of the client and educator are addressed as the student is prepared to counsel others in making positive health behavior changes.

HLTH 37390: Health Problems Of The Young Child 3 s.h.
Designed primarily for the early childhood and kindergarten-primary education majors, this course covers observation, detection, prevention and alleviation of physical, emotional and social health problems and disorders of the 3-8 year old child. This course may not be offered annually.

HLTH 37430: Practicum In Health Promotion And Fitness Management 3 s.h.
Prerequisites: HLTH 37340
This is an application-oriented course in which students design and implement a health promotion/fitness program for the Rowan community. While the major emphasis is on the implementation of the program, students continue to meet weekly to discuss and evaluate their progress. Specific topics related to the field, such as legal liability and resume preparation are also addressed. In addition, students complete a formal evaluation of their professional qualities and skills for the health promotion and fitness field.

HLTH 37453: School Health Program Planning 2 s.h.
Prerequisites: HLTH 37325 and HLTH 37126
This course develops an understanding of the competencies essential in planning of health programs in schools. Students are given opportunities for integrating and correlating health in K-12 school settings. Field experiences, planning and teaching experiences are a part of this course.

HLTH 37483: Senior Internship in HPFM 9 s.h.
Prerequisites(s): HLTH 37430
Students complete 400 hours of supervised field experience enabling them to gain practical experience in an environment focused on Health Promotion, Exercise Physiology, Community Health or other, related field. Placements are made in agencies selected on the basis of student's goals, interests, and program specialization. The site will provide experiences that build on the skills, knowledge, and dispositions acquired during coursework and related professional experiences.

HLTH 37485: Evaluation Procedures In Health 3 s.h.
This course applies knowledge and skill in developing measuring techniques for program effectiveness, through types of research procedures related to health. It includes competence in evaluating and interpreting health-related statistical data and material from various national and international health organizations. This course may not be offered annually.
Course Descriptions

HLTH 37486: Problems And Issues In Health 3 s.h.
This course assists students in understanding current problems and issues in health solutions by examining past and possible future solutions. It stresses the latest health issues, such as AIDS, the cocaine problem, and teenage pregnancy. This course may not be offered annually.

HLTH 37515: Driver Education Concepts And Theory 3 s.h.
The course is designed for currently certified teachers seeking New Jersey Driver Education teacher endorsement. The content includes learning to teach motor vehicle operation, driving environment and the student development of teaching techniques emphasizing safety, risk perception, and decision-making processes applied in a vehicle. Learning how to instruct others in performing behind-the-wheel driving will be scheduled outside of class time.

HPW 00210: Foundations of Health Promotion and Wellness Management 3 s.h.
This course examines the history, purpose and current practice of health promotion and wellness in organizational settings. Concepts of the field as they relate to corporations, hospitals, non-profit community health agencies and commercial providers are discussed. Students meet with professionals in the field and learn how health promotion and wellness are addressed in different organizations. Resources for professionals in the field are reviewed. Characteristics and skills of successful professionals in this field are addressed.

HPW 00340: Program Planning & Leadership in Health Promotion & Wellness 3 s.h.
Prerequisite(s): (HLT 00170 or HLTH 37170) and (NUT 00200 or INAR 06200) and (HLT 00192 or HLTH 37192) and (HPE 00310 or HLTH 37310) and (HPW 00350 or HLTH 37350) and (HPW 00350 or HLTH 37350)
This course identifies and explains the components of a successful health promotion and fitness program. Students learn how to conduct a needs assessment, set goals and objectives, design intervention strategies, promote the program, find resources, prepare a budget and evaluate a program. In addition, students sharpen their professional skills related to public speaking, time management and business writing.

HPW 00350: Health Behavior Theory and Counseling 3 s.h.
Prerequisite(s): (HPW 00310 or HLTH 37310) and successful completion of Praxis I exam.
This course examines the factors that influence an individual's choices and behaviors related to health and the process of motivating change within the individual to adopt healthful behaviors and discontinue unhealthful ones. Several theories of health behavior are examined and applied. The different roles of the client and educator are addressed as the student is prepared to counsel others in making positive health behavior changes.

HPW 00360: Facility & Program Management in Wellness 3 s.h.
Prerequisite(s): HLTH 00310
This course examines the skills necessary to effectively manage a health promotion facility and program through the study of the health and fitness facility management industry. Topics include training and managing staff, marketing programs and services, customer service, financial management, legal concerns, equipment selection and health and safety issues.

HPW 00430: Practicum in Health Promotion and Wellness Management 3 s.h.
Prerequisite(s): (HPW 00340 or HLTH 37340)
This is an application-oriented course in which students design and implement a health promotion/fitness program for the Rowan community. While the major emphasis is on the implementation of the program, students continue to meet weekly to discuss and evaluate their progress. Specific topics related to the field, such as legal liability and resume preparation are also addressed. In addition, students complete a formal evaluation of their professional qualities and skills for the health promotion and fitness field.

HPW 00481: Senior Internship in Health and Exercise Science 9 s.h.
Prerequisite(s): (HPW 00430 or HLTH 37430)
Students complete 400 hours of supervised field experience enabling them to gain practical experience in an environment focused on Health Promotion, Exercise Physiology, Community Health or other, related field. Placements are made in agencies selected on the basis of student's goals, interests, and program specialization. The site will provide experiences that build on the skills, knowledge, and dispositions acquired during coursework and related professional experiences.

INAR 05302: Contemporary American Family 3 s.h.
This course examines the dynamic interiors of family life, focusing on the interpersonal relationships of family members and current issues related to family life. Students choose course projects related to their professional or personal goals.
INAR 06200: Basic Nutrition  
3 s.h.  
Students study human nutrition through the basic knowledge of nutrients and the physiological processes involved in the utilization of food. They also develop an understanding of the ways in which age, health, social, and economic factors and other variables affect nutritional needs and food practices. A computerized dietary analysis may be one of the course requirements.

INAR 06390: Nutrition Education  
3 s.h.  
This course provides an overview of nutrition education and explores the various settings in which nutrition education is carried out. It introduces students to learning theory and reviews techniques and resources for teaching nutrition. Students learn to assess the needs of different learner groups and develop, select, and evaluate appropriate nutrition education materials. This course may not be offered annually.

INAR 06415: Nutrition For Fitness  
3 s.h.  
Prerequisites: INAR 06200, and (BIOL 10210 and 10212) or (PHED 35241 and PHED 35242), all with grade of C- or higher.  
This advanced nutrition course explores the relationship between nutrition, physical fitness, performance and disease prevention. Specific topics include nutrition fraud, supplementation, ergogenic aids, diet planning for athletes and the relationship between nutrition and chronic diseases such as cancer and heart disease. In addition, students continue to develop their skills as nutrition counselors and educators.

INAR 06420: Contemporary Issues In Nutrition  
3 s.h.  
Prerequisites: INAR 06200  
This upper-level nutrition course provides students with a forum to critically consider controversial issues in nutrition research, education and policy. The influence of governmental agencies, the food industry, the media, and consumer advocacy groups on the dietary guidelines provided for Americans is examined. Students are challenged to apply their nutrition knowledge and education skills as they provide a nutrition consultation for a client. This course is relevant for students desiring to enter the fields of public or community health upon graduation.

NUT 00200: Basic Nutrition  
3 s.h.  
Students study human nutrition through the basic knowledge of nutrients and the physiological processes involved in the utilization of food. They also develop an understanding of the ways in which age, health, social, and economic factors and other variables affect nutritional needs and food practices. A computerized dietary analysis may be one of the course requirements.

NUT 00210: Macronutrients  
3 s.h.  
Prerequisites: NUT 00200 and CHEM 06100  
This course provides an in-depth examination of carbohydrate, lipid and protein in the human body. Specific topics include the digestion, transport, and metabolism of each of the macronutrients, recommendations for consumption of each macronutrient, and the relationship between the macronutrients and disease.

NUT 00230: Introduction to Nutrition Professions  
3 s.h.  
The goal of this course is to introduce students to the profession of nutrition and/or dietetics and to the competencies necessary to be an effective leader in the health care field. Students will explore a variety of career opportunities in nutrition and complete one professional site visit with a nutrition professional. Information on competencies and credentialing in the field of nutrition, including the path to becoming a Registered Dietitian, will be reviewed. Principles of effective leadership will be introduced.

NUT 00300: Lifecycle Nutrition  
3 s.h.  
Prerequisite: NUT 00210 and NUT 00220  
This course explores the theory and practice of improving the nutritional status of various populations along the life span. Special needs within populations will be addressed, including obesity and diabetes, disordered eating, federal assistance programs, and school nutrition policies and programs.

NUT 00310: Management of Food and Nutrition Services  
3 s.h.  
Prerequisite: NUT 00250  
This course explores the organizational and business skills needed to establish and operate a food service facility. Students will learn about facility design, budgeting and accounting, human resources management, menu planning, regulatory compliance and marketing of food service facilities.
Course Descriptions

NUT 00320:  Techniques of Food Preparation  3 s.h.
This lab-based course offers students an opportunity to develop essential cooking and baking skills necessary for preparing recipes properly and safely. Students will learn how to prepare a wide variety of foods from all food groups and will have opportunities to improve their cooking and baking skills through evaluation of the foods they prepare.

NUT 00330:  Nutrition Therapy 1  
*Prerequisite: Must be accepted into the Dietetics track.*  3 s.h.
This is the first of a two-course sequence reviewing all aspects of nutritional care and therapy for patients with nutrition-related diseases. In this course, students are introduced to the concepts of nutrition assessment, care and therapy as part of a plan to treat disease. Methods of medical and nutritional record-keeping are also examined, as students learn how dietitians work within a healthcare team.

NUT 00340:  Nutrition Therapy 2  
*Prerequisite: NUT 00330*  3 s.h.
This is the second of a two-course sequence reviewing all aspects of nutritional care and therapy for patients with nutrition-related diseases. Building upon the first course, students expand their understanding and application of nutrition assessment, care and therapy as part of a plan to treat disease. Specific diseases of focus in this course include diabetes, mellitus, anemia, hepatitis, cancer and other diseases of the liver, kidneys, cardiovascular system, and pulmonary system.

NUT 00350:  Nutrition Education for Diverse Populations  3 s.h.  
*Prerequisite: Must be accepted into the Dietetics track.*
This course prepares students with the skills and knowledge they need to become effective nutrition educators in a community setting among diverse populations, including different cultural backgrounds and learning abilities. Students will learn the elements of planning, implementing and evaluating nutrition education programs in a variety of delivery formats.

NUT 00400:  Quantity Food Production  3 s.h.  
*Prerequisite: NUT 00310 and Must be accepted into the Nutrition and Exercise Science program.*
This course builds upon student’s knowledge of managing a food service facility by specifically addressing the challenge of food production in larger volume. Students learn how to develop menus, calculate costs, maintain food safety, extend and convert recipes, procure and store foods and ingredients, estimate labor needs, and market a large-scale food service operation.

NUT 00410:  Policy Issues in Dietetics Practice  3 s.h.  
*Prerequisite: Must be accepted into the Dietetics track.*
This course will focus on policy and professional issues which affect the nutrition and dietetics profession. These include professional ethics standards, state and federal legislation, political advocacy, and the mission and function of leading health and nutrition agencies. Students will have opportunities to engage in the advocacy process as they meet with professional representing these agencies and legislative efforts to discuss current issues facing the profession.

NUT 00415:  Nutrition for Fitness  3 s.h.  
*Prerequisite(s): (NUT 00200 or INAR 06200) and (BIOL 10210 and BIOL 10212) or (NUT 00200 or INAR 06200) and (HES 00241 or PHED 35241) and (HES 00242 or PHED 35242), all with a grade of C- or higher.*
This advanced nutrition course explores the relationship between nutrition, physical fitness, performance and disease prevention. Specific topics include nutrition fraud, supplementation, ergogenic aids, diet planning for athletes and the relationship between nutrition and chronic diseases such as cancer and heart disease. In addition, students continue to develop their skills as nutrition counselors and educators.

NUT 00420:  Contemporary Issues in Nutrition  3 s.h.  
*Prerequisite(s): (NUT 00200 or INAR 06200)*
This upper-level nutrition course provides students with a forum to critically consider controversial issues in nutrition research, education and policy. The influence of governmental agencies, the food industry, the media, and consumer advocacy groups on the dietary guidelines provided for Americans is examined. Students are challenged to apply their nutrition knowledge and education skills as they provide a nutrition consultation for a client. This course is relevant for students desiring to enter the fields of public or community health upon graduation.

NUT 00425:  Principles of Food Services  3 s.h.  
*Prerequisites: NUT 00210 and NUT 00220*
Food science integrates several branches of science with emerging technologies to better understand the properties of nutrients with a goal of expanding and improving the food supply. Students will explore the effects of preparation methods, commercial processing, and storage systems on the safety, quality and nutritional value of a variety of nutrients and foods.
Course Descriptions

NUT 00500: Advanced Nutritional Assessment 3 s.h.
Prerequisite: Must be accepted into the M.S. in Nutrition and Dietetics program and in the fifth (graduate) year of the program.
This graduate level course will expand upon the nutritional assessment skills of dietetics students to enable them to perform a complete client assessment. Students will learn to assess lifestyle habits, health risks, dietary intake, biometric measurements, and results of blood, stool, saliva and urine laboratory tests. Students will integrate assessment data into a comprehensive analysis and recommendation report for a client. Client confidentiality, data management and follow-up nutrition counseling skills will also be addressed.

NUT 00510: Advanced Topics in Public Health Nutrition 3 s.h.
Prerequisite: Must be accepted into the M.S. in Nutrition and Dietetics program and must be in the fifth (graduate) year of the program.
This course is an exploration of the relationship between nutrition, wellness and disease prevention. Students will examine the interaction between the physical and social environment, lifestyle habits and biological factors in determining the health status of a population and the role nutrition plays in addressing them. The development, implementation, monitoring and evaluation of nutrition programs and research needed to address current public health issues will be explored.

PHED 35103: Health And Wellness 3 s.h.
This course stresses the concepts of lifetime health and physical fitness. It examines the positive effects of exercise upon the heart and blood vessels, obesity and proper diet, body mechanics, and how the body handles stress. The course also examines the negative effects of disease, including socially transmitted diseases, substance abuse including narcotics, alcohol and tobacco, and other contemporary health-related problems. Students learn to analyze their strengths and limitations while planning a personal wellness profile which best fits their needs and interest.

PHED 35105: Introduction To Athletic Training 3 s.h.
This course is designed as an initial experience for students considering a career in athletic training. Students will be introduced to various domains, competencies, and proficiencies related to athletic training. An in-depth look at the field of athletic training and the requirements of the athletic training program will be discussed. An observational field experience is required.

PHED 35109: Adventure And Experiential Learning 2 s.h.
This course in adventure and experiential learning activities is designed to provide the prospective students with the skills and knowledge necessary to conduct adventure and experiential learning activities in a variety of settings. A function of this course is to introduce strategies appropriate for facilitating experiential and adventure experiences for varied settings and groups. We believe that these types of activities are becoming increasingly relevant in today's society, especially in occupational wellness. Thus, the skill and knowledge proficiency is a necessary component of leadership in a variety of settings.

PHED 35116: Safety, First Aid, And Basic Understanding Of Athletic Injuries 3 s.h.
Prerequisite: Acceptance into one of the following programs: Athletic Training, Health Promotion and Fitness Management, or Health and Physical Education Teacher Certification.
This course is designed for the individual who is interested in gaining CPR and First Aid certification and a basic understanding of athletic injuries. The first part of this class will allow students to understand and demonstrate appropriate techniques in performing American Red Cross Community CPR and First Aid techniques required for certification. The second component of the class will enable students to understand basic concepts in athletic injury: anatomy, recognition, and basic care.

PHED 35218: Prevention And Care Of Orthopedic Injuries 3 s.h.
An examination of current practices and procedures in the basic pathology, prevention and care of athletic injuries. The laboratory experience exposes students to wound care, padding, and the art and science of athletic injury taping. An observational clinical field experience will be required.

PHED 35219: Pathology And Evaluation Of Orthopedic Injuries I 3 s.h.
Prerequisites: PHED 35218 Co-requisites: PHED 35238
This course provides an examination of the etiology, epidemiology, pathology, and assessment of injuries and illnesses to the lower extremity. Structural, functional, and surface anatomy will be reviewed. In addition to didactic classroom time, students are also instructed, given time to practice and evaluated on pertinent athletic training psychomotor competencies and clinical proficiencies within a practical laboratory experience. There is an observational field experience associated with this class.
PHED 35220: Pathology And Evaluation Of Orthopedic Injuries II
Prerequisites: PHED 35219 Corequisite: PHED 35239
This course provides an examination of the etiology, epidemiology, pathology and assessment of injuries and illnesses to the upper extremity, head, axial skeleton, chest, and thorax. Structural, functional and surface anatomy will be reviewed. In addition to didactic classroom time, students are also instructed, given time to practice and evaluated on pertinent athletic training psychomotor competencies and clinical proficiencies within a practical laboratory experience. There is an observational field experience associated with this class.

PHED 35238: Pathology And Evaluation Of Orthopedic Injuries I (Lab)
Prerequisites: PHED 35218 Corequisite: PHED 35219
This laboratory course is designed to teach the psychomotor and clinical proficiency skills necessary to perform a competent evaluation of the lower extremity and low back region. It must be taken and successfully completed in conjunction with Pathology and Evaluation of Orthopedic Injuries I before a student may continue matriculating through the Athletic Training Education Program.

PHED 35239: Pathology And Evaluation Of Orthopedic Injuries II (Lab)
Prerequisites: PHED 35219 and PHED 35338 Corequisites: PHED 35220
This laboratory course is designed to teach the psychomotor and clinical proficiency skills necessary to perform a competent evaluation of the upper extremity, head, cervical and thoracic regions. It must be taken and successfully completed in conjunction with Pathology and Evaluation of Orthopedic Injuries II before a student may continue matriculating through the Athletic Training Education Program.

PHED 35240: Motor Development And Motor Learning
3 s.h.
This is an introductory course that includes the study of locomotor and non locomotor movement, manipulative skills, and developmental and environmental factors that affect learning in these motor skill areas. The course will focus on motor behavior changes. Students will also be introduced to motor learning theories and concepts, assessment, and development of motor skills in various settings.

PHED 35241: Structure And Function Of The Human Body I
Prerequisite: Acceptance into one of the following programs: Athletic Training, Health Promotion and Fitness Management, or Health and Physical Education Teacher Certification
This course investigates basic anatomical and physiological concepts of the human body. It includes cellular structure and function, metabolism, and the skeletal, nervous, muscular, circulatory and respiratory systems.

PHED 35242: Structure And Function Of The Human Body II
Prerequisites: PHED 35241 and acceptance into one of the following programs: Athletic Training, Health Promotion and Fitness Management, or Health and Physical Education Teacher Certification
This course continues the study of the human body begun in PHED35.241. It investigates the urinary, endocrine, reproductive, digestive and integumentary systems.

PHED 35252: Foundations Of Fitness
3 s.h.
This course is designed to provide students with the skills and knowledge to be able to design, implement, and assess a fitness program for K-12 students. Content will focus on health and skill related fitness and include designing fitness programs for individuals with differing needs and abilities.

PHED 35271: Movement And Meaning In Sports
3 s.h.
This course helps students understand themselves and how they relate physically to their environment. Through movement students discover, understand, control and adjust to their environment and gain an understanding of space, time and force. The course discusses exercise and sport forms. This course may not be offered annually.

PHED 35272: Technology And Assessment Of Health And Exercise Science
Prerequisite: acceptance into one of the following programs: Athletic Training, Health Promotion and Fitness Management, or Health and Physical Education Teacher Certification
This course will prepare students in the Department of Health and Exercise Science to use computers and technology for organizing information, amplifying presentation, developing written documents, assessing client/students, gathering information, and completing research. Students will evaluate software, use peripheral devices, explore internet applications, and use non-computer media applications as they apply to their discipline. An introduction to simple statistical designs will also be a component of this course.
PHED 35286: Teaching In Learning Communities II: Foundations Of Teaching Health And Physical Education 3 s.h.
Prerequisite: C- or better in EDUC 01270
Students in this course are introduced to the profession of teaching health and physical education for pupil outcomes which address the New Jersey Core Curriculum Content Standards for Comprehensive Health and Physical Education, with specific emphasis on teaching skills, student behaviors, and the classroom environment. These three elements are discussed, analyzed and practiced through the principles of learning communities. Students explore the roles and responsibilities of teachers through the study of professional literature; class discussions and activities; simulation exercises; and direct interactions with students, teachers and administrators during on-campus and off-campus experiences. School observations are a required component of this course.

PHED 35310: Teaching Concepts Of Secondary Physical Education I 3 s.h.
Prerequisites: PHED 35286
This course provides an opportunity for students to learn the characteristics of a skilled performance in a variety of activities, including target and net/wall activities. Students will be able to describe and demonstrate the application of appropriate participation in each activity, as well as effective pedagogical techniques that lead to such participation.

PHED 35316: Teaching Concepts Of Dance In Physical Education 3 s.h.
Prerequisite: Acceptance into one of the following programs: Athletic Training, Health Promotion and Fitness Management, or Health and Physical Education Teacher Certification
This course introduces health and exercise science majors specializing in teacher certification to the skills, concepts and knowledge necessary for instructing development and performance sequences in various rhythmic activities (creative rhythms, routines with small hand apparatus, and novelty dances) and dance forms (folk, social, square, contra, and line). The study of selected rhythmic activities and dance forms include: terminology, relative movement patterns, techniques, skill performance, evaluation, basic musical structure, and teaching strategies.

PHED 35320: Teaching Concepts Of Secondary Physical Education II 3 s.h.
Prerequisites: PHED 35286
This course provides an opportunity for students to learn the characteristics of a skilled performance in a variety of physical activities, including invasion sports. Students will be able to describe and demonstrate the application of appropriate participation in each activity, as well as effective pedagogical techniques that lead to such participation.

PHED 35334: Advanced Emergency Care 3 s.h.
This is a sophomore level course designed primarily for athletic training majors and other allied health professionals. Students are trained in CPR for the professional rescuer as well as other advanced emergency skills. An additional observation experience in a local emergency room is required. There also is an optional lifeguarding component available in this class.

PHED 35336: Teaching Concepts Of Elementary Physical Education 3 s.h.
Prerequisites: PHED 35286 and HES Department Acceptance
This course is an introductory survey course designed to help prepare health and exercise science teacher certification majors to teach relevant curriculum at the elementary school level. Students will be exposed to a number of important activities that comprise the focus of elementary school physical education. Methods, techniques and classroom management as they apply to teaching pertinent curriculum will be highlighted.

PHED 35338: Clinical Techniques In Athletic Training I 2 s.h.
Co-requisite: PHED 35338 Prerequisites: PHED 35220
This course, designed for first semester juniors, will review and evaluate psychomotor competencies and clinical proficiencies previously discussed in pre-professional course work. Students meet once per week in the Athletic Training Laboratory to practice and be evaluated on their psychomotor and clinical proficiency skills. Opportunities are also provided to discuss topics pertinent to the student’s clinical residency assignment.

PHED 35339: Clinical Techniques In Athletic Training II 2 s.h.
Co-requisite: PHED 35339 Prerequisites: PHED 35338
This course, designed for second semester juniors, will review and evaluate psychomotor competencies and clinical proficiencies previously discussed in Therapeutic Modalities and topics relevant to previous course work. Students meet once per week in the Athletic Training Laboratory to practice and be evaluated on their psychomotor and clinical proficiency skills. Opportunities are also provided to discuss topics pertinent to the student’s clinical residency assignment.
PHED 35340: Clinical Techniques In Athletic Training III  
2 s.h.  
Co-requisite PHED 35360  
Prerequisite: PHED 35339  
This course, designed for first semester seniors, will review and evaluate psychomotor competencies and clinical proficiency previously discussed in Therapeutic Exercises and topics relevant to previous course work. Students meet once per week in the Athletic Training Laboratory to practice and be evaluated on their psychomotor and clinical proficiency skills. Opportunities are also provided to discuss topics pertinent to the student’s clinical residency assignment.

PHED 35341: Clinical Techniques In Athletic Training IV  
2 s.h.  
Corequisite: PHED 35361  
Prerequisite: PHED 35340  
This course, designed for second semester seniors, will review and evaluate clinical proficiencies previously discussed in General Medical Conditions and Pharmacology and related topics relevant to previous course work. Students meet once per week in the Athletic Training Laboratory to practice and discuss topics pertinent to their clinical assignment. The clinical assignment enables students to develop and assimilate patient care skills under the direct supervision of a certified athletic trainer and/or approved clinical instructor within the athletic training room, exposure to intercollegiate athletics and/or at approved affiliated sites.

PHED 35343: Kinesiology  
3 s.h.  
Prerequisites: (BIOL 10210 and BIOL 10212) or (PHED 35241 and PHED 35242), all with grade of C- or higher  
Kinesiology, the study of human movement, integrates the sciences of anatomy, physiology and physics as they contribute to developing an appreciation for the art of movement. Opportunity is given for an individual study of a movement pattern with emphasis on the application of the mechanical principles of motion.

PHED 35344: Exercise Physiology (Without Lab)  
3 s.h.  
Prerequisites: (BIOL 10210 and BIOL 10212) or (PHED 35241 and PHED 35242), all with grade of C- or higher  
A course in applied anatomy and physiology, this course studies the interrelationship of exercise and physiology. This course also covers the functions of the human body under the stress of physical activity.

PHED 35345: Exercise Physiology (With Lab)  
4 s.h.  
Prerequisites: (PHED 35341 and PHED 35342) or (BIOL 10210 and BIOL 10212), all with grade of C- or higher  
A course in applied anatomy and physiology, this course studies the interrelationship of exercise and physiology. This course also covers the functions of the human body under the stress of physical activity.

PHED 35347: Applied Biomechanics  
3 s.h.  
Prerequisites: PHED 35219 and PHED 35220  
This course is designed to acquaint students with the fundamental principles involved with biomechanics and human movements. This course will discuss the kinetic and kinematics concepts and how they are applied to balance, posture, locomotion and functional activity.

PHED 35358: Residency In Athletic Training  
3 s.h.  
Prerequisites: PHED 35220 and acceptance in the Professional Phase of the athletic Training Education program; Corequisites: PHED 35338  
This clinical education course, designed for first semester juniors, will review and evaluate, within a clinical assignment, those clinical proficiencies discussed in previous and concurrent course work using a learning-over-time model. The clinical assignment enables students to develop and assimilate patient care skills under the direct supervision of a certified athletic trainer and/or approved clinical instructor within the athletic training room, exposure to intercollegiate athletics and/or at approved affiliated sites. During this course, the student will be formally evaluated by an Approved Clinical Instructor only. This course must be taken and successfully completed in conjunction with PHED 35.338 Clinical Techniques in Athletic Training I before a student may continue to matriculate through the Athletic Training Education Program.

PHED 35359: Residency In Athletic Training II  
3 s.h.  
Prerequisites: PHED 35338 and PHED 35358  
Corequisites: PHED 35339  
This clinical education course, designed for second semester juniors, will review and evaluate, within a clinical setting, those clinical proficiencies discussed in previous and concurrent course work using a learning-over-time model. The clinical assignment enables students to develop and assimilate patient care skills under the direct supervision of a certified athletic trainer and/or approved clinical instructor within the athletic training room, exposure to intercollegiate athletics and/or at approved affiliated sites. During this course, the student will be formally evaluated by an Approved Clinical Instructor only. This course must be taken and successfully completed in conjunction with PHED 35.339 Clinical Techniques in Athletic Training II before a student may continue matriculating through the Athletic Training Education Program.
Practical experience is provided for testing subjects in the laboratory. Assignments are sought that involve the pre-service teacher in a realistic mainstreamed classroom environment.

Exercise Prescription

This course provides students with the knowledge and practical experience in exercise testing and prescription. The information enables students to establish scientific foundations of exercise testing and prescription, to identify the risk factors for disease development and to prescribe an exercise program based on exercise test results and personal limitations. Practical experience is provided for testing subjects in the laboratory.
Course Descriptions

PHED 35405: Organization & Administration In Athletic Training  
Prerequisites: PHED 35339
This lecture/laboratory course is designed to meet the entry level competencies for the athletic training student in the area of organization and administration of athletic training. It covers liability, budgeting, athletic training facility design, insurance, administration of medical record keeping systems, data tabulation and interpretation, emergency transportation systems, athletic training facility management, impact of state and national governing body regulations, athletic injury insurance administration and communication, conflict resolution and mediation.

The senior level course is designed to meet educational competencies in pharmacology and general medicine for the undergraduate athletic training student. This course will focus on issues in pharmacology and general medicine pertinent to the allied health profession of athletic training. Issues such as the drug approval process, side effects of medications, general medical evaluation will be explored during this course. There is a general medical clinical field experience with the athletic training programs medical director associated with this course.

PHED 35412: Exercise For Special Populations  
Prerequisite: PHED 35345 Corequisite: PHED 35401
This course provides a study of exercise considerations for special populations. It covers the basic concepts of the physiologic effects of exercise and the application of these concepts to special cases. Cases included are respiratory and cardiovascular diseases, hypertension, obesity, diabetes, arthritis, osteoporosis, pregnancy, children/adolescents, and the elderly.

PHED 35430: Senior Seminar In Athletic Training  
Prerequisites: PHED 35340
This senior seminar is an examination of the individual's responsibility to promote athletic training as a profession, remain abreast of current theory and practice, disseminate health and athletic training information, and to enhance the professional growth of self and others.

PHED 35447: Therapeutic Modalities In Athletic Training - Laboratory Experiences  
Prerequisite: PHED 35220 Corequisite: PHED 35475
This laboratory course is designed to teach psychomotor and clinical proficiency skills necessary to develop psychomotor skills relevant to the use of Therapeutic Modalities. This laboratory course must be taken and successfully completed in conjunction with Therapeutic Modalities in Athletic Training before a student may continue matriculating through the Athletic Training Education Program.

PHED 35450: K-12 Health And Physical Education Curriculum And Instruction  
Prerequisite: HLTH 37325 and HLTH 37326 and PHED 35310 and PHED 35320 and PHED 35336. Corequisite: PHED 35392
K-12 Physical Education Curriculum and Instruction is a critical junior level course designed to help prepare Health and Exercise Science majors to become successful physical education teachers in schools. Teacher candidates will develop expertise in curriculum construction, planning, instruction and evaluation in elementary, middle and high school. In developing this expertise, candidates will address the NJ Core Curriculum Content Standards for Comprehensive Health and Physical Education (Standards 2.1, 2.5 and 2.6).

PHED 35452: Teaching Concepts Of Adapted Physical Education  
Prerequisites: PHED 35270 and PHED 35286 and PHED 35310 and PHED 35320 and PHED 35336 and SPED 08130. Corequisite: PHED 35392
This course is designed to provide health and physical education teacher candidates with the knowledge and basic skills required to meet the professional and legal mandates pertaining to general physical education for students with unique needs, between ages 3 to 21. The course will focus on the law, placement decisions, assessment, individualized general physical education programming, service delivery, and transition planning for individuals with disabilities. It stresses professionalism in the workplace, awareness of the strengths and limitations of those with disabilities and methods for inclusion.

PHED 35456: Principles Of Coaching  
This course emphasizes the development of a sound coaching philosophy. Includes aspects related to team organization, supervision, equipment control and its administration and community ethics. Attention will be given to the sociology and psychology of sport.

PHED 35460: Clinical Practice In Health And Physical Education, Elementary  
Prerequisites: PHED 35392, Praxis II
This course allows teacher candidates to work under the guidance and direction of an experienced elementary health and physical education teacher. Teacher candidates gain experience and develop insight and skill in the teaching of secondary school health and physical education. An application for clinical practice must be submitted and approved through the Office of Field Experiences.
**Course Descriptions**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PHED 35461:</td>
<td>Clinical Practice In Health And Physical Education, Secondary</td>
<td>5 s.h.</td>
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<td></td>
<td><strong>Prerequisites:</strong> PHED 35392</td>
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<td>This course allows teacher candidates to work under the guidance</td>
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<td>and direction of an experienced secondary health and physical</td>
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<td>education teacher. Teacher candidates gain experience and develop</td>
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<td>insight and skill in the teaching of secondary school health and</td>
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<td>physical education. An application for clinical practice must be</td>
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<td>submitted and approved through the Office of Field Experiences.</td>
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<tr>
<td>PHED 35465:</td>
<td>Clinical Seminar In Health And Physical Education</td>
<td>2 s.h.</td>
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<td></td>
<td><strong>Prerequisites:</strong> PHED 35460 or PHED 35461</td>
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<td>This senior-level capstone course is designed to be taken</td>
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<td>concurrently with student teaching. The seminar will focus on:</td>
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<td>understanding the current issues in teaching health and physical</td>
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<td>education; evaluating the application of effective teaching;</td>
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<td>and understanding the parameters of professional and ethical</td>
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<td>behaviors in teaching.</td>
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<tr>
<td>PHED 35473:</td>
<td>Water Safety Instructor</td>
<td>3 s.h.</td>
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<td></td>
<td>This course covers the American National Red Cross standardized</td>
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<td></td>
<td>program of skill proficiency, teaching methodologies, principles</td>
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<td></td>
<td>of class organization, safety factors in teaching swimming and</td>
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<td>practice teaching experiences. The course is for advanced</td>
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<td>swimmers who are interested in learning to teach swimming and</td>
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<td>water safety. Upon successful completion of this course students</td>
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<td>receive the American National Red Cross Certificate as a Water</td>
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<td></td>
<td>Safety Instructor. This course may not be offered annually.</td>
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<tr>
<td>PHED 35475:</td>
<td>Therapeutic Modalities For Athletic Training</td>
<td>3 s.h.</td>
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<td></td>
<td><strong>Prerequisites:</strong> PHED 35220 and PHED 35239; <strong>Corequisite:</strong> PHED</td>
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<td>35447</td>
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<td></td>
<td>This course focuses on the cognitive, affective and psychomotor</td>
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<td></td>
<td>competencies involved in developing appropriate therapeutic</td>
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<td></td>
<td>modality programs for the injured person. This course uses current</td>
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<td>research to discuss the theory and clinical applications of all</td>
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<td>potential modalities used in the athletic training room. This</td>
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<td></td>
<td>course implements a problem-solving approach for the return of</td>
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<td>functional integrity to the injured person through the use of</td>
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<td>therapeutic modalities. A laboratory experience is part of this</td>
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<td>class.</td>
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<tr>
<td>PHED 35476:</td>
<td>Therapeutic Exercises In Athletic Training - Laboratory Experiences</td>
<td>2 s.h.</td>
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<td></td>
<td><strong>Corequisites:</strong> PHED 35476; <strong>Prerequisites:</strong> PHED 35475</td>
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<td></td>
<td>This laboratory course is designed to teach the psychomotor and</td>
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<td>clinical proficiency skills necessary to develop psychomotor</td>
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<td>skills relevant to the use of Therapeutic Exercises. This</td>
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<td>laboratory course must be taken and successfully completed in</td>
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<td></td>
<td>conjunction with Therapeutic Exercises in Athletic Training</td>
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<td>before a student may continue matriculating through the athletic</td>
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<td>Training Education Program.</td>
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<td>PHED 35477:</td>
<td>Psychosocial Aspects Of Physical Activity</td>
<td>3 s.h.</td>
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<td></td>
<td><strong>Prerequisites:</strong> PSY 101.107 PHED 35479</td>
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<td></td>
<td>This course, designed for seniors in Athletic Training, addresses</td>
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<td></td>
<td>several CAATE proficiencies related to the psychosocial aspect</td>
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<td>of physical activity and injury. Topics include but are not</td>
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<td>limited to theories related to the psychological and emotional</td>
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<td>aspects of trauma and forced inactivity, the use of</td>
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<td>motivational activities towards rehabilitation, basic principles</td>
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<td>of mental preparation, relaxation, and visualization, as well as</td>
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<td>theories and techniques of interpersonal and cross-cultural</td>
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<td>communication among athletic trainers, their patients, and others</td>
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<td>involved in the health care of the patient.</td>
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<tr>
<td>PHED 35478:</td>
<td>Therapeutic Exercises In Athletic Training</td>
<td>3 s.h.</td>
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<td><strong>Corequisites:</strong> PHED 35476; <strong>Prerequisites:</strong> PHED 35475 and</td>
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<td>PHED 35447</td>
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<td>This course covers the cognitive, affective and psychomotor</td>
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<td>competencies involved in developing appropriate rehabilitation</td>
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<td>exercise protocols for the injured person. This course uses</td>
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<td>current research to discuss the physiological and biomechanical</td>
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<td>concepts involved in the clinical practice of rehabilitation.</td>
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<td>This course implements a holistic and problem-solving approach</td>
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<td>for the return of functional integrity to the injured person. A</td>
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<td>laboratory experience is part of this class.</td>
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<td>PHED 35479:</td>
<td>Pharmacology And General Medicine In Athletic Training</td>
<td>3 s.h.</td>
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<td><strong>Prerequisite:</strong> PHED 35478</td>
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<td>This senior level course is designed to meet educational</td>
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<td></td>
<td>competencies in pharmacology and general medication for the</td>
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<td>undergraduate athletic training student. The course will focus on</td>
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<td>issues in pharmacology and general medicine pertinent to the</td>
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<td>allied health profession of athletic training. Issues such as the</td>
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<td>drug approval process, side effects of medications, general</td>
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<td>medical evaluation will be explored during this course. There is</td>
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<td>a general medical clinical field experience with the athletic</td>
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<td>training program's medical director associated with this course.</td>
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</tbody>
</table>
Course Descriptions

PHED 35480: Trends In School And Community Recreation 3 s.h.
This course, an elective course for all students, assists students to develop and enhance "a worthy use of leisure" by participation in school and community recreation as well as leisure service programs and activities.

PHED 36100: Teaching Concepts Of Driver Education 3 s.h.
The course is designed for individuals seeking New Jersey Driver Education teacher endorsement. The content includes learning to teach motor vehicle operation, driving environment and the student development of teaching techniques emphasizing safety, risk perception, and decision-making processes applied in a vehicle. Learning how to instruct others in performing behind-the-wheel driving will be scheduled outside of class time.

HIST 05100: Western Civilization To 1660 3 s.h.
This course covers the evolution of Western Culture from the Stone Age to the end of the Thirty Years War, emphasizing the medieval and early modern periods. Students study the ancient period to learn of its contribution to western culture. The course introduces students to the principles and methodology of history.

HIST 05101: Western Civilization Since 1660 3 s.h.
Prerequisites: Admitted to the Bantivoglio Honors Concentrate
This course examines expansion of European culture to other world areas and the consequent changes for European life. It emphasizes the impact of the Industrial Revolution on all aspects of Western culture and introduces students to the principles and methodology of history.

HIST 05120: World History Since 1500 3 s.h.
This course studies the key changes in the patterns of interaction among the major cultures of the earth from the beginnings of European Expansion in the 1500’s. The course covers the roots of European Expansion, the response of the Confucian, modern, and non-Eurasian cultures, and the emergence of a non-Western Third World Block since 1914.

HIST 05150: United States To 1865 3 s.h.
This course examines the historical roots of the American democratic traditions, with the emphasis on understanding the political, social and cultural forces developed in the new physical setting of North American and finally welded into a unified nation.

HIST 05151: United States Since 1865 3 s.h.
This course analyzes the principal political, social and cultural factors conditioning the life of the nation since the Civil War. It emphasizes the issues facing modern America by the impact of industrialization and the problems of world leadership.

HIST 05273: American Military History, 1775-Present 3 s.h.
A survey of American military experience since the Revolution, this course analyzes military action and its effect on the home front against a background of politics, technology, diplomacy, and personality. This course may not be offered annually.

HIST 05306: Historical Methods-Wi 3 s.h.
Prerequisites: COMP 01112
This course offers intensive training in the techniques of historical research and analysis of historical writing. Required of History majors as prerequisite for other upper-level courses.

HIST 05307: Ancient Mediterranean World 3 s.h.
Prerequisites: HIST 05306 and HIST 05100
This course begins with the earliest Near Eastern civilization and ends with the collapse of Rome. It deals with the wide diversities within this span through selected topics, using readings from primary sources and secondary interpretations. This course may not be offered annually.

HIST 05308: Modern Middle East 3 s.h.
Prerequisites: HIST 05306
This course provides an introduction to the history of the Middle East from 1800 to the present, a period of intense change in the region. It examines the transition from empires to nation states and the rise and fall of European imperialism in the area. This course is typically offered in the spring semester. This course may not be offered annually.
HIST 05310: Medieval Europe  
Prerequisites: HIST 05100 and HIST 05306  
This course examines the development of Europe from the particularism of the feudal age to the formation of national states. It covers political evolution, integrating it with the social, economic and cultural trends giving particular stress to the reading of primary sources in translation. This course may not be offered annually.

HIST 05311: Renaissance And Reformation  
Prerequisites: HIST 05100 and HIST 05306  
This course examines the Renaissance in Italy and northern Europe, the Protestant and Catholic Reformations and their impact upon the politics and culture of the period, the growth of a capitalistic society, overseas expansion and the beginnings of modern science. It uses reading of primary sources. This course may not be offered annually.

HIST 05312: Age Of Enlightenment 1648-1789  
Prerequisites: (HIST 05101 or HIST 05120) and HIST 05306  
This course studies Europe from the end of the Thirty Years War to the French Revolution including the significant intellectual development known as the Enlightenment, the development of the national monarchies, colonization and the colonial wars. This course may not be offered annually.

HIST 05313: Age Of Revolution 1760-1815  
Prerequisites: (HIST 05101 or HIST 05120) and HIST 05306  
This course emphasizes the dramatic changes that occurred in European society during this period. It examines the political, social, economic and intellectual factors that stimulated change, using readings in primary sources and secondary interpretations. This course may not be offered annually.

HIST 05314: Europe 1871-1914  
Prerequisites: (HIST 05101 or HIST 05120) and HIST 05306  
This course examines the period in terms of its dual character as the climax of Enlightenment and as the source of later disillusionment. The course emphasizes Europe and not any particular country, giving particular attention to the historiographical problem of the causes of World War I. This course may not be offered annually.

HIST 05315: Twentieth Century Europe I  
Prerequisites: (HIST 05101 or HIST 05120) and HIST 05306  
This course analyzes the major factors that have produced the unrest and disturbances of the present century. It stresses the important economic, social and intellectual trends and major political events. This course may not be offered annually.

HIST 05316: Twentieth Century Europe II  
Prerequisites: (HIST 05101 or HIST 05120) and HIST 05306  
A continuation of in-depth analysis of the modern European historical experience, including the impact of world wars and social change. This course may not be offered annually.

HIST 05319: Ancient Greece  
Prerequisites: HIST 05100 and HIST 05306  
This course will cover the history of ancient Greece from its prehistoric beginnings, through the flourishing and collapse of Helladic culture at the end of the Bronze Age, to the formation of the "Classical World" following the Dark Ages. Particular attention will be given to the role and importance of Homer in shaping Greek history and ideals; the rise of the city-state during the Archaic Period; the peculiarities of Sparta and Athens, and their rivalry and clash from the Persian to the Peloponnesian Wars. Emphasis shall be placed upon contemporary perceptions of, and reactions to these events as found in primary sources (in translation), and their utility for recovering and reconstructing Hellenic history.

HIST 05321: U.S. History 1820-1861  
Prerequisites: HIST 05150 and (HIST 05306 or AMST 13201)  
This course analyzes American society and culture from 1820 to 1861 against the background of industrialization, urban development, westward movement, political campaigns, religious revivals, and evolving gender roles, race relations, and social classes. The course will also focus on the growth of the American Empire, the impact of Jacksonian democracy, and the emergence of sectional politics. This course may not be offered annually.

HIST 05322: Civil War And Reconstruction  
Prerequisites: HIST 05150 and (HIST 05306 or AMST 13201)  
This course provides a detailed political, economic and cultural analysis of the causes of the Civil War. It makes a searching study of the years of reconstruction and their significance for our own times, giving particular emphasis to interpreting the era and its overall significance. This course may not be offered annually.
From the Progressives of the early twentieth century to the present, this course attempts to probe the trends and ideas which form the basis of our present points of view in attempting to solve contemporary problems. This course may not be offered annually.

This course explores developments in English society, government, art, and literature with special emphasis on eighteenth century social and constitutional customs, nineteenth century urbanization, industrialization, imperialism and the attendant social and political consequences; twentieth century world wars, the creation of the welfare state and decolonization. This course may not be offered annually.

This course examines the social and economic history of England from the Reform Act of 1832 to the constitutional crises of 1910, giving special attention to those social and economic factors that underlie British Imperialism. This course may not be offered annually.

This course will examine in-depth the political, economic, social and cultural forces that shaped North America from the time of Columbus' first voyage to the onset of the American Revolution. This will include the study of the variety of European settlements, the impact of European conquest and colonization on native populations, and the threefold relationship between Native Americans, Europeans and Africans that the colonial experience initiated in North America. This course may not be offered annually.

During the Gilded Age and Progressive Era, the United States made a critical transition from a nation that was largely agrarian, rural, and relatively ethnically homogenous to one that was industrial, urban, and ethnically diverse. Students will apply a variety of historical methods to examine the United States's late nineteenth and early twentieth century transformation into a modern society characterized by dynamic politics and fluid cultural forms. This course may not be offered annually.

This course surveys the development of urban America from the 17th century in the U.S. with emphasis on architecture and city planning as well as the traditional attitudes of Americans toward the city and the country. This course may not be offered annually.

This course will focus on federal government's role in the economy and in social life and the restructuring of the American racial, gender, and ethnic systems. A central focus of the course is the development of a mass production economy and the attendant rise of consumerism and media influence that characterized the era between the wars. This course may not be offered annually.

This course will examine the political, economic, social, and cultural factors that led to the onset of the American Revolution, the outbreak of the Revolutionary War, and the creation of the United States of America. This will include study of the adoption of the Constitution, popular challenges to federal power, and the character of American society and politics during the Early Republic. This course may not be offered annually.

This course traces the origin, rise and development of Russia until the end of the Imperial period. It emphasizes the formative features in Russian history, using readings from primary sources and secondary interpretations. This course may not be offered annually.
### Course Descriptions

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HIST 05344</td>
<td>Russia Since 1914</td>
<td>3 s.h.</td>
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<td><strong>Prerequisites:</strong> HIST 05306</td>
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<td>This course emphasizes the revolutionary forces which led to the explosions of 1905 and 1917. The course carefully studies the nature and dynamics of the Communist Party and the Soviet government. It involves readings from primary sources and secondary interpretation. This course may not be offered annually.</td>
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| HIST 05347  | Traditional Latin America                        | 3 s.h.  |
| **Prerequisites:** HIST 05306                    |         |
| This course examines the racial and cultural diversity of the region, establishment of Iberian institutions and challenges from other empires, the Enlightenment in Hispanic America and the beginnings of independence movements. This course may not be offered annually. |         |

| HIST 05350  | Modern Latin America                             | 3 s.h.  |
| **Prerequisites:** HIST 05306                    |         |
| This course examines the history of Latin America from 1825 to the present, including early revolutionary movements, cultural, economic, political and social development with special emphasis on the Organization of American States and United States-Latin American relations. |         |

| HIST 05351  | Modern Japan                                      | 3 s.h.  |
| **Prerequisites:** HIST 05306                    |         |
| This course offers the analysis of the developments of island East Asia (Japan) from the time of the Tokugawa Shogunate’s contribution to the development of modern Japan and Japanese involvement in modern Western expansionism to the emergence of Japanese expansionism and contemporary Japan, including the various aspects which affect historical development. This course may not be offered annually. |         |

| HIST 05355  | Modern China                                      | 3 s.h.  |
| **Prerequisites:** HIST 05306                    |         |
| This course analyzes the development of mainland and island East Asia (China and Japan) from the early involvement with the rising Western expansionism to the present. This course may not be offered annually. |         |

| HIST 05356  | Late Imperial China                              | 3 s.h.  |
| **Prerequisite:** HIST 05306                     |         |
| This is an upper-level course on the history of late imperial China, or the rise and fall of the Ming and Qing dynasties from the mid 14th to the early 20th centuries. During this period, China saw an impressive rise of commercial and urban culture, which impacted the relationship among ethnic groups and between gender in family and society. The Ming-Qing dynastic transition also generated lasting changes that shaped the course of development in modern Chinese history. In addition, the course discusses such epoch-making events as the reconstruction of the Great Wall, Zheng He’s maritime expeditions and the rise of “evidential learning” as an intellectual movement. |         |

| HIST 05362  | History Of Mexico And The Caribbean              | 3 s.h.  |
| **Prerequisites:** HIST 05306                    |         |
| This course focuses on the development of Mexico and her Central American and Caribbean island neighbors. Although the course deals mainly with events from the time of independence to the present, it also discusses key eras in the pre-Columbian and colonial periods. This course may not be offered annually. |         |

| HIST 05371  | U.S. Legal And Constitutional History To 1870    | 3 s.h.  |
| **Prerequisites:** HIST 05306 or AMST 31021      |         |
| In this course, students will learn how American law and the Constitution developed from its English roots. This English Common law heritage of American law means that historical development is a part of contemporary law, as justices interpret a Constitution written over 200 years ago. As a part of gaining a strong foundation in American law and government, the course will pause and spend significant time exploring the Constitutional era, in order to be able to evaluate competing ideas today like “original intent” and the “evolving Constitution.” The course will continue through the Reconstruction Amendments to gain perspective on how American law and the Constitution survived and changed during its first chapter. |         |

| HIST 05372  | U.S. Legal And Constitutional History Since 1870 | 3 s.h.  |
| **Prerequisites:** HIST 05306 or AMST 31021      |         |
| In this course, students will learn how American law and the Constitution developed in the late 19th and early 20th century beginning with the transformative Reconstruction movements. The course is structured thematically, looking at criminal law, professionalization of the law, the expansion of the federal government, and the rise of civil rights, in order to understand the current legal culture. |         |
HIST 05373: Civil Rights/Black Power Movements 3 s.h.
Prerequisites: HIST 05306
This course offers a profound re-examination of the Civil Rights-Black Power movements since the 1970s. Special
attention is given to ongoing debates over the origins, development, regional boundaries, leadership, protest strategies, and
effects of the movement. We will cover a variety of themes ranging from post-WWII racial politics, gender, interracial
alliances, grassroots activism, transnational movements, and the Cold War to the constructed images of Martin Luther
King, Jr.

HIST 05375: America Since 1945: The Modern Era 3 s.h.
Prerequisites: HIST 05151 and (HIST 05306 or AMST 31021)
This course is designed to provide students with an in-depth study of the social, economic, cultural, technological and
political forces that shaped modern America since 1945.

HIST 05376: Afro-American History To 1865 3 s.h.
Prerequisites: HIST 05306 or AMST 03376r (AFST 01104 and COMP 01112)
This course surveys the major social, economic and cultural developments of the black community from Africa to the Civil
War. It emphasizes a comparison of the transition from Africa to slave culture and studies the contribution of blacks to the
making of America.

HIST 05377: Afro-American History Since 1865 3 s.h.
Prerequisites: HIST 05306 or AMST 13376r (AFST 01104 and COMP 01112)
This course studies the development of the black community from emancipation to contemporary America, tracing such
major themes as the pattern of migration and the various methods of black protest developed and employed in the 20th
century.

HIST 05379: Ancient Egypt 3 s.h.
Prerequisites: HIST 05100 and HIST 05306
This course will study the culture and history of ancient Egypt from its predynastic beginnings to its formation as the first
nation state (c. 3000 BCE) through its apex as an imperial power in the New Kingdom and decline (1050 BCE). Special
attention will be paid to the African and Near Eastern origins of ancient Egyptian society; the institution of kingship; the
place of ancient Egypt in the development of ethics and religion; and the complexities of imperialism. Emphasis will be
placed upon Egyptologists' use of primary sources and their role in the recovery and reconstruction of ancient Egyptian
history.

HIST 05380: Traditional Jewish History 3 s.h.
Prerequisites: HIST 05306
This course traces the origin, faith, law and development of the Jewish people to the 16th century, with emphasis on
traditional Jewish culture and values; Jewish literature, the phenomenon of anti-Semitism and the Jewish contribution to
Western civilization. This course may not be offered annually.

HIST 05381: Modern Jewish History 3 s.h.
Prerequisites: HIST 05306
This course examines the development of Jewry in Poland, Germany and the U.S. with special emphasis on modern Jewish
thought, Zionism, the Nazi holocaust, the rise of Israel and the situation of Judaism and Jews at the present time. This
course may not be offered annually.

HIST 05383: Islamic Civilization 3 s.h.
Prerequisites: HIST 05306
This course provides an introduction to Islam and Islamic history, concentrating on the Middle East and North Africa,
from the emergence of Islam in the 7th century A.D. through the establishment of the Safavid Dynasty in the 16th century.
The course is designed to familiarize students with basic themes and debates related to Islamic history, religion, cultures,
and societies using a variety of primary sources as well as secondary interpretations.

HIST 05394: Sub-Saharan Africa To 1800 3 s.h.
Prerequisites: HIST 05306
This course surveys the regions and cultures of sub-Saharan Africa from the earliest origins to the beginning of European
colonialism to provide an appreciation of the variety and significance of historical developments prior to the coming of the
Europeans. This course may not be offered annually.
HIST 05397: Sub-Saharan Africa Since 1800 3 s.h.
Prerequisites: HIST 05306
Students survey the development of sub-Saharan Africa during the colonial period and the new national period which followed, making an analysis of colonialism both as a European venture and as an episode in African historical development. This course may not be offered annually.

HIST 05404: Arab-Israeli Conflict 3 s.h.
Prerequisites: HIST 05306
This course focuses on the history and development of the Arab-Israeli conflict from its genesis in the late 19th century to the present day. It covers a variety of topics including the origins of Zionism, Palestinian nationalism, the development of the conflict before 1948, the Arab-Israeli Wars, and peace plans. It is typically offered every other year.

HIST 05406: Jewish Holocaust 1933-1945 3 s.h.
Prerequisites: HIST 05306
This course examines this unprecedented human destruction by dividing it into two phases: origins in Germany before 1939 and the war itself. Its sweep encompasses the killers, the victims of all faiths and status and the onlookers. Because this is a case study of genocide, students are urged to form their own conclusions as to its meaning for our own time. This course may not be offered annually.

HIST 05407: History Of World War II 3 s.h.
Prerequisites: (HIST 05306 or AMST 13201) and (HIST 05101 or HIST 05120 or HIST 05151)
This course studies the causes and events of the Second World War with special attention to diplomatic and military history as well as to the personalities and cultural trends of the war. This course may not be offered annually.

HIST 05408: Chinese Cultural History 3 s.h.
Prerequisites: HIST 05306
This course covers essential features of Chinese culture from the 5th century BC to the present, including philosophy, religion, literature, geography, social and family structure, foreign cultural relations, and art. Students will also learn current scholarship on the subject and recent cultural trend. This course may not be offered annually.

HIST 05409: Latin American Revolutions And Reform 3 s.h.
Prerequisites: HIST 05306
This course examines the often violent movements in Latin American history directed to achieve social, economic, and political reform. It emphasizes the Mexican, Cuban, and Chilean movements. This course may not be offered annually.

HIST 05410: European Intellectual History Since The 16th Century 3 s.h.
Prerequisites: HIST 05101 and HIST 05306
This course covers the major themes in European intellectual history. It includes such topics as the birth and diffusion of the Enlightenment, Romanticism, 19th century liberalism, positivism, the Darwinian Revolution, Marxism, nationalistic thought, irrationalism in political and philosophical thought, existentialism and contemporary ideas. This course may not be offered annually.

HIST 05411: Topics In Latin American History 3 s.h.
Prerequisites: HIST 05306
This course analyzes selected topics in Latin American history since 1808. It reviews various topics and historiographical controversies. This course may not be offered annually.

HIST 05412: Intellectual History Of The U.S. 3 s.h.
Prerequisites: HIST 05150 and HIST 05151 and (HIST 05306 or AMST 13201)
This course deals with the main currents in American thought and society from colonial times to the present. It emphasizes discussion of high culture as essential to the understanding of the political and economic process of the American democratic experiment. This course may not be offered annually.

HIST 05413: Comparative Race Relations: South Africa, Brazil, And The U.S. 3 s.h.
Prerequisites: (HIST 05306 or AMST 13201) and HIST 05150 and HIST 05151
This course offers a comparative examination of the development of multi-racial societies in Brazil, South Africa and the United States, and the impact of race on the political, social and economic cultures of the respective countries. This course may not be offered annually.
HIST 05414: Diplomatic History Of The U.S. To 1900 3 s.h.
Prerequisites: (HIST 05306 or AMST 13201) and HIST 05150
This course surveys U.S. diplomatic history from the Revolutionary period through the emergence of the U.S. as a colonial power. The course stresses the impact of public opinion, cultural and political relations, as well as economic and strategic factors. It will analyze conflicting scholarly interpretations. This course may not be offered annually.

HIST 05415: Diplomatic History Of The U.S. Since 1900 3 s.h.
Prerequisites: HIST 05151 and (HIST 05306 or AMST 13201)
This course details the U.S. attempt to cope with the international complications and responsibilities brought about by 20th-century reality. The course stresses the impact of public opinion, cultural and political relations, as well as economic and strategic factors and analyzes conflicting scholarly interpretations. This course may not be offered annually.

HIST 05417: Women In Islam 3 s.h.
Prerequisites: HIST 05306
This course aims to acquaint students with the role of women in Islam as a religion. It focuses on the wide range of women's experiences in different periods of history and in diverse Muslim societies, and introduces students to a variety of works and approaches to the field, including primary and secondary sources. The course is typically offered every other year.

HIST 05418: Women In Europe To 1700 3 s.h.
Prerequisites: HIST 05100 and HIST 05306
This course traces the changing status and experience of women from classical civilizations through the early modern period of European history. Themes covered include women's role in religious life, early women's writings, women in the age of chivalry, early modern witch hunting, and the first stirrings of feminist thought. This course may not be offered annually.

HIST 05419: Women In Modern Europe 3 s.h.
Prerequisites: (HIST 05101 or HIST 05120) and HIST 05306
This course examines the history of women in modern Europe, from the 18th century to the 20th. Themes covered include the rise of domesticity, feminism in the age of revolutions, Victorian women, changing patterns of work and family, and the rise of women's activism. This course may not be offered annually.

HIST 05420: BRITISH EMPIRE/COMMONWEALTH 3 s.h.

HIST 05422: Women In American History 3 s.h.
Prerequisites: HIST 05306 or AMST 13201
This course focuses on the role of women in American history and culture, but some consideration is also given to Western traditions, myths and ideas which have affected American women. The range of topics is almost limitless. This course may not be offered annually.

HIST 05425: History Of Feminisms 3 s.h.
Prerequisite: HIST 05306
This course examines the history and origins of modern feminisms from European and American traditions to emergence in developing nations. Students will analyze and comprehend the intellectual, social, philosophical, political, and religious underpinnings of the development of feminisms from the Middle Ages to the present day in western and non-western contexts. This course may not be offered annually.

HIST 05428: Family History 3 s.h.
Prerequisites: (HIST 05101 or HIST 05120) and HIST 05306
A comparative and thematic study employing the methods and techniques of new social historians, this course gives students an understanding of the interplay between family and historical processes. This course may not be offered annually.

HIST 05429: Topics in History 3 s.h.
Prerequisites: (HIST 05306 or AMST 13201) and HIST 05101 and AMST 13201
This course introduces students to in-depth historical analysis of a selected theme, including work with historical sources, critical reading of historians' accounts, intensive writing and class discussion.

HIST 05436: U.S. Home Front 1941-1945 3 s.h.
Prerequisites: HIST 05306 or AMST 13201
This course explores the lives of ordinary people under the strains of war, examining social and economic factors which undergirded the military and political decisions of World War II. This course may not be offered annually.
HIST 05437: Twentieth Century African Nationalism 3 s.h.
Prerequisites: HIST 05306
In this course students will explore the history of 20th century Africa through an in-depth analysis of independence movements from their roots in the European conquest of the continent at the turn of the century to their legacies in Africa today. This course may not be offered annually.

HIST 05438: History Of The Vietnam War 3 s.h.
Prerequisites: HIST 05306 or AMST 13201
This course will explore the political, economic, military, diplomatic, social, and cultural dimensions and ramifications of the war from the perspective of all peoples involved. This course may not be offered annually.

HIST 05439: Ottoman History 3 s.h.
Prerequisites: HIST 05306
This course will examine the history and development of the Ottoman Empire from its origins in the 13th century to its partition following World War I. Topics to be covered include its system of government and ruling elite, the cultural and daily life of Ottoman subjects, 19th and 20th century reform movements, and debates about the origins and “decline” of the empire. This course may not be offered annually.

HIST 05441: Imperialism And Colonialism 3 s.h.
Prerequisites: HIST 05306 or AMST 13201
This course analyzes nineteenth and twentieth century imperialism in terms of its meaning, origins and development. It emphasizes institutional background, theory and practice and the "national liberation" movements, using readings in primary sources and secondary interpretations. This course may not be offered annually.

HIST 05443: Topics in Global History 3 s.h.
Prerequisites: HIST 05306
This course introduces students to in-depth historical analysis of a selected theme in global history, including work with historical sources, critical reading of historians’ accounts, intensive writing and class discussion. Past and proposed topics include the partition of Africa and Islamic reform movements.

HIST 05444: Islamist Movements 3 s.h.
Prerequisites: HIST 05306
This course will explore the history of radical Islamist movements, commonly termed "Islamic Fundamentalists," and their increasing strength since the 1970s. Students will explore the writings of influential Islamist writers as well as the goals, ideology, and tactics of a wide variety of Islamist opposition groups, regimes, and groups operating in Western countries. This course may not be offered annually.

HIST 05445: History Of The Cold War 3 s.h.
Prerequisites: HIST 05306 or AMST 13201
This course explores the history of the Cold War by combining lecture and class discussion in a format that seeks to immerse students in the complex series of peaceful and violent interactions between the Soviet Union and the United States (and their allies and client states) that made up the Cold War. The course will focus on several critical issues and the debates among historians over their causes and outcomes. Those issues include: the origins of the Cold War, Stalin and the Soviet system, the Berlin Crisis, war on the Korean peninsula, the Cuban Missile Crisis, the Vietnam War, detente, and the collapse of the Communist Bloc. This course may not be offered annually.

HIST 05446: Race, Identity And History In East Asia 3 s.h.
Prerequisite: HIST 05306
This is an upper-level history course that explores race relations in modern societies from a comparative perspective. Following a basic chronology, the course will be taught thematically. After a brief introduction to the rise of racism in the modern Western world, it will trace ideas and discourses on race in China prior to the 19th century and examine their influence in shaping the world order in East Asia. It will then discuss how the racial discourses changed after the region was exposed to Western influences from the mid-19th century onward. Its foci are how the East Asians appropriated the racial discourses from the West, how they forged nationalist ideas and constructed nation-states, and how they wrote history from nationalist and racialist perspectives.

HIST 05450: HIST CHILDHOOD & YOUTH AMERICA 3 s.h.
Prerequisite: HIST 05306
This course will explore the history of childhood and youth in America. Major topics include family formations, work, education, children and the state, adolescence, generational tensions, and especially the effects of gender, class, race, ethnicity, religion, and geographically diversity. This course may not be offered annually.
Course Descriptions

HIST 05455: Gender, Sexuality And History 3 s.h.
Prerequisites: HIST 05100, (HIST 05101 or HIST 05120) and HIST 05306
This course approaches the study of human sexuality from an historical point of view; i.e., how attitudes towards sexual behavior have varied over the centuries. The course uses the world of Western Civilization as an historical laboratory for the course. This course may not be offered annually.

HIST 05470: Issues In American History 3 s.h.
Prerequisites: HIST 05306 or AMST 13201
This course introduces a topical approach to U.S. history and involves an analysis of major events and ideas that have shaped U.S. society that uses historical methodology and interpretation. The course covers issues such as race, sex and youth in American society and protest movements. This course may not be offered annually.

HIST 05471: History Of The American West 3 s.h.
Prerequisites: HIST 05150 and (HIST 05306 or AMST 13201)
This course considers the settlement and economic development of the American West from the arrival of Europeans in the sixteenth century to the present. Among the topics considered will be: the role of the frontier in American history; the settlement of the region first by Native Americans and later by Europeans, Africans, and Asians; conflicts between Europeans and Native Americans; Manifest Destiny and american expansionism; the Gold Rush; vigilantism; women and the frontier experience; farming on the Great Plains; Mexican immigration; high technology and the economy of the modern West; and the frontier in the American imagination. This course may not be offered annually.

HIST 05472: Cultural History Of The U.S. 3 s.h.
Prerequisites: (HIST 05306 or AMST 13201) and (HIST 05150 or HIST 05151)
This course explores trends in the fine arts and literature from 1607 to the present on three different levels: high style or urban culture, popular culture and rural or folk culture. It emphasizes specific American interpretations of parallel European developments. This course may not be offered annually.

HIST 05474: U.S. Labor History 3 s.h.
Prerequisites: (HIST 05150 or HIST 05151) and (HIST 05306 or AMST 13201)
This course examines the changing nature of the work and working conditions and the workers’ efforts to find their place in the American economy from colonial times to the era of the Wagner and Taft-Hartley Acts, with special attention to workers’ organizations. This course may not be offered annually.

HIST 05475: History Of New Jersey 3 s.h.
Prerequisites: HIST 05306 or AMST 13201
This course explores the historical background of the pre-European beginnings, colonial exploitation and settlement, the Revolution, growth of the state’s leading industries, the development of transportation and problems of government. This course may not be offered annually.

HIST 05492: Seminar 3 s.h.
Prerequisites: Senior Status and HIST 05306 w/C- better, at least 9 credits in 300-400 level history courses.
This course concentrates on a research paper of substantial length based upon primary as well as secondary sources. The course also requires critical analysis and discussion of the papers by seminar participants. Required of History majors during their senior year.

HIST 05493: Independent Study 3 to 6 s.h.
This course provides an opportunity to pursue individual specialized historical topics under the guidance of a staff member. This course may not be used as substitute for a course offered by the Department. This course may not be offered annually.

HIST 05495: Internship In History 3 s.h.
Prerequisites: HIST 05306
This course will introduce students to public history by placing them with a public history agency such as an historic site, museum, library, historical society, archives, or similar institution, where they will serve as interns for a minimum of 120 hours during the semester. The students will acquire practical experience in such work as historic preservation, exhibit design and production, library and archives cataloging, journal editing, and museum education. This course may not be offered annually.
IS 25300: Introduction to International Studies - WI
Prerequisites: COMP 01112 or ENGL 01112 or HONR 01112 or ENGR 01201
This writing intensive course will introduce International Studies majors to the interdisciplinary field of international studies, develop students' critical thinking and methodological skills, familiarize students with different perspectives and aspects of globalization, and acquaint students with major trends and themes in global affairs today.

IS 25400: Senior Seminar in International Studies
Prerequisites: IS 25300 and Senior standing.
Students in this class capstone course for International Studies majors will write a research paper of substantial length that is comparative in approach, international in context and content, and applies interdisciplinary approaches to global problems and issues. The paper should be informed by important and recent scholarly works drawn from at least three fields, defend a substantive thesis, and extensively use various types of primary sources.

HONR 01111: Writing Arts: College Composition I
Prerequisites: Admitted to the Bantivoglio Honors Concentration or having a GPA of 3.00 or higher
This is a lower level interdisciplinary general education course that can be taken by Bantivoglio Honors Scholars or Honors-eligible students. The course will utilize an interdisciplinary approach to rhetoric, composition, argument, and research to study an interdisciplinary topic which will vary each semester.

HONR 01112: Writing Arts: College Composition II
Prerequisites: HONR 01111 or COMP 01111 and Admitted to the Bantivoglio Honors Concentration or have a GPA of 3.00 or higher
This is a lower level interdisciplinary general education course that can be taken by Bantivoglio Honors Scholars or Honors-eligible students. The course will utilize an interdisciplinary approach to rhetoric, composition, argument, and research to study an interdisciplinary topic which will vary each semester.

HONR 05101: Honors: Participation
Prerequisites: Admitted to the Bantivoglio Honors Concentration.
This is a non-credit Honors course in which all Honors Concentration students are enrolled each semester. The course is graded on a Pass/No Credit basis. Each Honors student will complete a portfolio of her/his extracurricular activities in the areas of educational enhancement, service and social activities in accordance with the Honors Concentration requirements. The portfolio will consist of a one-page summary of each of the extracurricular educational, service and social activities in which the student participated during the past semester.

HONR 05180: Mathematics
Prerequisites: Admitted to the Bantivoglio Honors Concentration or have a GPA of 3.00 or higher
This is a lower level general education course which provides the student with a working knowledge of the foundations of mathematics. Basic concepts and principles in the philosophy of mathematics and mathematical logic, including set theory, and the concept of infinity and proof will be explored. Mathematical applications form a major portion of the course.

HONR 05205: Humanities
Prerequisites: Admitted to the Bantivoglio Honors Concentration or have a GPA of 3.00 or higher
This is an interdisciplinary course which will fulfill a Humanities/Languages General Education course. It introduces the student to significant primary texts, taken from literature, philosophy, religion, and history, within the Western and non-Western traditions and provides a common base of cultural literacy. Emphasis is placed on critical thinking and the qualitative evaluation of human experience.

HONR 05214: Artistic And Creative Experience
Prerequisites: Admitted to the Bantivoglio Honors Concentration or have a GPA of 3.00 or higher
This is an interdisciplinary general education course which will fulfill a Rowan Experience artistic and creative experience requirement. The course will utilize an interdisciplinary approach to the study of the various types of fine and performing arts including art, music, theatre and dance, and radio/TV/film.

HONR 05217: Literature
Prerequisites: Admitted to the Bantivoglio Honors Concentration or have a GPA of 3.00 or higher
This is an interdisciplinary general education course which will fulfill a Rowan Experience literature requirement. The course will utilize an interdisciplinary approach to the study of the literature with the goals of increasing students' understanding and enjoyment of various types of literature including drama, novel, poetry and short story. The content and pedagogy of the course is qualitatively and quantitatively designed to meet the intellectual needs of Honors students. Topics will vary each semester and will be interdisciplinary in content and/or methodology. This course will satisfy the University's general education "literature" requirement.
Course Descriptions

HONR 05285: Natural Science  3 to 4 s.h.
Prerequisites: Admitted to the Bantivoglio Honors Concentration or have a GPA of 3.00 or higher
This is an interdisciplinary general education course which can be taken by honors students as a Natural Science Rowan Experience course. It permits students to explore the natural sciences from a problem-oriented perspective. Students are encouraged to examine evidence and assess scientific theories critically.

HONR 05290: Social Science  3 s.h.
Prerequisites: Admitted to the Bantivoglio Honors Concentration or have a GPA of 3.00 or higher
This is an interdisciplinary general education course which will fulfill a general education Social and Behavioral Science elective. It provides the student with the opportunity to examine, in-depth, a contemporary social issue. This course explores a given substantive concern from several social science perspectives; anthropological, historical, political, economic, psychological, social, and cultural theories and methods are applied to the analysis of that issue.

HONR 05390: Selected Topics  3 to 6 s.h.
Prerequisites: Admitted to the Bantivoglio Honors Concentration or have a GPA of 3.00 or higher
This is an upper level interdisciplinary seminar style course that will address itself to topics and problems taken from various disciplines.

HONR 05400: Honors Independent Study  1 to 3 s.h.
Prerequisites: Admitted to the Bantivoglio Honors Concentration, four Honors courses and 57 hours completed, approval by the Honors Board.
An upper level interdisciplinary course involving an approved Honors Research Assistantship project supervised by a faculty member.

ECED 23211: Seminar: Principles and Pedagogies in the Inclusive Classroom  1 s.h.
Prerequisite: Admission into Early Childhood Program Corequisite: INCL 02.210 Principles and Pedagogies in Inclusive Classrooms
This Seminar course serves as the vehicle for domain-specific application of the principles and pedagogies that promote the use of positive management techniques supportive of all learners in an inclusive setting. Through case study scenarios, videos, virtual, and live field experiences, students will have multiple opportunities to reflect on and apply new learning to enhance their understanding of proactive behavior strategies and supports.

ECED 23220: Contemporary Child in the Family and Community  3 s.h.
Prerequisite: ELEM 02210, INCL 02210
This course is an overview of inclusive early childhood education focusing on the child in the context of contemporary families and communities. Through theoretical frameworks such as multiculturalism, critical theory and sociocultural theory, candidates will explore diverse historical, political, social and economic perspectives on contemporary families with young children, including issues of access and equity within early childhood services and systems. Attention will be given understanding racial, socioeconomic, structural, linguistic and faith diversity, as well as exceptionalities in the child, family, and community contexts and how early childhood systems respond to these trends.

ECED 23221: Family, Community And School Relationships  3 s.h.
Prerequisite: EDUC 01270
This course is designed to heighten teacher candidates’ awareness of the roles that family and community have on a child’s success in school. Teacher candidates will learn that all children must be understood in the context of their community environment, including their families, schools, communities, and the wider society. Teacher candidates will also develop skills in working effectively with diverse families in the learning community, in order to provide positive educational outcomes for the child. Field visits are required. This course is offered upon special request.

ECED 23320: Building Brains: Competency and Resiliency  3 s.h.
Prerequisites: READ 30320, ECED 23210, INCL 02210
This course will build upon General Education coursework in Child Development, Human Exceptionality and Educational Psychology. Teacher candidates will apply knowledge from these foundational courses as well as prior courses on diversity to understand how young children, birth through age eight, including children with special needs, develop and learn. This course will highlight a risk and resiliency perspective with a focus on protective factors assessed through intentional observations and screenings. Teacher candidates will apply theories of child development through formal and informal observations and in-depth child studies in inclusive classrooms. Emphasis will be made on fostering social and emotional development and developing resiliency. Teacher candidates will thoughtfully plan developmentally appropriate learning experiences to foster growth and connect with learning standards. Field visits are required.
Course Descriptions

ECED 23321: Effective Learning Environments For Diverse Children
Corequisite: ECED 23322
Prerequisites: ECED 23320 and READ 30320
Teacher candidates will use and apply knowledge that stems from the previous child development and learning courses to understand how young school age children, including typical and atypical children, grow and learn from kindergarten through third grade. Teacher candidates will be able to apply theories of childhood development in the classroom with direct implications for teaching and learning. Teacher candidates will also be able to use developmentally appropriate practice as a foundation for planning and making decisions in inclusive primary education settings. Field visits are required. This course is offered in the spring semester only.

ECED 23322: Planning, Integrating, And Adapting Curriculum: Math And Science
Corequisite: ECED 23321
Prerequisites: READ 30320, ECED 23320, MATH 01201 and MATH 01115
This course is designed to enable teacher candidates to understand and plan curriculums for teaching math and science. This course will start from the perspective of teacher candidates' experiences of learning science and mathematics. They will reflect on their own prior experiences with math and science and discover the impact of those experiences on their feelings of efficacy. Teacher candidates will experience teaching strategies and processes that we expect them to master and use in teaching math and science for young children in inclusive settings. Within an integrated framework, teacher candidates will develop the conceptual knowledge base for developing a coherent science and mathematics program with developmentally appropriate activities and expectations. Field visits are required. This course is offered in the spring semester only.

ECED 23430: Observation, Assessment, And Evaluation Of Diverse Learners
Corequisite: ECED 23431
Prerequisites: ECED 23321 and ECED 23322
This course provides teacher candidates with a dynamic hands-on exploration of the measurement and evaluation of children who are in the developmental period known as early childhood. Teacher candidates will learn about standardized measurement and other types of assessments that are appropriate for young children, including children with special needs. The tools of authentic assessment with checklists, rating scales or observation will be used within the candidates' field experience in both regular and special education settings. Research into the rationale of assessment of young children will also be explored. Field visits are required. This course is offered in the Fall semester only.

ECED 23431: Planning, Integrating And Adapting Curriculum Across Content Areas
Corequisite: ECED 23430
Prerequisites: ECED 23321 and ECED 23322
This curriculum course considers the areas of Social Studies, Music, Movement, Arts, Drama, and Health/Physical Education as disciplines with a major focus; on the integration of curriculum in a rich learning environment. Teacher candidates will also design learning communities that enhance all members of learning, by creating environment that reflect the standards. Further, teacher candidates will learn and practice the art of facilitating classroom learning centers and classroom activities. Finally, teacher candidates will be able to identify, select, and plan developmentally appropriate activities in Social Studies and Arts for both typical and atypical children in inclusive settings. Field visits are required. This course is offered in the Fall semester only.

ECED 23446: Clinical Practice In Early Childhood Education
Corequisites: ECED 23447 and SECD 03350
Prerequisites: ECED 23430 and ECED 23431
The clinical practice experience is a supervised, full-time activity conducted in the early childhood classrooms, PreK to 3rd grade. In this course, teacher candidates must demonstrate abilities to plan and implement developmentally appropriate practice for all children, including developing lesson plans, integrating various activities/lessons into the teaching, accommodating multiple instructional strategies, assessing and documenting learners' performance, building safe and positive learning environment, managing the classroom, and collaborating with families and other professionals. This is a full time field-based course. This course should be taken in senior year.

ECED 23447: Early Childhood Education Clinical Seminar
Corequisites: ECED 23446 and SECD 03350
Prerequisites: ECED 23430 and ECED 23431
This course is a capstone course for all teacher candidates in the Early Childhood Education Program. The main goals of this course are to synthesize the pre-service components of the early childhood teacher education in inclusive settings and to facilitate the transition into the profession. For these goals candidates will have opportunities to reflect on their understanding of child development and to communicate and collaborate with family and community of both typical and atypical children, to plan curricula for all children, to assess and document diverse learners' performance and progress, and to understand professional development of teachers in inclusive settings. They will also develop a professional portfolio. This course should be taken with Clinical Practice in Early Childhood Education.

EDUC 01102: Learning Communities
This course provides an introduction to the Co-Teach program and learning communities. Through it, students will develop an understanding of how a learning community operates and what is required to be a successful participant. Students will also learn and practice the skills of collaboration through classroom and clinical experiences. This course, and its companion--Foundations of Education--form the foundation on which the rest of the program is built.

ROWAN UNIVERSITY UNDERGRADUATE CATALOG 2016-2017
EDUC 01104: Teaching: An Introduction To The Profession 3 s.h.
This case-based introductory course is designed for students considering a career in teaching. It guides students through the profession, its foundations, realities, challenges, and rewards. Students will evaluate classroom practices using case studies, video methodology, and online resources. They will participate in ten (10) hours of field-based observations.

EDUC 01200: Literacy, Learning And Curriculum 6 s.h.
Prerequisites: EDUC 01102 and EDUC 01103
This course is a continuation of the sequence of courses in the Co-Teach program. This course builds knowledge about literacy and literacy development as it pertains to regular and special education. The focus of the course is to integrate the major concepts of curriculum development and literacy. The emphasis will be on the interface between literacy development and social studies through appropriate curricular planning. An observational field experience will be required.

EDUC 01270: Teaching In Learning Communities I 3 s.h.
Prerequisites: This course for teacher candidates in undergraduate teacher certification programs provides an introduction to the elements of successful, caring learning communities and will serve as a foundation for Teaching in Learning Communities II and future education courses. Teacher candidates will learn about, observe, participate in, and reflect on various aspects of learning communities and types of collaborative teaching and learning. They will begin their understanding of the interactions between and among curriculum, planning, instructional approaches, assessment, culture, diversity, and management within a learning community environment. Field visits will provide the opportunity for teacher candidates to begin to make the connection between the content of the course and its application in elementary classrooms.

EDUC 01272: Teaching In Learning Communities II 3 s.h.
Prerequisite: C- or better in EDUC 01270
This course provides in-depth examination and practice of instructional planning and assessment in a caring learning community. Candidates study viable learning community approaches where content-rich, research-based, and culturally responsive teaching and democratic and inclusive practices are used in caring learning environments. Candidates develop skills in objective, lesson, unit, and assessment design. Field component is required.

EDUC 01282: Teaching In Learning Communities II-Art 3 s.h.
Prerequisite: C- or better in EDUC 01270
Teaching in Learning Communities II Art furthers the understanding of successful and caring learning communities begun in Learning Communities I. A field component is required.

EDUC 01284: Teaching In Learning Communities II-Music 3 s.h.
Prerequisite: C- or better in EDUC 01270
Teaching in Learning Communities II Music is specifically designed to continue the development of an understanding of successful and caring learning communities begun in the Teaching in Learning Communities I course and apply it specifically to the music classroom as a "learning community." This course will be music education specific to develop a broad and deep knowledge of music education processes throughout grades K-12 in music settings. A field component is part of this course.

EDUC 01300: Instructional Planning And Collaboration 3 s.h.
Prerequisite: EDUC 01200
This course focuses on developing a thematic unit plan in the area of literacy. Students learn about various instructional approaches and how to select the best approach for a specific student. Students identify new developments in the field of technology and their applications in teaching all children. Students participate in a literacy clinic in which they will work with children experiencing difficulty in some aspect of literacy, related to their field placement.

EDUC 01301: Instructional Implementation And Collaboration 3 s.h.
Prerequisites: EDUC 01102 and EDUC 01103
During the spring semester, the focus is on instructional implementation and collaboration. Students learn about collaborative problem-solving models and participate in a problem-solving activity. Students learn how to design, structure and manage daily classroom routines. They also learn about the principles of action research and develop an action research project.

EDUC 01400: Teaching In Inclusive Classrooms 4 s.h.
Prerequisites: EDUC 01300 and EDUC 01301
This course is designed to enable students in the Collaborative Education major to develop and implement methods for teaching, managing, and evaluating children with special needs. Students will learn about the impact of specific disabilities on learning and behavior, the rationale for inclusive education, and academic adaptations for children with special needs. Students will be responsible for developing and implementing instructional and/or behavior management adaptations in their field placements and reporting on these to the class.
Course Descriptions

EDUC 01401: Developing And Adapting Instruction In Elementary Classrooms 4 s.h.
Prerequisites: EDUC 01300 and EDUC 01301
This course is designed to prepare teacher candidates to use a variety of teaching models and strategies to make mathematics and science instruction accessible to all students. Instructional standards developed by NCTM and NSTA will be reviewed. A technology component addressing the use of technology as a tool for teachers and learners will be incorporated. Issues of equity, curriculum integration, collaboration, and reflection will be emphasized in both course and field assignments. The course includes a field assignment in an inclusion classroom.

EDUC 01402: Developing And Adapting Assessment For All Learners 3 s.h.
Prerequisites: EDUC 01300, EDUC 01501 and EDUC 01401
The course emphasizes the link between assessment and instructional decisions for learners at a variety of academic and functional levels. Prospective classroom teachers will learn how to routinely use curriculum-based and authentic assessment techniques. Although the emphasis of this course is on informal assessment, an introduction to standardized tests and statistical factors in testing is included. Teacher candidates will develop informal assessment measures in conjunction with their field placement responsibilities.

ELEM 02210: Seminar: Principles and Pedagogies in the Inclusive Classroom 1 s.h.
Corequisite: INCL 02210
This seminar course serves as the vehicle for domaine-specific application of the principles and pedagogies that promote the use of positive management techniques supportive of all learners in an inclusive setting. Through case study scenarios, videos, virtual and live field experiences in Early Childhood, Elementary, Art, Music, and Physical Education instructional settings, students will have multiple, varied opportunities to reflect on and apply new learning to enhance their understanding of proactive behavior strategies and supports.

ELEM 02310: Curriculum And Assessment In Elementary Classroom 4 s.h.
Prerequisites: EDUC 01272 Minimum Grade C- and READ 30280 Minimum Grade C- and SMED 33420 Minimum Grade C- and MATH 01201 Minimum Grade B-
This course examines the use of established elementary education content standards in science, social studies, health, and the arts and how interdisciplinary, thematic units of inquiry facilitate meeting those standards. Current research about the way children learn and effective teaching is stressed. Students apply research on the way children learn in science, social studies, health, and the arts, as well as instructional knowledge and skills they are developing related to inquiry-based instruction, assessment, and differentiating that instruction for elementary students. Building on school district materials and mandates, teacher candidates plan, teach, and assess an interdisciplinary unit of inquiry, which reflects candidates' understanding of appropriate content and pedagogy in science, social studies, health, and the arts for the grade and student in the classroom. Teacher candidates will also review, administer as appropriate, and reflect on results of varied assessments of student learning that are typically used in that classroom. The course includes a field experience, and assignments are coordinated with a concurrent course on differentiating instruction.

ELEM 02336: Mathematics Pedagogy For Elementary Teachers 2 s.h.
Prerequisite: MATH 01301 with a minimum grade B-
Corequisites: ELEM 02338 and READ 3051
This course in mathematics pedagogy for the elementary education candidate focuses on the knowledge and skills essential for teaching mathematics. Utilizing current research findings about how students develop mathematical concepts and processes, candidates will develop an understanding of teaching and learning mathematics at the elementary level. Teacher candidates will develop a repertoire of instructional strategies and will develop and analyze effective mathematics lessons. A field component is required.

ELEM 02338: Practicum In Mathematics And Literacy 1 s.h.
Corequisites: ELEM 02336 and READ 3051 Prerequisites: ELEM 02319 and SPED 08316
This field experience course provides an opportunity for candidates in the Elementary Education Specialization to practice their developing instructional skills once a week in a K-5 classroom setting. Candidates will work with partners in assigned classrooms to assist with literacy and mathematics instruction and to take the lead in developing and teaching lessons in literacy and mathematics.

ELEM 02441: Elementary Education Clinical Practice Seminar 1 s.h.
Corequisites: ELEM 02448 and SECD 03310
This capstone senior seminar provides elementary education candidates with a supportive atmosphere in which to synthesize the pre-service components of their academic preparation with actual experience, emerging issues in the field of education, and their transition into the profession. Candidates develop a philosophy of teaching; gather and present evidence of their comprehensive knowledge, skills, and dispositions expected in this profession; and demonstrate knowledge of current critical and contemporary issues facing educators and those who hold a stake in education. Interviewing skills and a professional portfolio will be developed.
ELEM 02448: Clinical Practice In Elementary Education 10 s.h.
Corequisites: ELEM 02445 and SECD 03350
The clinical practice experience is a supervised, full-time activity conducted in a public elementary classroom. In this course, candidates must demonstrate mastery of subject area content, lesson planning, and use of multiple instructional strategies; ability to assess learner progress, manage all aspects of classroom activity, work collaboratively with all colleagues, administrators, families, and community, and to document evidence of doing all of the above. This is a full-time field-based course taken in the senior year.

FNDS 21230: Characteristics Of Knowledge Acquisition 3 s.h.
This course will focus on how human beings think, process information and acquire skills. Discussion of learning philosophies and applications in a variety of settings will be addressed. Methods of inquiry, reflection, motivation, creativity and critical thinking will be explored.

INCL 02200: Context of Inclusive Elementary Classrooms 3 s.h.
This course examines educational philosophies in inclusive and elementary education, psychological influences on education, and the development of the Standards Movement as these ideas pertain to current educational practices. Emphasis is placed on understanding the relationship between theory and practice, and students are required to develop self-analytic, reflective, problem-solving skills. Through seminal readings and course assignments, students will explore how differing philosophies of inclusive education and the associated psychological influences shape elementary learning communities and approaches for teaching all learners in the classroom.

INCL 02210: Principles and Pedagogies in the Inclusive Classroom 2 s.h.
Corequisites: ELEM 02210 or ECED 02210
In lieu of punitive, rapid-suppression approaches to concerning behavior, this course introduces educational principles and pedagogies that promote the use of positive, universal classroom management techniques-supportive of all learners in an inclusive setting. Students will be empowered to: articulate common academic language as it relates to the cycle of teaching and learning; create connections between educational philosophies, beliefs, and dispositions; and embrace universal, proactive supports and strategies for creating effective learning communities to promote a positive school climate.

INCL 02250: Instruction & Assessment in the Inclusive Classroom 3 s.h.
Prerequisites: INCL 02210 and ELEM 02210 Co-requisites: INCL 02330
This course provides in-depth examination and practice of instructional planning and assessment in the inclusive classroom. Built on the learning community philosophy developed in Principles and Pedagogies in the Inclusive Classroom, this course is a broad overview of the field of inclusive elementary education. Standards, philosophies, theories, and teaching and learning principles that underpin inclusive elementary education are revealed to enable teacher candidates to begin developing a personal philosophy of how children learn and what teachers need to do to support and assess their learning. Candidates learn to write lesson plans and incorporate different teaching strategies to enhance student learning. Teacher candidates will design, review, and reflect on results of varied assessments of students learning that are typically used in the elementary inclusive classroom. This course includes field visits in inclusive educational urban school settings, and is offered both semesters.

INCL 02310: STEAM 1: Social Studies, ELA, and the Arts 2 s.h.
Prerequisites: INCL 02250 and INCL 02310 Co-requisites: INCL 02315 and INCL 02320 and INCL 02325 and READ 30351
This course explores the use of established elementary education content standards and pedagogical methods in social studies, English/language arts, and the fine arts, and how interdisciplinary, thematic units of inquiry facilitate meeting those standards. Students apply current research on how children learn and on effective teaching methods in social studies, English/language arts, and the fine arts. Students also apply instructional knowledge and skills they are developing related to inquiry-based, interdisciplinary instruction, assessment, and differentiation in the co-requisite STEAM practicum.

INCL 02315: STEAM PRACTICUM 2 s.h.
Prerequisites: INCL 02250 and INCL 02310 Co-requisites: INCL 02315 and INCL 02320 and INCL 02325 and READ 30351
The STREAM Practicum course serves as the field-based experience during the junior year, requiring teacher candidates to spend two full days each week in the assignment elementary classroom. This course provides teacher candidates, enrolled in the co-requisite junior semester STREAM coursework, opportunities to apply the knowledge, theories, and frameworks throughout sixteen weeks of field-based, classroom teaching experiences. In addition, a series of discussions, readings, and course assignments will focus teacher candidates on the cycle of lesson planning, implementation, assessment, and reflection/revision. In this course, candidates develop and present evidence of the comprehensive knowledge, skills, and dispositions expected of teaching professionals.
INCL 02320: STREAM II: STEM & Health in the Inclusive Classroom 3 s.h.
Prerequisites: INCL 02250 and INCL 02330 Co-requisites: INCL 02310 and INCL 02325 and INCL 02315 READ 30351
This course focuses on understanding and developing inquiry-based, interdisciplinary instruction based on national and state standards in science, technology, engineering, mathematics, and health education at the elementary school level. Students will critically examine the principles of inquiry-based instruction and design-based instruction, develop interdisciplinary lesson plans, and develop performance-based assessments. Utilizing current research findings about how students develop STEM & Health concepts and processes, candidates will develop an understanding of teaching and learning related to STEM & Health disciplines at the elementary level. Teacher candidates will develop and repertoire of instructional strategies and will develop and analyze effective science, technology, engineering, and mathematics and health instruction.

INCL 02325: Mathematics Strategies in the Inclusive Classroom 2 s.h.
Prerequisites: INCL 02250 and INCL 02330 Co-requisites: INCL 02310 and INCL 02315 and INCL 02320 and READ 30351
This course is designed to help teacher candidates prepare to teach mathematics in diverse, inclusive elementary classrooms. In order to do that, this course will focus on teaching through inquiry and problem solving, using appropriate interventions, and shaping the learning environment. The co-requisite STREAM practicum should be considered a laboratory for this course, where teacher candidates observe, reflect, question, and make connections to what is discussed in class in terms of both content and pedagogy.

INCL 02330: Differentiating Instruction in the Inclusive Classroom 2 s.h.
Prerequisites: SPED 08130 and INCL 02210 and ELEM 02210 Co-requisite: INCL 02250
This course focuses on how the diverse needs of individuals with educational disabilities/differences can be met within the general education classroom environment. Emphasis will be on communication and collaboration with parents and professional, understanding of linguistic and cultural differences, and utilizing instructional strategies that are responsive to the results of differentiated assessments to meet individual needs.

INCL 02440: DIVERSITY SEMINAR 2 s.h.
Prerequisites: INCL 02310 and INCL 02320 and READ 30351 INCL 02325 and INCL 02315 Co-requisite: ELEM 02448
This Diversity Seminar is a capstone course in the Elementary Education program and will help teacher candidates enrolled in clinical practice reflect upon and better understand their practitioner experiences through a series of discussions, readings, and course assignments. In this course, candidates develop a philosophy of teaching, gather and present evidence of their comprehensive knowledge, skills, and dispositions expected in this profession; and demonstrate knowledge of current critical and contemporary issues facing educators and those who hold stake in education. Interviewing skills and professional portfolio will be developed.

SPED 08130: Human Exceptionality 3 s.h.
This general education course is designed to develop students' awareness and understanding of the nature and needs of individuals with exceptionalities. It provides a lifespan perspective that will assist students in better understanding and, hopefully, accepting and advocating for individuals with disabilities. A field component is required.

SPED 08307: Assessing Students With Exceptional Learning Needs 3 s.h.
Prerequisites: SPED 08130
This course emphasized linking assessment with educational instruction. Prospective classroom teachers will learn how to routinely use norm-referenced instruments and criterion-referenced techniques, with an emphasis on performance assessment. Introduction to statistical factors in testing, observation of testing, and administration of selected assessment instruments will be included. Teacher candidates will also have the opportunity to develop informal assessments in conjunction with a required field experience component.

SPED 08308: Assistive Technology And Transition Planning 3 s.h.
Prerequisites: SPED 08130
This course will focus on exposing students to a variety of technologies used by and with students with exceptional learning needs. Students will gain hands-on skills in designing technology-based instructional materials for students with a wide range of exceptionalities. A focus on Universal Design for learning is at core of this course- with a goal of providing students with the ability to adapt technology, instruction, and assessment to meet a range of student needs. Exposure to adaptive and assistive technologies, as well as state-of-the-art software and hardware, is also emphasized in the course. All of this will be addressed as part of the development of Individual Educational Plans (IEPs) for students, with special emphasis on transition planning. Transition planning will address all major life transitions (e.g., early intervention to preschool; preschool to elementary; elementary to secondary; and secondary to post-secondary and work environments). A field component will be required.
Course Descriptions

SPED 08316: Differentiated Instruction In The Inclusive Classroom 2 s.h.
Prerequisites: SPED 08130
This Junior Level (300) course will focus on how the diverse needs of individuals with educational disabilities/differences can be met within the general education classroom environment. Emphasis will be on developing communication/collaboration, instructional and assessment strategies that will assist the classroom teacher in diversifying instruction to meet individual needs. A field component is required.

SPED 08330: Workshop In Special Education 3 s.h.
This course provides instruction in current issues and topics related to the field of special education which are compatible with the student's prerequisites and interest. The course can be designed to meet the in-service needs of agencies and/or local school systems. Number of credits will be determined by course content each time the course is offered. Students should consult current registration booklet for the topic and the specific number of credits to be offered.

SPED 08350: Practicum in Special Education I 1 s.h.
Corequisite(s): SPED 08360 and SPED 08307
This course serves as the field placement for SPED 08308 and SPED 08415. Students must complete the field requirements of those in a classroom that includes students with low incidence special needs.

SPED 08351: Practicum in Special Education II 1 s.h.
Corequisite(s): SPED 08308 and SPED 08415
This course serves as the field placement for SPED 08308 and SPED 08415. Students must complete the field requirements of those courses in a classroom that includes students with low incidence special needs.

SPED 08360: Positive Behavioral Support Systems For Students With Exceptional Learning Needs 3 s.h.
Prerequisite: SPED 08130
This course exposes students to a variety of theoretical approaches in behavior management of students with exceptional learning needs and how to apply those skills in classroom practices. A field component is required.

SPED 08415: Specialized Instruction For Students With Exceptional Learning Needs 3 s.h.
Prerequisites: SPED 08130 and SPED 08316 and SPED 08307
This senior-level course enhances the systematic progression of skills initiated during the earlier stages of the Teacher of Students with Disabilities Endorsement Program. The course prepares candidates to teach students with exceptional learning needs, covering instructional methods and strategies to teach self-help, motor, reading, math, language, study skills, science, and social studies. The course also emphasizes supporting students with exceptional learning needs in inclusive classrooms. There is a required field experience component with this course.

SPED 08416: Specialized Instruction For Students With Exceptional Learning Needs II (K To Grade 12) 5 s.h.
Prerequisites: SPED 08316
This senior-level course enhances the systematic progression of skills initiated during the earlier stages of the Teacher of Disabilities Program. The course prepares candidates with Subject Area Specialization to teach children from Kindergarten thru 12th grade with exceptional learning needs, covering instructional methods and strategies to teach self-help, motor, reading, math, language, study skills, science, and social studies. The course also emphasizes supporting students with exceptional learning needs in inclusive classrooms. There is a required, supervised field experience component with this course.

SPED 08445: Clinical Seminar In Special Education 1 to 2 s.h.
Prerequisites: SPED 08415
This course is designed to be taken with Clinical Practice in Special Education. The seminar will focus on three major areas within the candidate's area of specialization, application of effective teaching research, and analysis and evaluation of the Clinical Practice experience. This course is intended to be a capstone experiences for all candidates in the Teacher of Students with Disabilities Endorsement Program.

SPED 08450: Clinical Practice In Special Education 4 s.h.
Prerequisites: SPED 08415 or SPED 08416
This is the culminating field experience for candidates in the Teacher of Students with Disabilities Endorsement Program. Clinical Practice provides candidates with full-time placement in a classroom setting that serves students with exceptional learning needs. Under University supervision and working with a clinical teacher, candidates assume full responsibility for planning, teaching, and managing a special education program during this placement. As the culminating field experience for seniors in the Teacher of Students with Disabilities Endorsement Program, Clinical Practice provides candidates with one full-time placement in a classroom setting, serving students with exceptional learning needs. Under college supervision, and working with a clinical teacher, teacher candidates assume full responsibility for planning and teaching during this placement.
Course Descriptions

SPED 19410:  Cerebral Palsy: Its Individual And Community Problems  3 s.h.
*Prerequisites: SPED 08326*
This course presents a focus on a comprehensive multi-disciplined approach to the diagnosis and habilitation of the cerebral palsied individual. It covers the roles of the medical, psychological, therapeutic, social work and rehabilitation professions to assist teachers to provide appropriate instructional programs.

BINF 07250:  Introduction to Bioinformatics  2 s.h.
*Prerequisites: CHEM 06101 and BIOL 01106 and CS 04103*
This introductory survey course in bioinformatics covers the application of modern computational methods to the fundamentals of molecular biology (protein and DNA structure, transcription and translation). The multidisciplinary nature of bioinformatics will be highlighted through examples of computational approaches to solving biological, biochemical, and applied biomedical research problems. Emphasis is placed on the interplay between computational methods and how they are applied to solve problems in biology and biochemistry.

DPEM 00101:  Introduction to Emergency Management and Homeland Security  3 s.h.
This course presents comprehensive overview of the discipline of Emergency Management and Homeland Security. Attention to mitigation, preparedness, response, and recovery will be emphasized. An analysis of past disasters will be presented along with their impacts on policy formation leading up to the current FEMA all-hazards approach. The role, duties, and importance of the Emergency Management professional will be discussed throughout the semester. Moreover, a discussion of ethical issues and career options will be presented.

DPEM 00310:  Critical Infrastructure and Incident Command: Theory and Practice  3 s.h.
*Prerequisite(s): DPEM 00101*
This course introduces students to the methods and approaches to protecting critical infrastructure as a means of effectively protecting people, physical entities and cyber systems and the establishment of an effective incident command operation. Moreover, students will examine vulnerability rise reduction strategies, contingency planning, and strategic partnership models as they are applied to the critical infrastructure sectors. Course topics include risk assessment and management, contingency planning, training and exercises, the role of the crisis management team, crisis communications, and public and private sector roles and relationships in emergency management.

DPEM 00400:  Disaster Planning, Mitigation and Recovery  3 s.h.
The purpose of Disaster Planning, Mitigation and Recovery is to introduce the concepts and skills of hazard mitigation and recovery planning, vulnerability risk analysis, and implementation of a community-wide program disaster preparedness plan, and to relate them to hazard planning and mitigation processes of disaster planning. Students will design an exercise, identify the logistics necessary for execution and management of the exercise, and develop an exercise evaluation plan. The course instruction will follow and meet the guidelines established by the Federal Emergency Management Agency exercise design and evaluation courses and the Department of Homeland Security Exercise and Evaluation Program.

DPEM 00410:  Public Leadership in Crisis Management & Communications  3 s.h.
This course provides an overview of political and organizational leadership in crisis situations by addressing prevention of potential crises, mitigation of those that do occur, and recovery and restoration in the wake of a crisis. Students learn why effective crisis preparation and response are crucial, how to handle internal and external communications, and which leadership qualities are essential for effectively managing a crisis.

INTR 01102:  Introduction To Social Science  1 s.h.
This is an interdisciplinary general education course intended to introduce social science thinking, concepts and methods. The course describes the core social science disciplines and their typical methods and examines the common themes of self, society and power through readings selected from such prominent contributors to social science as Sigmund Freud, Erving Goffman, Ruth Benedict, and Karl Marx.

INTR 01107:  ROWAN 101: COLLEGE SUCCESS  2 s.h.
*Prerequisite: None*
This course provides support during freshman students’ transition to college level work; engagement with the Rowan community; and planning for major and career. Included among many topics are discussions of academic skills, identity and diversity, academic integrity, and financial literacy.

INTR 01120:  Biology, History, And Human Societies  3 s.h.
This course explores the ultimate causes of differences in the development of human societies over approximately the last 13,000 years. Students will be introduced to the methods of two disciplines, history and evolutionary biology. This course will reveal the importance of an interdisciplinary approach for addressing a major question in human history: why did early societies on different continents develop at different rates?
Course Descriptions

INTR 01130: Women And Gender In Perspective 3 s.h.
An introduction to Women's and Gender Studies, this course surveys the field, focusing on how both men and women are depicted and represented in culture: in the arts, in popular media, in the sciences and in psychology, sociology and history. This interdisciplinary course probes questions of sex roles, sexism in language, stereotyping in society.

INTR 01132: Biology, History, And The Fate Of Human Societies 3 s.h.
This course explores the ultimate causes of differences in the development of human societies over approximately the last 13,000 years. Students will be introduced to the methods of two disciplines history and evolutionary biology. This course will reveal the importance of an interdisciplinary approach for addressing a major question in human history: why did early societies on different continents develop at different rates?

INTR 01134: Readings In American Democracy 3 s.h.
This course will acquaint students with the theoretical and intellectual underpinnings of American democracy by providing opportunities to read, respond to, discuss, and write about seminal American political literature from diverse times and perspectives.

INTR 01136: Gateway To Asia 3 s.h.
Combining visual presentations with other innovative pedagogical methods, this course offers an introduction to various aspects of Asian culture, ranging from philosophy, history, and social structure to literature, martial arts, and family and gender relations. Students will not only learn and discuss important issues related to the study of Asian cultural developments and the Asian American experiences, they will also acquire first hand experience through field trips, live demonstrations, and the exchange of ideas in and outside the class.

INTR 01138: Issues In Sustainable Development 3 s.h.
This course is an introduction to local and global sustainability challenges. The course will discuss the environmental dimensions of development at the local and global level addressing issues such as resource use, greenhouse gas emissions, and population growth. The course will also focus on technological solutions to sustainable development.

INTR 01140: Diverse Approaches To Environmental Literature 3 s.h.
This is a multidisciplinary course that addresses the understanding of diversity of selected environmental issues at local, regional and global settings and in a historical context through the reading of literature pieces. The selected readings will help students to understand today's environmental challenges, and to think about the profound ethical, political, economic, religious, and technological implications of these challenges.

INTR 01142: Three Generations Of Family Life: Diversity And Democracy Through Family 3 s.h.
Using the concepts of diversity and democracy as the common unifying scheme, students will employ a sociological perspective to explore the macro level changes in the family as an institution as well as the parallel micro level changes in the life of their own families. The historical period under examination extends from 1880 to 1970 and ,thus, captures approximately three generations of family life. The changes in family life will be explored within the larger context of the political, economic and social changes that characterize the historical period under examination.

INTR 01144: Human Ecology: An Evolutionary Approach 3 s.h.
This course will take an evolutionary approach to understand how the environment has shaped biological and cultural changes in humans, and how humans have and are continuously impacting the environment. The emphasis of this course will be to understand the biological, cultural and environmental diversity that has emerged through human history and its impact in the intricate interactions among humans and between humans and their environment.

INTR 01146: Identity, Culture, And Democracy: Being An American-RS 3 s.h.
This interdisciplinary course strengthens writing and critical thinking skills through explorations of one’s cultural history, an investigations on American society and national identity(ies). This multi-disciplinary course will acclimate students to American cultural and political roots and sensitize students to patterns of difference that constitute life in the twenty-first century United States.

INTR 01148: Environmental Ethics: Through The Lens Of Diversity 3 s.h.
This is a multidisciplinary course that addresses ethical issues and concerns regarding the environment; the relationships between individual, society and the natural environment; the importance of different attitudes and world-views for understanding and responding to environmental challenges; and the need for changes in those attitudes and world-views. Students will be encouraged to think about the profound ethical, political, economic, religious, and technological implications of these environmental challenges.
**Course Descriptions**

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<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td>INTR 01150</td>
<td>Language, Rhetoric, And Propaganda: The Weapons Of The Cold War</td>
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<td>This course introduces students to knowledge of the political, social, economic and cultural history of the Cold War. Students will learn to critically and rhetorically analyze scholarly writing and decipher and evaluate primary source documents relating to the history of the Cold War.</td>
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<td>INTR 01152</td>
<td>Beyond Face Value: Critical Analysis Of Texts And Images</td>
<td>3 s.h.</td>
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<td>This is an interdisciplinary course that addresses the social construction of identity from three interconnected, disciplinary perspectives: literature, art and gender studies. This class will teach students how to read stories and images critically in order to uncover the often hinder ways certain aspects of lived identity are presented and/or experienced as &quot;natural&quot; when they, in fact, are constructed by the society in which we live.</td>
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<td>INTR 01154</td>
<td>Emotions In Organizations</td>
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<td>This course will consider the role of emotions in organizational settings. Attention will be paid to the nature of emotions, emotional expression, and perceptions of emotions. Factors related to emotions, including cultural and individual diversity will be addressed throughout the course.</td>
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<td>INTR 01156</td>
<td>Freedom And Artistic Expression In 20th Century America</td>
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<td>This course is designed to help students understand what free speech is, the legal limits on free speech, and current debates on free speech. Additionally, students will come to understand aesthetics, aesthetics as related to the arts, and how aesthetics changed as America into and through the 20th century. Specifically, this course will enable the students to see how specific art works comment on current events or are a reaction to the suppression of speech/expression and how artists have been subjected to control while pursuing their arts in the United States during the 20th century. The course will also help students appreciate diversity by studying various works of art and various artists, and will help students understand democracy by examining free speech and related issues in art and artistic expression.</td>
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<td>INTR 01158</td>
<td>From Nancy Drew To Lara Croft: Historical And Critical Dimensions Of The Female Detective Genre</td>
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<td>This course analyzes historic and multi-cultural constructions of the female detective/action figure in literature, motion pictures, and video games. Students will confront a variety of texts in order to increase their awareness of how cultural assumptions come into play and often unconsciously influence their reading and viewing of texts. The course will culminate in the development and implementation of a cooperatively devised critical thinking rubric, which allows students to more critically analyze textual and visual media.</td>
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<td>INTR 01160</td>
<td>Growing Up Female In 20th Century America: Historical And Psychological Perspectives</td>
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<td>This course combines the historical and psychological approaches to female adolescence in the 20th century America from a multicultural perspective. Its topics include the historical development of adolescence, theories of adolescent development, and representations of female adolescence.</td>
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<td>INTR 01162</td>
<td>The Leadership Of Ideas</td>
<td>3 s.h.</td>
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<td>The college experience includes constant engagement with new and challenging ideas. This course explores how little ideas become big and public ideas by drawing on the knowledge and experiences students bring to college. The course will focus on the learning mechanisms for expanding those ideas. The intent is to enhance the student’s academic experience by exploring critical thinking skills and developing concrete strategies that lead to lifelong learning success.</td>
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<td>INTR 01164</td>
<td>Science Fiction As A Gateway To Human Diversity</td>
<td>3 s.h.</td>
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<td>This course will explore the intersection between the ways in which scientific theories (especially evolutionary and genetic ones) are used to justify or reduce discrimination in human societies and the hypothetical exploration of similar issues in science fiction literature. Students will critically examine examples of utopian and dystopian science fiction and investigate how such writings can inform our thinking about current, real-world diversity issues.</td>
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<td>INTR 01166</td>
<td>Rhetoric Of Music - Rs</td>
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<td>This course examines the rhetoric of music with particular emphasis given to the rhetorical aspects of music’s aural, non-discursive elements. The course will consider how there elements functioned in diverse cultures and political systems from antiquity to the twentieth century.</td>
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<td>INTR 01168</td>
<td>What’s Wrong With Normal? - Rs</td>
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<td>This course will address the topic of the body and physical difference as it is theorized in Disability Studies. As a Rowan Seminar, special attention will be paid to basic skills and critical inquiry. Particular topics will include Deaf culture, Supercrips, Accessibility, the ADA, images of disability and resistance to normative structures of embodiment.</td>
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Course Descriptions

INTR 01170: Law And Order - Rs 3 s.h.
This course explores the three components of the criminal justice system: police, courts, and corrections, based on our understanding of Nature’s order. In particular, it presents the case for taking a mathematical and scientific approach to dealing with many of the issues facing our criminal justice system today: racial profiling, affirmative action hiring, cost of crime, cost effectiveness of prevention and rehabilitation programs, admissibility of evidence, standards of proof, incarceration policies. These issues will provide context for developing mathematical proficiencies such as calculating means, percentages, and rates of change; representing quantitative information visually; and making predictions by extrapolating from existing data. The underlying theme will be to quantitatively analyze whether our legal policies reflect and protect the interests of diverse groups in our society pertaining to issues of social order, civil liberties and fairness.

INTR 01172: Songs Of Praise/Protest - Rs 3 s.h.
This course will examine the ways in which music has served as an instrument for social change. African-American music in the form of Spirituals and Blackface Minstrelsy will provide a mechanism for exploring social change, tensions between races, confused dynamics of racial identity, and stereotypes. Hymns of the late 18th and early 19th century will demonstrate how women used song as a means of self-expression denied them in other spheres. Finally, the civil rights and protest songs of the 60s and 70s will provide a backdrop for exploring issues of race and social culture.

INTR 01174: Ethics And The Professions 3 s.h.
This course will provide students with a critical examination of moral and ethical issues that arise in the context of various professions. The course will address and seek to bridge conceptual issues with more practical real-life examples. Students will discuss longstanding philosophical questions concerning social justice, equality, and the place of religion in a diverse society.

INTR 01176: Historical Aesthetics Of Suffering 3 s.h.
The subject of suffering is a universal one, and forces all human beings to acknowledge the commonality of a shared experience. Yet, while this phenomenon transcends time and place, and is inclusive of all communities and their members, responses to, and representations of suffering may, and have, differed greatly. This class is intended to prompt reflection upon the diversity of questions and answers provoked by suffering in various socio-historical contexts, as preserved in contemporary accounts, religious and philosophical writings, literature, drama, the visual arts, and music. A detailed examination of these documents, texts, and performances hopefully will move students from initial, personal understanding of this complex topic, towards group empathy and cultural sensitivity, as well as fostering appreciation and respect for the many, and profound ways in which individuals and societies have wrestled with tragedy.

INTR 01178: In Search Of Democracy: The Quest For Civil Liberties 3 s.h.
This course will explore critical issues in contemporary civil rights, placing them in their historical, philosophical and political contexts. Specific issues to be discussed include separation of church and state, freedom of speech, the role of the federal government in the protection of civil liberties, the right to privacy and its implications for women's reproductive rights, and Prohibition and its implications for gay marriage and marijuana.

INTR 01200: Issues In Women'S Health 3 s.h.
This interdisciplinary course examines issues in women’s health. Biological, socio-cultural, psychological, historical and political processes that shape and define women’s health and healthcare experiences will be explored, including the ways in which medical knowledge has been applied to women.

INTR 01430: Women, Sex, And Power: A Capstone Seminar In Women'S Studies 3 s.h.
This capstone seminar will be interdisciplinary in focus with a writing-intensive component. Students in this course will engage in critical analyses of selected readings on women and gender from six different subject areas, including biology, history, literature, psychology, philosophy and sociology. Students will study and learn the dominant issues and debates concerning the study of women and gender within these specific academic disciplines.

INTR 01486: Interdisciplinary Materials Science 3 s.h.
This interdisciplinary course discusses selected topics of current technological importance drawn from the field of materials science. Three faculty members from different backgrounds in engineering and science will co-teach this course, offering the students different perspectives to a given topic. The topics are chosen by the faculty and may include nanotechnology, semiconductors, polymers, inorganic materials, superconductors, fiberoptics, spintronics, and photonics.

INTR 01488: Career Planning And Development For Bgs 2 s.h.
This course will provide career development for all students in the Bachelor of General Studies Program. Students will engage in self-assessment, career exploration, job search strategies and decision making.
New Media Practicum provides students with the opportunity to integrate the knowledge they have gathered through the Concentration in New Media by synthesizing what they have learned into a cohesive and sophisticated project that will be exemplary of the student's particular strengths and interests. In addition to the experiential benefit of producing the capstone project, the student is also expected to present the work in such a way that it can serve as part of or a complete portfolio of new-media work that would be of interest to potential employers, graduate schools, or other interested parties. Students plan the project with an assigned adviser and meet various agreed-upon milestones throughout the semester.

Bachelor Of General Studies Portfolio
This course is limited to students enrolled in the General Studies Program. This course is the portfolio component required for all students in the Bachelor of General Studies Program. Students will analyze their academic progress through self-reflective assessment.

Senior Seminar In Math/Science
Prerequisites: COMP 01112
This course provides the opportunity for students to engage in their own research into specific scientific topics and to significantly advance their own scholarly development in the field. Students will interact with the instructor and the other students in the seminar in the development and completion of their individual projects. The central theme will vary by semester. Topics will include case studies of applied and theoretical math and scientific research.

Internship In Applied Liberal Arts
Prerequisite: 30 credits required
The course will provide formal opportunities and guidance for liberal arts students seeking to explore the wide variety of careers open to students with degrees in the humanities and social sciences. This program will allow Rowan students to explore careers in the corporate, non-profit, and public sectors. The course will be offered annually. To receive 3 credits, the student must commit to a total of 130-150 hours at the internship site. To receive 4 credits, the student must commit to a total of 175-200 hours at the intern site. To receive 5 credits, the student must commit to a total of 220-250 hours. To receive 6 credits, the student must commit to a total of 260-300 hours.

Environmental Internship
The internship provides for career-oriented training outside the college under the guidance of a faculty adviser and an experienced sponsor. Assignments will be based on matching the needs and objectives of the students and sponsors. Students become involved in work with a community resource group, industry, governmental agency, etc.

Military Science I Lab
0 s.h.

Military Science I - Basic Leadership Laboratory/Practicum
1 s.h.
Provides hands-on experience to reinforce leadership fundamentals, while emphasizing increased awareness of and proficiency in military skills. (No service obligation)

Military Science I - Basic Leadership Laboratory/Practicum
1 s.h.
Provides hands-on experience to reinforce leadership fundamentals, while emphasizing increased awareness of and proficiency in military skills. (No service obligation)

Military Science I - Leadership And Personal Development
2 s.h.
Introduces students/cadets to the personal challenges and competencies that are critical for effective leadership. Focus is placed on developing basic knowledge and comprehension of the U.S. Army's Leadership Dimensions while gaining a "big picture" understanding of the Army ROTC program, its purpose in the U.S. Army and our nation, and its advantages for the student. Classes are conducted for one hour once each week. (No service obligation).

Military Science I - Foundations In Leadership
2 s.h.
Reviews leadership fundamentals such as setting direction, problem solving, listening, presenting briefs, providing feedback and using effective writing skills. Students/cadets are also exposed to key fundamentals of skills required to be successful as an MS II cadet; namely, military map reading and land navigation, and small unit operations/ leadership drills. (No service obligation).
The focus of the Army Military History Course is to examine the relationship of the military to American society and the value of military history to the professional officer. The course will cover American military history through the American Revolution to the current 'War on Terror'. This is a very large span of time to cover in one class, thus not every war, conflict or interwar period can be touched upon. At the conclusion of this course students will have a basic understanding of major conflicts in which the United States has been involved, what brought the nation to the decision of war and what the outcomes were.

The focus of the Army Military History Course is to examine the relationship of the military to American society and the value of military history to the professional officer. The course will cover American military history through the American Revolution to the current 'War on Terror'. This is a very large span of time to cover in one class, thus not every war, conflict or interwar period can be touched upon. At the conclusion of this course students will have a basic understanding of major conflicts in which the United States has been involved, what brought the nation to the decision of war and what the outcomes were.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tr>
<td>MILS 01410</td>
<td>Military Science IV - Developing Adaptive Leaders</td>
<td>2 s.h.</td>
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<td>Corequisites: MILS 01410; Prerequisites: MILS 01310 and MILS 01310 Minimum Grade of B</td>
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<td>Develops cadet proficiency in planning, executing, and assessing complex operations, functioning as a member of a staff, and providing leadership performance feedback to subordinates. Cadets are given situational opportunities to assess risk, make ethical decisions, and provide coaching to fellow ROTC cadets.</td>
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<tr>
<td>MILS 01420</td>
<td>Military Science IV</td>
<td>2 s.h.</td>
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<td>Prerequisites: MILS 01410 Minimum Grade of B</td>
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<td>Explores the dynamics of leading in the complex situations of current military operations. Cadets examine differences in customs and courtesies, military law, principles of war, and rules of engagement in the face of international terrorism. Aspects of interacting with non-government organizations, civilians on the battlefield, and host nation support are examined and evaluated.</td>
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<tr>
<td>JRN 02205</td>
<td>Journalism Principles And Practices</td>
<td>3 s.h.</td>
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<td>Prerequisites: COMP 01111</td>
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<td>This course introduces students to the world of journalism: the culture, commerce, ethics, history, working conditions, rights, responsibilities, standard practices, and effects of evolving technology. Students learn about the nature of a journalism career and gather information that will serve as a foundation for their future journalism skills as well as for their lecture and seminar courses.</td>
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<tr>
<td>JRN 02210</td>
<td>Journalistic Writing For Nonmajors</td>
<td>3 s.h.</td>
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<td>Prerequisites: COMP 01112</td>
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<td>This course introduces students to a wide variety of news writing forms. The course covers material ranging from news writing to features, editorials, sports copy and blogging. Students learn how to strengthen their writing through techniques such as using active voice, varying sentence length, and copy editing. The course is designed for non-Journalism majors.</td>
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<td>JRN 02305</td>
<td>TV Newscast</td>
<td>3 s.h.</td>
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<td>Prerequisites: JRN 02310</td>
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<td>Students write, gather, edit, and present a cable newscast on Rowan University's closed-circuit cable system and adapt that newscast for transmission over the Web. During the semester, students rotate through various duties, including writing, anchoring, reporting and producing.</td>
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<td>JRN 02307</td>
<td>On-Camera Field Reporting</td>
<td>3 s.h.</td>
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<td>Prerequisites: JRN 02341</td>
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<td>On-Camera Field Reporting provides the fundamentals of reporting and includes writing, camera shooting techniques, editing, gathering sources, and on-camera presentation to perform &quot;one-man band&quot; responsibilities in any television market. Students will gain extensive hands-on experience that will produce a resume reel for their portfolio. Skills acquired can be used to edit online video components for news outlets.</td>
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<tr>
<td>JRN 02310</td>
<td>News Reporting I</td>
<td>3 s.h.</td>
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<td>Prerequisites: JRN 02205</td>
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<td>This course teaches students basic reporting and writing skills. They learn newspaper style and use a computer to write basic stories that deal with accidents, obituaries, construction, statistics, speeches, interviews and polls. Students also learn how to write humorous stories and how to rewrite news releases. Students take weekly spelling and style quizzes to sharpen writing skills.</td>
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<td>JRN 02311</td>
<td>News Reporting II-Wi</td>
<td>3 s.h.</td>
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<td>Prerequisites: JRN 02310 and COMP 01112</td>
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<td>This course stresses government reporting. Students learn about the Sunshine Law and how to deal with government sources. They use a computer to write stories about governing bodies, zoning and planning boards, school boards, budgets, arrests, hearings, arraignments, indictments and trials. Students cover a local community and write various meeting stories.</td>
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<tr>
<td>JRN 02312</td>
<td>Feature Writing</td>
<td>3 s.h.</td>
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<td>Prerequisites: JRN 02310</td>
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<td>Designed to develop competence in the writing of features, editorials, sports, reviews and columns, the course offers students ample opportunity to become familiar with each journalistic form through writing.</td>
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<td>JRN 02313</td>
<td>Magazine Article Writing</td>
<td>3 s.h.</td>
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<td>Prerequisites: JRN 02310 or JRN 02210 or PR 06301 or WA 01300 with a grade of C- or better</td>
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<td>Students get started as freelance magazine article writers by conceiving article ideas, interviewing, researching, and writing. The course provides instruction in adjusting style and slant to reach potential readers. Students learn to sharpen writing, resolve clarity problems, and add vigor to writing. The course analyzes freelance markets. Students submit work for publication.</td>
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<td>JRN 02314:</td>
<td>Photojournalism</td>
<td>3 s.h.</td>
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<td>Prerequisites: 45 credits required</td>
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<td>This course covers the practices and techniques used by photojournalists on modern American newspapers. Students take digital photographs and edit in Photoshop. Weekly laboratory assignments are required.</td>
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<td>JRN 02317:</td>
<td>Publication Layout And Design</td>
<td>3 s.h.</td>
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<td>Prerequisites: 45 credits required</td>
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<td>This course focuses on design, layout, and make-up of brochures, magazine and newspaper pages, newsletters, fliers, and advertisements. Students will learn how to coordinate art and typography with content. A workshop approach is used to show students how creativity in design can increase the effectiveness of communication. Students learn how to work with various computer applications to achieve effective layout.</td>
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<td>JRN 02318:</td>
<td>Investigative Journalism</td>
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<td>Prerequisites: JRN 02310</td>
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<td>This course acquaints students with federal and state public records laws. They learn where to find and how to use public records at federal, state, county, and local levels. Students investigate property records, records on public officials and business and nonprofit records. They use this and other information to write long-form journalism articles.</td>
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<td>JRN 02319:</td>
<td>Media Ethics</td>
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<td>Prerequisite(s): JRN 02205 or RTF 03295 or PR 06501</td>
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<td>Media Ethics examines decision-making in media professions. The course examines the moral aspects of media conduct, and helps the student develop a more complete understanding of not only the historical background of ethics, but how the interplay of politics, science, economics, law, philosophy, and other disciplines have influenced the way we view right and wrong. The course also strengthens analytical skills as they relate to ethical decisions, cultivating a perception of how media professionals come to a decision and the many factors that influence that decision.</td>
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<td>JRN 02320:</td>
<td>Radio News</td>
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<td>Prerequisites: completion of 45 earned hours</td>
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<td>This course provides training in the necessary skills students must demonstrate to obtain entry-level employment as news reporters and editors in radio. Students learn broadcast writing and reporting techniques. The course is designed primarily for those interested in newscasting as a career.</td>
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<td>JRN 02321:</td>
<td>Online Journalism I</td>
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<td>Prerequisite(s): JRN 02205 or RTF 03295 or PR 06501</td>
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<td>This course examines the online news landscape. Students learn which principles of traditional journalism can and should be applied to writing online news, and which should not. Students explore how to write news in ways that leverage the unique aspects of the online environment.</td>
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<td>JRN 02322:</td>
<td>The Publishing Industry</td>
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<td>Prerequisites: completion of 45 semester hours</td>
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<td>The Publishing Industry examines the business and practice of publishing through broad readings and research related to industry operations and trends, field trips, guest speakers, interactive projects, and directed discussion. Students explore publishing aspects of books, magazines, newspapers, online material, blogging, podcasting, self-publishing, and editing. When students complete this course, they will have a better idea of the career path they would like to pursue.</td>
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<td>JRN 02323:</td>
<td>Crime Reporting</td>
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<td>Prerequisite: JRN 02310 with a grade C- or better</td>
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<td>The class explores one of the most durable and important aspects of journalism, focusing not only on the mechanics of crime but also on how the story reflects the undercurrents of conflict in society as a whole. Crime Reporting focuses on how to gather information and turn it into a narrative that both tells the story and explores the issues behind the story. Emphasis will be on researching existing databases and analyzing actual documents. Students will be required to enroll in PACER, a federal court tracking system.</td>
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<td>JRN 02324:</td>
<td>Health Reporting</td>
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<td>Prerequisite: JRN 02310 with a grade C- or better or by permission</td>
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<td>From news bulletin on peanut butter recalls to a feature story on concussions in football, from advice on preventing sunburn to in-depth examinations of how the aging of America impacts the economy, health reporting keeps the public informed about issues affecting their well-being. In this journalism class, students will learn through real-world practice, guest speakers, and field trips how to report and write about health issues. Topics include public health, healthcare reform, and health trends.</td>
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<td>JRN 02325:</td>
<td>Online Journalism II</td>
<td>3 s.h.</td>
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<td>Prerequisites: JRN 02321</td>
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<td>Students will learn to conceptualize, design, and implement a basic website, with emphasis on content creation and presentation. The course will examine content strategy, editing, and production techniques for sites related to newspapers, television, radio, public relations, and advertising.</td>
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| JRN 02326:  | Sports Broadcast             | 3 s.h. |
| Prerequisite: JRN 02310 with a grade of C- or better or JRN 02315 with a grade of C- or better or JRN 02315 with a grade of C- or better or by permission |         |
| Sports Broadcast will include play-by-play, color commentary, pre-game and post-game analysis. Students will learn reporting techniques unique to the world of sports coverage, including interviewing sports figures. They will gain onsite experience at Rowan's radio station as well as with Rowan's television network as they become proficient in sports talk and sports reporting for broadcast. |

| JRN 02332:  | The Publishing Industry      | 3 s.h. |
| Prerequisites: 75 credits required |                   |         |
| The Publishing Industry examines the business and practice of publishing through broad readings and research related to industry operations and trends, field trips, guest speakers, interactive projects, and directed discussion. Students explore publishing aspects of books, magazines, newspapers, online material, blogging, podcasting, self-publishing, and editing. When students complete this course, they will have a better idea of the career path they would like to pursue. |

| JRN 02335:  | Media Law                    | 3 s.h. |
| Prerequisites: 45 credits required |                   |         |
| This course examines laws that deal with the legal responsibilities of print, broadcast, online and film media as well as public relations and advertising practitioners. Students analyze topics such as libel, privacy, broadcast regulations, and copyright. |

| JRN 02334:  | Broadcast News Writing       | 3 s.h. |
| Prerequisites: completion of 45 earned hours |                   |         |
| Broadcast News Writing provides instruction in the fundamentals of television news writing essential to all careers in television news. Students will explore the fast-paced world of writing breaking news for television. They will learn how to write in TV broadcast style and write news blogs to build their student portfolios. |

| JRN 02355:  | Journalism Practicum Fall    | 1 to 3 s.h. |
| Prerequisites: 75 credits required |                   |         |
| Journalism Practicum allows students to apply their skills and knowledge by working on-campus with department faculty on a variety of technical, creative, or research-related assignments. Students earn 1 credit for every 40 hours of work, with most practica implemented for 3 credit hours. Students keep a detailed log of working hours, prepare an extensive portfolio, write an analytical critique of the practicum and are evaluated by their faculty supervisor. Journalism Practicum Fall is offered in the fall. Practica may be taken in any order. |

| JRN 02356:  | Journalism Internship Fall   | 1 to 3 s.h. |
| Prerequisites: 75 credits required and Journalism major with 2.5 Major GPA |                   |         |
| Under professional supervision in the field, students practice theories and skills learned in the classroom. Students earn 1 credit for every 40 hours of work, with most field experiences implemented for 3 credit hours. Students keep a detailed log of working hours, prepare an extensive portfolio, write an analytical critique of the internship, and are evaluated by their faculty supervisor. Journalism Internship Fall is offered in the fall. Internships may be taken in any order. |

| JRN 02357:  | Journalism Practicum Spring  | 1 to 3 s.h. |
| Prerequisites: 75 credits required |                   |         |
| Journalism Practicum allows students to apply their skills and knowledge by working on-campus with department faculty on a variety of technical, creative, or research-related assignments. Students earn 1 credit for every 40 hours of work, with most practica implemented for 3 credit hours. Students keep a detailed log of working hours, prepare an extensive portfolio, write an analytical critique of the practicum and are evaluated by their faculty supervisor. Journalism Practicum Spring is offered in the spring. Practica may be taken in any order. |

| JRN 02358:  | Journalism Internship Spring | 1 to 3 s.h. |
| Prerequisites: 75 credits required and Journalism major with 2.5 Major GPA |                   |         |
| Under professional supervision in the field, students practice theories and skills learned in the classroom. Students earn 1 credit for every 40 hours of work, with most field experiences implemented for 3 credit hours. Students keep a detailed log of working hours, prepare an extensive portfolio, write an analytical critique of the internship, and are evaluated by their faculty supervisor. Journalism Internship Spring is offered in spring. Internships may be taken in any order. |
### JRN 02359: Journalism Internship Summer 1 to 3 s.h.
**Prerequisites:** 75 credits required and Journalism major with a 2.5 Major GPA
Under professional supervision in the field, students practice theories and skills learned in the classroom. Students earn 1 credit for every 40 hours of work, with most field experiences implemented for 3 credit hours. Students keep a detailed log of working hours, prepare an extensive portfolio, write an analytical critique of the practicum, and are evaluated by their faculty supervisor. Journalism Internship Summer is offered in the summer. Internships may be taken in any order.

### JRN 02361: Sports Journalism I 3 s.h.
**Prerequisite:** 45 earned hours
This introduction to Sports Journalism focuses on practical experience as well as study of professional sports journalists. Students cover Rowan University sports teams and learn to produce professional-quality game stories, feature stories, columns, and a comprehensive enterprise package. In addition, students are required to file weekly reports detailing their Internet tracking of professional journalists, with a focus on the amount, variety, and quality of their work.

### JRN 02362: Sports Journalism II 3 s.h.
**Prerequisite:** JRN 02361
Students will build on sports writing skills learned in Sports Journalism I. Students will work in teams to form sports staffs that will produce sports sections on a biweekly basis. These sections will include game stories, features and columns, as well as "surprise" stories. The sports staffs will compete with each other to produce the most compelling, timely, informative, opinionated and entertaining sections. Each student will spend time in a different role - beat writer, feature writer, columnist, general-assignment writer, and assigning editor.

### JRN 02400: Independent Study - Journalism 1 to 3 s.h.

### JRN 02410: Journalism Senior Seminar-Wi 3 s.h.
**Prerequisite(s):** COMP 01112 or HONR 01112 or ENGL 01112 or ENGR 01201 with a grade of C- or better and 90 credit hours and JRN 02311 with a grade of C- or better
The course probes four issues: ethics, group ownership of the media, the public and the press, and journalism education. Students read and react to articles in professional journals and other publications. They present panel discussions and interview media professionals.

### JRN 02411: Copy Editing 3 s.h.
**Prerequisite(s):** JRN 02205 or RTF 03295 or PR 06301
Students learn modern copy-editing skills. They use computers to edit copy and write captions and headlines. Students interview copy editors to learn more about the job. They take weekly style quizzes to sharpen their editing skills.

### JRN 02420: Newspaper Laboratory 3 s.h.
**Prerequisites:** JRN 02310
This laboratory course teaches students to use desktop publishing equipment and modern design principles to produce a newspaper. It emphasizes interview and research techniques. Students use concepts learned in liberal arts courses to go beyond the mere facts of a story to add depth that will help readers understand issues. Students function as editors, making assignments and directing production.

### JRN 02425: Advanced Publication Layout 3 s.h.
**Prerequisites:** JRN 02317
This course provides a thorough experience in print production through its various stages: writing, edition, choosing styles, layouts, imposition, proofs, and printer specs. Students build on the skills and knowledge acquired in Publication Layout and Design (JRN 02317). They work with various page sizes, edit photos and art, create multiple-page documents such as booklets and magazines, and format a brand identity to implement in their projects.

### BLED 40512: Linguistics And Second Language Acquisition For Teaching Languages 3 s.h.
This course addresses basic concepts of linguistic theory and second language acquisition research. Students will compare and contrast second language acquisition paradigms and investigate their applicability to the classroom. Discussion will also focus on components of the language system in the context of second language teaching.

### BLED 40515: Language, Culture And Communication 3 s.h.
In this course students examine the experiences and identities of English Language Learners, focusing on culture, socioeconomic status, race, religion, national origin, disability and gender. Special issues related to immigration and the forms of discrimination that ELL students encounter are also addressed. Students also discuss advocacy issues as well as ways to support partnerships with families and communities.
This course provides an in-depth study of American education from 1600 to the present, covering preschool through post-secondary education. It focuses on the social forces, sources of conflict, major educational figures and patterns of schooling during each period. In addition, the course will highlight the ways in which diversity has been accommodated, marginalized, or rejected in American education. Students will be able to identify and discuss ways in which diversity has been accommodated, marginalized, or rejected in American education.

READ 17100: Improving Personal Reading Skills 3 s.h.
This basic skills course helps students whose reading skills need improvement in order to cope with the demands of college course work. Instruction in the full semester course emphasizes vocabulary, comprehension and study skills. This course is not counted toward graduation. It is a required course for entering students who do not pass the Rowan University Basic Skills competency requirement in Reading.

READ 30100: Critical Thinking and Reading of Academic Texts 1 or 3 s.h.
This course is designed to address the needs of any university student who wishes to become a more critical, proficient college reader. The course is characterized by providing multiple opportunities for students to apply critical thinking and reading skills to a variety of academic texts. It will provide multiple opportunities to learn and apply a variety of strategies needed to successfully negotiate academic texts and academic vocabulary across a broad spectrum of majors. Critical thinking and reading skills, effective communication, decision making and self-management skills will be emphasized.

READ 30120: Literacies In Today's World 3 s.h.
This course will provide students with historical and cultural perspective of how and why people acquire and use literacy to meet personal and societal needs. By viewing literacy through different lenses students will acquire an understanding of the interrelationship of language, thought, and social practice.

READ 30280: Teaching Literacy 3 s.h.
A basic understanding of the reading process and its relationship to the other language arts is the focus of this course. Topics pertaining to reading/writing instruction in grades K-12, ranging from emergent literacy to comprehension of narrative and expository discourse are covered. There is an emphasis on strategies for developing phonemic awareness, word recognition skills, fluency, vocabulary, and comprehension through various instructional settings and across all curricular areas. The importance of literature-enrichment activities and making curricular connections is highlighted. Field component is required.

READ 30310: Teaching Reading In The Content Areas 3 s.h.
This course helps students integrate reading methods and strategies into subject matter instruction. Students learn a basic format for lesson planning. They acquire an understanding of the reading process and examine a variety of instructional techniques for assessing pupil abilities, selecting suitable materials, and fostering language, comprehension, and study skills needed for mastery of academic subjects.

READ 30319: Teaching Reading And Writing In The Content Area 3 s.h.
This course helps students integrate reading and writing methods and strategies into subject matter instruction in grades K-12 ranging from emergent literacy to comprehension of narrative and expository text. There is an emphasis on strategies for developing phonemic awareness, word recognition skills, fluency, vocabulary, and comprehension through various instructional settings as well as integrating writing to learn strategies. Students acquire understanding for assessing pupil abilities, selecting suitable materials and fostering language, comprehension, and study skills needed for mastery of academic subjects. The importance of literature-enrichment activities and making curricular connections is highlighted.

READ 30320: Language Development, Emergent Literacy, And Reading In Young Children 4 s.h.
Corequisites: ECED 23120 Prerequisites: ECED 23221
Students will gain an understanding of five phases of Literacy: Awareness and Exploration; Experimental Reading and Writing; Early Reading and Writing; Transitional Reading and Writing; Independent Reading and Writing. Students will learn how to integrate literacy across all curricula in the forms of reading, writing speaking, listening, and viewing. They will be able to identify, assess, adapt and implement a variety of strategies that take into account children with special needs. Further, students will be able to recognize the impact of cultural, linguistic, and other diversities that affect engagement in literacy learning and they will be able to identify and utilize effective teaching strategies that address these differences. This course also requires a weekly field experience in a pre-school setting.

READ 30347: Phonics And Spelling Instruction 3 s.h.
Prerequisites: READ 30280 or REED 30280
This course prepares prospective teachers to blend evidence-based phonemic awareness, phonics, word identification, and spelling instruction strategically into an integrated language arts approach to teaching literacy. Major topics include the development of children's phonics/spelling knowledge; what teachers should know about language; informal techniques to assess children's early literacy, word identification, and spelling understandings; systematic and meaningfully applied instruction to meet development, cultural, and linguistic differences; and communicating with parents and professionals.
about phonics and/or spelling.

**READ 30350:** Using Children's Literature In The Reading/Writing Classroom  
*Prerequisites: REED 30280 or READ 30280*  
This course prepares prospective teachers to integrate reading and writing in a language arts program through the use of book selections that reflect quality writing in the genres typically found in children's literature. The course will provide students with sufficient background and knowledge in children's literature so that they may teach reading by using trade books, emphasizing process writing and developing thematic units. Language, literacy, and learning will be enhanced by integrating children's literature across the curriculum.

**READ 30351:** Differentiated Literacy Instruction  
*Prerequisite: READ 30280*  
This course prepares teacher candidates to provide differentiated literacy instruction in diverse classrooms with a wide range of developmental levels, instructional needs, interests, and backgrounds. Teacher candidates will learn how to select, administer, and analyze various assessment tools to inform instruction. Field experience is required.

**READ 30421:** School Reading Problems-Writing Intensive  
*Prerequisites: COMP 01112 and READ 30347*  
In this course, students learn to teach struggling readers by applying their knowledge of literacy instruction learned in prerequisite coursework. They use assessments and observations to identify students' reading levels. Students are required to use on-going diagnostic teaching techniques to plan, teach, and adjust instruction according to the needs and interests of struggling learners. Process writing is used throughout. As a course requirement, students work in the Rowan Reading Clinic. Students tutor a K-12 student for 20 hours and write a final report.

**READ 30451:** Supervised Clinical Practice In Reading  
*Prerequisites: READ 30421 or READ 30350*  
Students in this course apply diagnostic, reflective teaching procedures in order to teach struggling readers in a clinical setting. They select materials and instructional strategies that meet the specific needs of the child. Emphasis is placed on on-going, diagnostic teaching that integrates the language arts in instruction that adjusts to the needs and interests of struggling readers. Students will conduct informal reading assessments at the end of the clinic session in order to write a formal report that includes assessment data; students' strengths and needs; and recommendations to parents, classroom teachers, and future tutors for further instruction.

**READ 30495:** Workshop In Reading  
This course examines current developments related to reading instruction. It is suitable for students who have experience working in a school. Emphasis is given to effective practices related to teaching reading. Specific topics are selected by the instructor and students. Examples include: reading in vocational programs, interrelating language arts instruction, evaluating software, managing reading instruction, etc. This course may not be offered annually.

**READ 30515:** Teaching Reading And Writing Across The Grades  
Students acquire a background in current theory and practices related to emerging literacy, word identification, fluency, comprehension, study skills, and recreational reading in grades K-12. The relationships between reading and the other language arts and between reading and other subject areas are addressed. Additionally, students become familiar with various methods, materials and technology used in teaching reading, assessing reading performance, and organizing and managing a reading program in the K-12 classroom. This course is required for those seeking the M.A. in reading education and/or reading specialist certification. Teachers and administrators who wish to increase their knowledge in the K-12 reading curriculum and instruction may also enroll.

**READ 30520:** Content Area Literacy  
This course is designed for reading and non-reading majors interested in increasing knowledge and skills in teaching reading in the content areas. It is a required course for those seeking an M.A. in reading. Instruction is provided in the developmental aspects of reading with little emphasis on corrective or remedial practices. The content of the course may be oriented toward the subject matter areas represented by the students enrolled in the course. Special emphasis is also given to developing vocabulary, comprehension, and study skills as well as to assessing pupil ability to read content material and to select suitable materials for instruction.

**READ 30530:** Teaching Reading To Exceptional Children  
The primary purpose of the course is to present the philosophy of teaching reading to exceptional children along with the appropriate methods and materials. Major topics include the nature and needs of children who deviate from normal assessment of reading ability, emerging literacy, the role of parents and the child study team, intervention strategies, settings for instruction, word recognition, comprehension and study skill techniques appropriate for exceptional learners, adaptations of methods and materials, and organizational patterns. This course may not be offered annually.
This course develops understandings for teaching phonics, spelling, and vocabulary in integrated language arts classrooms. The importance of knowing what to teach and when is emphasized. Major topics include: the development of word knowledge from emergent literacy to adulthood, strategies for instruction, the role of assessment, and parental involvement.

This course will focus on reading and actively engaging with a wide variety of multicultural texts for children and adolescents. Multicultural literature will be broadly defined to include an examination of difference that looks closely at those traditionally absent or marginalized in texts for young readers. Course readings will emphasize issues of selection versus censorship and the ability of multicultural literature to provide enjoyment while allowing for the development of cultural awareness/sensitivity.

Students in this course will become aware of the factors which influence reading achievement. They will learn to administer standardized and informal tests to individuals as well as to small groups. Furthermore, they will recognize the need to modify some procedures for exceptional learners. Throughout the course, the importance of on-going assessment will be emphasized. Finally, strategies for interpreting and reporting test results will be delineated. As a course requirement, students will administer selected tests to a student and summarize the results in a report.

Students in this course become aware of factors that are considered when planning instruction for readers experiencing difficulty. In planning lessons students design and adapt instructional materials, develop computer-based teaching strategies, and implement instructional procedures in an integrated language arts perspective. The course instructor supervises students as they use diagnostic teaching strategies to instruct remedial readers in field-based settings.

Students plan and execute reading lessons for groups of remedial readers. They integrate the results of testing, observation and the assessment of reading-related factors in order to devise appropriate sequences of corrective instruction. Students select and use varied teaching strategies, including remedial techniques in order to adjust to the individual needs of their pupils. Following weekly observations, students discuss their performance with the instructor. During the seminar portion of the class, students learn to administer, interpret and evaluate diagnostic instruments. They are taught to use corrective procedures which integrate the language arts and utilize computers.

The most commonly used techniques employed in educational research are studied. Guided reading and discussion of research articles in reading education are provided. Research studies are analyzed and critiqued with special attention given to the methodology of the studies. Enrollment is limited to matriculated graduate students with permission of the graduate advisor.

The issues of inclusion form an integral part of a teacher preparation program. The schooling of all children demands that diversity in multiple forms be addressed in the inclusive classroom, including cultural and linguistic diversity. Knowledge about diversities and the performance of appropriate instructional strategies are emphasized in this course, and attention is directed to the sensitivity needed to assist the learning of students of linguistic and cultural diversity.

This first of two content-specific pedagogy courses, this one with a middle school emphasis, is designed for teacher candidates majoring in English and planning careers as K-12 English language arts teachers. In conjunction with a co-requisite practicum, the course includes building a functioning learning community, including English language arts pedagogy, national and New Jersey standards for English language arts, lesson and unit planning, classroom management, and attention to learning among the diverse populations who attend New Jersey schools.

This second of two content-specific pedagogy courses, this one with high school emphasis, is designed for teacher candidates majoring in English and planning careers as K-12 English language arts teachers. In conjunction with a co-requisite practicum, the course includes both campus and public school-based experiences dealing with a range of topics necessary to building a functioning learning community, including English language arts pedagogy, national and New Jersey standards for English language arts, lesson and unit planning, classroom management, and attention to learning among the
diverse populations who attend New Jersey schools.

SMED 51330:  Teaching/Learning A: Foreign Languages  3 s.h.
Prerequisite: C- or better in EDUC 01272 and READ 30319 and SMED 33420
Corequisite: SPED 08316 and SECD 03330
This course is the first of two sequential junior level courses designed for the teacher candidate preparing to teach foreign languages K-12. The focus of this course is the instruction of students in grades K-8. The course treats a variety of topics essential to development of the knowledge, skills, and dispositions of the professional foreign language teacher, including second language acquisition, using the state and local standards to plan units and lessons, and contemporary instructional strategies. The course includes a public school field experience in an elementary or middle school.

SMED 51331:  Teaching/Learning B: Foreign Language  3 s.h.
Corequisites: SECD 03332 Prerequisites: SMED 51330 Minimum Grade of C
This course is the second of two sequential junior level courses designed for the teacher candidate preparing to teach foreign languages K-12. The focus of this course is the instruction of students from 9-12 grades. The course treats a variety of topics essential to development of the knowledge, skills, and dispositions of the professional foreign language teacher, including content planning and organization and contemporary instructional strategies. The course includes a public school field experiences in a middle or high school.

SMED 52330:  Teaching/Learning A: Social Studies  3 s.h.
Prerequisite: C- or better in EDUC 01272 and READ 30319 and SMED 33420 and HIST05306
Corequisite: SPED 08316 and SECD 03330
This first in a sequence of two three-credit courses is designed for students majoring in one of the social studies disciplines and planning careers as K-12 social studies teachers. Teacher candidates will learn to organize instructional materials into standards-based social studies units and daily lessons appropriate for the elementary and middle school grades. In conjunction with a co-requisite practicum, this course includes both community- and public school-based experiences dealing with a range of topics necessary to building a functioning learning community in social studies classrooms, including an introduction to theories of social studies education, standards-based lesson and unit planning, social studies pedagogy, classroom management, and learner diversity.

SMED 52331:  Teaching/Learning B: Social Studies  3 s.h.
Corequisites: SECD 03332 Prerequisites: SMED 52330 Minimum Grade of C
This second in a sequence of two three-credit courses is designed for teacher candidates majoring in one of the social studies disciplines and planning careers as K-12 social studies teachers. Building upon understandings of elementary and middle-grade content and instructional planning as developed in Teaching and Learning A, teacher candidates will learn to create standards-based social studies units and daily lessons for the middle and/or high school grades. In conjunction with a co-requisite practicum, this course includes both community- and public school-based experiences dealing with a range of topics necessary to building a functioning learning community in social studies classrooms, including standards-based lesson and unit planning, social studies pedagogy, classroom management, learner diversity, and ongoing professional development.

LAWJ 05116:  Introduction To Corrections - Wi  3 s.h.
This course studies the historical development of correctional practices in the handling of criminals from early to modern times. Students survey contemporary correctional organizational structures and treatment processes, as well as institutional and community based programs and problems.

LAWJ 05120:  Introduction To Security  3 s.h.
This course presents the organization and management of the security function in industry, business, government and institutions. It also covers the protection of personnel, facilities and other assets as well as the administrative, legal and technical problems of loss prevention and control.

LAWJ 05175:  Survey Of Criminal Justice  3 s.h.
This general education approved social science elective course deals with the nature of crime and criminal responsibility, and elements of social control. It also surveys the criminal justice process from original law enforcement contact through the judicial and correctional phases. It includes professional roles and opportunities in the criminal justice field.

LAWJ 05200:  Introduction To Corrections  3 s.h.
This course studies the historical development of correctional practices in the handling of criminals from early to modern times. Students survey contemporary correctional organized structures and treatment processes, as well as institutional and community based programs and problems.
LAWJ 05201: Introduction To Courts  3 s.h.
This course covers the organization of both the state and federal court systems; the management and administration of those courts; the relationship of courts to the police, corrections, and community; the criminal trial process, including pre-trial and post-trial processes; and the judiciary and judicial power, including the areas of separation of powers and judicial behavior.

LAWJ 05202: American Police  3 s.h.
This course covers the philosophy and history of the police role in society. It surveys organizational forms and basic procedures of police work; police ethics and professional preparation for law enforcement; and, major police problems confronting the police today.

LAWJ 05205: Minorities, Crime And Criminal Justice  3 s.h.
In this course students critically examine the involvement of minorities with crime in the U.S. both as perpetrators and victims. Additionally, they will be afforded the opportunity to understand, critically examine, and apply significant theoretical perspectives for the study of minority criminality. They will develop an understanding of the impact of race and class within the law-making process, the content of the law, and the quality of justice afforded minorities within the American criminal justice system.

LAWJ 05210: Restorative Justice  3 s.h.
This course surveys the major theoretical and applied concepts of Restorative and Community Justice. Students will examine how the Restorative and Community Justice processes differ from the traditional, retributive criminal justice system and how Restorative Justice models attempt to benefit the victim, offender and the community. Some of the issues to be covered are: informal justice practices, reintegrative shaming, forgiveness and resentment, and the efficacy of Restorative and Community Justice initiatives. Additionally, students may have opportunities to interact with adjudicated youth from New Jersey's Restorative Justice Project.

LAWJ 05220: Victimology  3 s.h.
This course gives students insight into the "forgotten" party in a crime, the victim. The course covers victims' rights in the Justice System with specific coverage of the following: the social, economic and racial impacts of crime on victims; victims and courts; police reaction to victims; restitution; offender accountability and the dramatic increase in victims programs and services.

LAWJ 05225: Media and Crime  3 s.h.
This undergraduate level course aims to provide students with an understanding of the role that media plays in our understanding of criminal justice problems and solutions as well as the role that popular media plays in the lifecycle of criminal justice issues and policies. This course demonstrates to students how the portrayal of crime and justice in the media has real and lasting impacts on the public's perception of crime, fear of crime, and attitudes toward the criminal justice system and those involved at all levels of the criminal justice system, as well as significant effects on criminal justice policy.

LAWJ 05250: The Scholarship Of Criminal Justice  3 s.h.
This course is designed to augment required composition courses with a specific focus on writing within the discipline. The course is designed to prepare students to be more effective scholars in criminal justice in preparation for criminal justice research and other advanced law and justice courses.

LAWJ 05255: Criminal Law  3 s.h.
This course offers a comprehensive review of the major common law and statutory crimes including homicide, rape and all related personal and property offenses. The students will be introduced to domestic violence offenses. Considerable attention is given to the social, moral and constitutional frameworks of the criminal law with a review of recent and standard judicial interpretations. It also offers a review of defenses and mitigation.

LAWJ 05274: Criminal Justice And Community Relations  3 s.h.
This is a broad-based course on the relationship between the community and crime and the criminal. The course covers such topical areas as police-community relationships, the culture of the inner city, human service delivery systems, the role of citizen and business groups and the criminal justice system, and the various ways in which criminal justice agencies have an obligation to the community at large.

LAWJ 05276: Parole, Probation And Community Corrections  3 s.h.
A comprehensive review of the noninstitutional response to criminal behavior, this course covers probation, parole and community corrections in depth. It includes topics like work release, education release, half-way houses, drug and alcohol centers, legal aspects of these processes and the effectiveness of these programs.
Course Descriptions

LAWJ 05285: Criminal Investigation 3 s.h.
Students study the criminal investigation process. Analysis of problems encountered in interviewing, interrogating and investigating is included. The course covers investigative techniques that may be applied to investigative problems and develops application of criminal investigation theories to the administration of justice.

LAWJ 05290: Forensic Law 3 s.h.
This class offers a comprehensive analysis of legal issues involving forensic techniques in the justice systems. This course examines the importance of admissibility, relevance and materiality as it relates to the evidence and the various experts in Forensics. The topics include bloodstain pattern and trace evidence, pathology and gunshot wounds, DNA fingerprinting, micrography, postmortem determinations and case studies in Forensic Science.

LAWJ 05305: Law And Evidence 3 s.h.
This course covers the basic principles of criminal evidence, including burdens of proof, judicial notice, presumptions, testimonial privileges and hearsay; the rule of exclusion of evidence, confessions, identifications and electronic eavesdropping; and the use of physical and demonstrative evidence including fingerprints, exhibits, photographs, documents and writings, scientific evidence and the polygraph.

LAWJ 05310: Criminal Jurisprudence 3 s.h.
Students study the history and philosophy of modern criminal law. This course covers problems of contemporary jurisprudence and especially the typology of constitutional issues as it relates to due process and its requirements.

LAWJ 05312: Criminal Procedure II 3 s.h.
This course will examine the legal procedures by which the criminal justice system operates. Students will assess United States Supreme Court opinions so as to explore issues related to the Fourth, Fifth, Sixth, Eighth, and Fourteenth Amendments to the Constitution, including pre-trial processes, speedy trial, the prosecution function, bail, the identification of suspects, the right to counsel, the adjudication process, the law of confessions and interrogation, and the privilege against compelled self-incrimination. This course has two primary objectives. The first is to introduce students to the analysis of judicial opinions, a primary source of law in the American legal system. The second is to become familiar with both the fundamental doctrines of constitutional criminal procedure and the important policy issues that emanate therefrom.

LAWJ 05315: Criminal Justice And Social Conflict 3 s.h.
This course covers the major crises in our basic American institutions. Students examine the various aspects of social mobility, population explosion, social stratification, sex revolution, militarism, and the generation gap as they relate to problems of social justice in our society.

LAWJ 05320: Civil Aspects Of Law Enforcement 3 s.h.
Students undertake an analysis of those areas in civil law with which law enforcement professionals frequently encounter. Topics include family law, torts, administrative and environmental issues, property disputes, liens, business and consumer transactions.

LAWJ 05322: Drugs And Crime In America 3 s.h.
This course explores and analyzes the relationship between illegal drugs and crime and all the relevant issues and ramifications. These include, but are not limited to: national and international trafficking, control of the problem, legalization, and explanations for drug use.

LAWJ 05323: Maritime Crime And Criminality 3 s.h.
The course is designed to give the students a broad survey of the myriad issues surrounding crime in the maritime environment. The course examines the macro and micro factors surrounding deviant behavior that takes place either on the seas or where the seas are a principle component to the criminal enterprise. Some of the main areas of study include, but are not limited to: contemporary and early piracy, criminal and corporate negligence within commercial shipping, admiralty law, marine pollution, illegal commercial fishing, marine insurance fraud, drug and human trafficking, and analysis of state recreational and commercial vessel laws and policies. Using policy analysis and criminological theory we explore the underlying causes of maritime crime and policy responses to maritime crime.

LAWJ 05324: Sentencing And The Rights Of The Convicted 3 s.h.
Students explore, analyze, and critique the relevant structures, processes, and impacts of criminal sentencing and sentences. The course is designed to examine critically the relevant political, philosophical and social driving forces of change and their impacts on the system and society.
Course Descriptions

LAWJ 05325:  Comparative And International Criminal Justice  
Prerequisites: LAWJ 05175  
3 s.h.  
The course is an introduction to comparative and international criminal justice. It compares the criminal justice system in the Unit States with other national systems in the five continents and major regions of the world. Areas examined include crime, criminal law, policing, court processes, and corrections. This course also provides an introduction to the globalization of crime including terrorism, drug trafficking, human smuggling, and war crimes and the development of domestic and international efforts in fighting these crimes. The goal of this course is to help students develop comparative and international perspectives in addressing problems facing the criminal justice system.

LAWJ 05326:  International Terrorism  
3 s.h.  
This course explores the historical development of international terrorism and provides a foundational knowledge of current terrorist groups and their tactics. Specifically, this course introduces the student to the definition, origin, and evolution of international terrorism; the roles of world-views, ideologies, mind sets, and motivations; and the different types of terrorism. Students will also study the organization, tactics, operational capabilities and threats posed by terrorist groups. Finally, the course will introduce the current status of antit- and counterterrorism efforts in the United States.

LAWJ 05330:  Problems In World Justice  
3 s.h.  
This multidisciplinary course examines the principles of justice and their application to the criminal justice system and society at large. Additionally, a critical examination of significant issues and concerns of world justice will be offered.

LAWJ 05335:  Criminal Procedure I  
3 s.h.  
This course will examine the legal procedures by which the criminal justice system operates. Students will assess United States Supreme Court opinions so as to explore issues related to the Fourth Amendment to the Constitution, including search and seizure of premises and persons, the arrest and detention of suspected criminals, and the remedies available for constitutional violations. This course has two primary objectives. The first is to introduce students to the analysis of judicial opinions, a primary source of law in the American legal system. The second is to become familiar with both the fundamental doctrines of constitutional criminal procedure and the important policy issues that emanate therefrom.

LAWJ 05337:  Treatment Of The Offender  
3 s.h.  
This course covers the major therapeutic approaches to the correction of criminal and delinquent behavior and a review of processes and procedures of corrections and of research on the outcome of various treatment approaches. Students analyze the ethical and legal problems related to rehabilitation in a correctional setting.

LAWJ 05342:  Counseling And Guidance Of The Offender  
3 s.h.  
A survey of basic principles and techniques of counseling of offenders, this course includes interviewing, case conferences, case histories, individual and group counseling, classification procedures, and team treatment participation.

LAWJ 05346:  Women, Crime And Criminal Justice  
3 s.h.  
This course covers the many facets of women, crime and criminal justice, including past and present trends of female crime along with its relationship to the three major components of the criminal justice system: police, courts and corrections. Furthermore, this course addresses gender as a significant variable in all aspects of society, both criminal and non-criminal.

LAWJ 05366:  Criminal Justice Internship I  
Prerequisites: COMP 01112 or HONR 01112  
3 to 6 s.h.  
This course provides practical immersion in a criminal justice-related agency for pre-service students; this course will for in-service students (law enforcement, courts and corrections personnel) involve placement in a social service related agency, or a research paper. A criminal justice related cooperative education experience may be substituted for the internship. In unusual circumstances other coursework may be substituted for the internship; this requires the approval of the department chair. (Implemented Spring 2004)

LAWJ 05357:  Criminal Justice Internship II  
Prerequisites: COMP 01112 or HONR 01112  
3 s.h.  
This course provides students with an additional opportunity to pursue practical or research experience in a criminal justice setting. Students may continue with a previously approved internship or may complete an internship in a different area of criminal justice. A criminal justice related cooperative education experience may be substituted for the internship. This course is not intended to replace Criminal Justice Internship I (SOSW05.356) but is intended to allow students additional opportunities for field experience. Students are advised to complete Criminal Justice Internship I (LAWJ05356) prior to enrolling in this course. Students are also encouraged to discuss this course with the internship coordinator prior to enrolling.
Course Descriptions

LAWJ 05361: Introduction To Juvenile Justice 3 s.h.
This course covers the history and philosophy of the juvenile justice system, which includes the development of the system through the 19th and 20th centuries and the decisions rendered by the United States Supreme Court. The student also scrutinize the various steps in the police, courts and corrections stages of the juvenile justice system.

LAWJ 05367: Theories Of Justice 3 s.h.
This course covers the nature and varieties of justice, including numerous historical perspectives on justice and the relationship between justice and society.

LAWJ 05369: Theories Of Crime And Criminality 3 s.h.
In this course students explore the extent of crime and delinquency in the United States and the full range of relevant theories of causation. They also synthesize and apply appropriate theories to such concepts and topics as race, social class, gangs, drugs, family, schools, and neighborhoods.

LAWJ 05370: Theories Of Crime And Criminality - Wi 3 s.h.
This is a writing intensive course in which students explore the extent of crime and delinquency in the United States and the full range of relevant theories of causation. They also synthesize and apply appropriate theories to such concepts and topics as race, social class, gangs, drugs, family, schools, and neighborhoods.

LAWJ 05379: The "Political Prisoner" 3 s.h.
This course examines the causes and significance of the political prisoner concept on the criminal justice system generally and the U.S. prison systems specifically. The course deals with varying perceptions of different segments of the population about the existence and scope of this phenomenon in depth.

LAWJ 05380: Criminal Justice Research 3 s.h.
Prerequisites: LAWJ 05369
Students study the basic principles of research and statistics. This course undertakes a review of contemporary criminal justice research projects, emphasizing evaluation of journal studies and basic planning and writing of the research paper.

LAWJ 05392: Criminal Justice Administration 3 s.h.
This course provides upper level students with the concepts, theories, and principles of managing and administering criminal justice organizations. The content of the course is applied to police, courts, and corrections agencies and gives the student a total system approach to the subject.

LAWJ 05395: The Incarceration Experience 3 s.h.
This course focuses on the exploration of various aspects of incarcerating criminals. It includes the history of incarceration, the prisonization process, prison subcultures, violence and victimization, and the underground prison economy.

LAWJ 05399: Crime Prevention Analysis 3 s.h.
Prerequisites: LAWJ 05175
This course will examine crime prevention strategies, emphasizing situational crime prevention approaches. We will concentrate on theories that are inextricably linked to crime prevention practices such as lifestyle, rational choice, and routine activities theories. Using a case study approach, the student will learn a variety of tools for analyzing crime patterns, developing appropriate prevention responses, and evaluating the effectiveness of the crime prevention technique employed.

LAWJ 05401: Law And Human Rights 3 s.h.
This course reviews individual civil rights and liberties in detail with a particular emphasis on federal-state legislation on discrimination, substantive and procedural due process materials and 1st amendment problems. Specific attention is given to the role police, courts and correctional systems play in the enforcement and enhancement of such rights.

LAWJ 05415: Selected Topics In Criminal Justice 3 s.h.
This course promotes intensive research and analysis in Special Topics in Criminal Justice. Students engage in either theoretical or applied research in topics that can be mutually agreed upon between faculty and student. Topics will vary but may include female criminality, XYY theory, insanity, mental health and the justice systems, advanced security systems or radical criminology.
LAWJ 05461: Seminar In Corrections-Wi 3 s.h.
Prerequisites: LAWJ 05175, LAWJ 05255, LAWJ 05380 and one of: LAWJ 05200, LAWJ 05201, or LAWJ 05202

This seminar is a capstone experience offering in particular depth a number of special areas concerning social justice. The student will engage in class discussions, conduct research, write papers, and participate in problem solving examinations, all of which will be centered around a variety of aspects of social justice.

LAWJ 05465: Seminar In Social Justice- Wi 3 s.h.
Prerequisites: LAWJ 05175, LAWJ 05255, LAWJ 05380 and one of: LAWJ 05200, LAWJ 05201, or LAWJ 05202

This seminar is a capstone experience offering in particular depth a number of special areas concerning law and the court system. The student will engage in class discussions, conduct research, write papers, and participate in problem solving examinations, all of which will be centered around a variety of aspects of the law/court process.

LAWJ 05467: Seminar In Law - Wi 3 s.h.
Prerequisites: LAWJ 05175, LAWJ 05255, LAWJ 05380 and one of: LAWJ 05200, LAWJ 05201, or LAWJ 05202

This seminar is a capstone experience offering in particular depth a number of special areas concerning law and the court system. The student will engage in class discussions, conduct research, write papers, and participate in problem solving examinations, all of which will be centered around a variety of aspects of the law/court process.

LAWJ 05468: Seminar In Police Science - Wi 3 s.h.
Prerequisites: LAWJ 05175, LAWJ 05255, LAWJ 05380 and one of: LAWJ 05200, LAWJ 05201, or LAWJ 05202

This seminar covers a wide variety of police science topics, including constitutional review and police process, investigation and forensic problems, special problems in the criminal law and its enforcement, and any other appropriate senior level topics in police studies. Students are expected to participate in a research paper, design, or project and to present oral presentations.

LAWJ 05469: Seminar In Law/Justice - Wi 3 s.h.
Prerequisites: LAWJ 05175, LAWJ 05255, LAWJ 05380, one of: LAWJ 05200, LAWJ 05201, or LAWJ 05202 and senior standing

This seminar will cover topics relating to how law and justice are put into practice by the police, courts, and corrections system. Important issues affecting society and the criminal justice system as a whole will be examined in depth. Students will be expected to read scholarly work exploring these issues; participate in class discussions; conduct library research; write short, informal memos and a senior level research paper; present oral reports on their research; and demonstrate their understanding of assigned readings and the research reported by classmates in a final examination.

BUS 01105: Business Perspectives 3 s.h.
Providing an overview of the business functions, students will explore the impact of acceleration of change and environment complexity on contemporary business organizations. This course will not meet any major requirement for majors offered by the Rohrer College of Business.

ENT 06100: Entrepreneurial Experiences 0 s.h.
Prerequisite: Admission to Entrepreneurship major.
This is a non-credit course that all entrepreneurship majors are enrolled in each semester. The course is graded on a Pass/No Credit basis. Each student will be required to complete a set of extracurricular activities in accordance with the entrepreneurship faculty's requirements.

ENT 06240: Entrepreneurship And Innovation 3 s.h.
Prerequisites: Junior standing, 57 credits required
This course provides a broad framework for understanding the nature of entrepreneurship in multiple organizational settings. The course introduces students to the innovation and idea generation process and helps students determine the most desirable educational path for them to achieve their career goals.

ENT 06326: Entrepreneurship And Small Business Management 3 s.h.
Prerequisites: Junior standing, 57 credits required
This course provides complete coverage of entrepreneurial models of organization and decision making. Topics include making the decision to go into business, what to expect, and the areas of small business operations (finance, purchasing, production, and sales) and management (planning, organizing, directing, and controlling). Students will develop an entrepreneurial profile of an existing entrepreneur or do a preliminary feasibility analysis for a complete business plan for a business of their choice. This course will acquaint students with the opportunities and perils of starting and managing their own firms.
 Course Descriptions

ENT 06327: Strategic Issues In Family Business 3 s.h.
Prerequisites: Junior standing, 57 credits required
This course examines a new discipline that has developed in the last 10 years and focuses on the unique aspects of family business. Organizational behavior, law, finance operations, and basic small business concepts are integrated into this course. Students will have an opportunity to consult with and develop transition plans for a family firm in a live field project.

ENT 06328: Evaluating Franchising Opportunities 3 s.h.
Prerequisites: Junior standing, 57 credits required
This course is designed for students who are interested in learning about the opportunities and threats that abound in the modern world of franchising. Franchising is pervasive in our economy. The practice spans virtually every retail and wholesale product category. The logic of this course is that franchising is one of the development models that minimize risk for the small business, focused student. Many of these opportunities offer the chance for high incomes if the model is developed fully. Some franchising oriented people may want to start a franchise and grow it rapidly. This option is often a first step into business ownership for inexperienced owners.

ENT 06342: Financing And Legal Aspects Of Entrepreneurship 3 s.h.
Prerequisite(s): Junior standing (completion of 57 credit hours) and ENT 06240 or permission of instructor.
This course provides an overview of the legal and financing issues most frequently encountered by entrepreneurs and others involved in start-ups and small, closely-held, or family businesses. The course covers various aspects of financing an entrepreneurial venture. Major topics include attracting seed and growth capital from sources such as venture capital, investment banking, government, and commercial banks; creating, protecting and leveraging intellectual property. Among the issues discussed are valuing a company, going public, selling out, acquisitions, bankruptcy, different legal forms of organization, employment relationships, partnerships, and taxes.

ENT 06344: Entrepreneurial Growth Strategies 3 s.h.
Prerequisite(s): Junior standing (completion of 57 credit hours) and ENT 06240 or permission of instructor.
The course goal is to transform the strategic process for entrepreneurs into a growth-oriented approach. The course is organized to flow in the following manner: understanding the entrepreneurial perspective and the challenge of entrepreneurial growth, gaining an appreciation for strategic planning in emerging ventures, and finally a discussion of the emerging entrepreneurial issues confronting the economy today.

ENT 06346: Social Entrepreneurship 3 s.h.
Prerequisites: Junior standing, 57 credits required
The Social Entrepreneurship course provides a broad theoretical perspective and practical framework for understanding social entrepreneurs and the social ventures they create ranging from local social organizations to large international social ventures leading global change. The course introduces students to the possibilities of social entrepreneurship and an introduction to the entire social venture creation process and life cycle.

ENT 06415: Management Consulting Field Study 3 s.h.
Prerequisites: Entrepreneurship major, Senior standing, and ENT 06426 New Venture Development OR permission of instructor
This course is designed to provide education and training opportunities in the art and application of techniques from various business and non-business courses primarily to firms with under $25 million in sales. The overall purpose of the course is the acquisition of knowledge and skills that will enable students to provide consulting advice to entrepreneurs and small business owners that will be understood, accepted, implemented, and will improve the performance of the firms. The emphasis in the course is on experiential approaches that provide a participative type of learning about the crucial issues firms face.

ENT 06426: New Venture Development 3 s.h.
Prerequisite(s): Junior standing (completion of 57 credit hours) and ENT 06240, or permission of instructor.
This course provides an opportunity to develop a business plan for a new venture or expansion of an existing company. Students are expected to acquire skills in evaluating business ventures, learn alternative financing sources, develop ideas for differentiating products, and develop an understanding of what is required to harvest the profits in a growing business.

ENT 06450: Technology Entrepreneurship 3 s.h.
Prerequisites: Junior standing, 57 credits required
This course provides the student with insights into the creation, development, management, and transfer of intellectual assets. Real world product based projects will form the central core of the learning process. Students will gain an increased appreciation for the details of technology transfer and commercialization and an awareness of these critical issues from both industry and university perspectives. Examples of typical license, sponsored research, and other agreements will be provided.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ENT 06505</td>
<td>Entrepreneurship And Innovation</td>
<td>3 s.h.</td>
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<tr>
<td>ENT 06509</td>
<td>Special Topics In Entrepreneurship</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HRM 06302</td>
<td>Management Of Human Resources</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HRM 06315</td>
<td>Recruitment And Selection</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HRM 06318</td>
<td>Human Resource Information Systems</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HRM 06319</td>
<td>Special Topics In Human Resource Management</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HRM 06420</td>
<td>Principles Of Training And Training Management</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HRM 06425</td>
<td>Management Of Compensation</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HRM 16401</td>
<td>Labor And Employee Relations</td>
<td>3 s.h.</td>
</tr>
<tr>
<td>HRM 98335</td>
<td>Legal Aspects Of Human Resource Management</td>
<td>3 s.h.</td>
</tr>
</tbody>
</table>

**ENT 06505: Entrepreneurship And Innovation**

Prerequisites (effective Spring 2009): ACC 03500 and MGT 06502 and MKT 09500

This course provides a broad framework for understanding the nature of entrepreneurship in multiple organizational settings. The course introduces students to the innovation and idea generation process and helps students apply an alternative way of "thinking" to assist in solving difficult issues for government, business, and the non-profit sector.

**ENT 06509: Special Topics In Entrepreneurship**

Students will study advanced level topics in Entrepreneurship. The exact topics to be covered will change over time. Contact the MBA office or the Management and MIS Department for details.

**HRM 06302: Management Of Human Resources**

Prerequisite: Junior standing, 57 credits required

This course examines the human resource management system: staffing and organization, recruitment, employee development, motivation, performance evaluation, management-labor relations, remuneration and security.

**HRM 06315: Recruitment And Selection**

Prerequisite: HRM 06302 or PST 08220

This course focuses on the human resource recruitment and selection functions of organizations. Topics covered include recruitment, organizational choice, validation, interviewing, and testing. Both the theoretical foundations for the recruitment and selection functions as well as the practical application of these activities are presented.

**HRM 06318: Human Resource Information Systems**

Prerequisite: MIS 02334

This course will provide students with a working knowledge of the structure, use, and evaluation of human resource information systems.

**HRM 06319: Special Topics In Human Resource Management**

Prerequisite: Junior standing, 57 credits required

This course presents human resource management topics related to recent development in HRM practice and research.

**HRM 06420: Principles Of Training And Training Management**

Prerequisite: HRM 06302 or MGT 06509 or PST 08220 or MGT 06100

This course will expose students to various theories and methodologies used to plan, design, conduct and evaluate training and management development programs in organizations. The learning experience within the course is designed to provide the student with the knowledge, information and skills required to develop and implement a training program. The course material offers a practical "how-to" approach to training and development, as well as managing the training function. Each student in the course will participate in the development of a training program or module, which will be presented and critiqued at the end of the semester.

**HRM 06425: Management Of Compensation**

Prerequisite: HRM 06302 or PST 08220

This course will expose students to various theories and methodologies used to plan, design, conduct and evaluate training and management development programs in organizations. The learning experience within the course is designed to provide the student with the knowledge, information and skills required to develop and implement a training program. The course material offers a practical "how-to" approach to training and development, as well as managing the training function. Each student in the course will participate in the development of a training program or module, which will be presented and critiqued at the end of the semester.

**HRM 16401: Labor And Employee Relations**

Prerequisites: HRM 06302 or PST 08220

This advanced course studies union-management relations. The course provides students with the essentials of labor law, collective bargaining, contract administration, and dispute settlement. The course uses case studies and simulations extensively.

**HRM 98335: Legal Aspects Of Human Resource Management**

Prerequisites: MGT 98242 and MGT 06302 or HRM 06302

This course introduces students to three areas of human resources management which are extensively regulated by federal and state legislation. Legislation studied includes the Occupational Safety and Health Act (OSHA), the Equal Employment Opportunity Act (EEO), and the Employee Retirement Income Security Act (ERISA). The course emphasizes practical applications to the human resource function.
HRM 98337: Legal Aspects Of Human Resource Management (Wi) 3 s.h.
Prerequisites: MGT 98242 and (HRM 06425 and HRM 06315 with concurrent enrollment allowed) or permission of instructor
This course introduces students to three areas of human resources management which are extensively regulated by federal and state legislation. Legislation studied includes the Occupational Safety and Health Act (OSHA), the Equal Employment Opportunity Act (EEO), and the Employee Retirement Income Security Act (ERISA). The course emphasizes practical applications to the human resource function.

MGT 06123: Introductory Management Perspectives For The 21st Century 3 s.h.
Prerequisites: Freshmen enrolled in a major offered by the Department of Management and Entrepreneurship or Permission of the College
The objective of this course is to have students explore current theory, practices, and issues in management from the perspective of the management functions of planning, organizing, leading, controlling, and monitoring.

MGT 06300: Organizational Behavior 3 s.h.
Prerequisite(s): Junior standing and matriculation in the Business minor or a Business major
This course examines human relations in management. The course studies the concern for both task and process in the light of structure, goals and human relationships found in organized efforts. It also covers the application of new management theories in the areas of motivation, leadership and group problem-solving by a variety of means, including simulation, case studies, and role playing.

MGT 06304: Organizational Change And Development 3 s.h.
Prerequisites: MGT 06300 or MGT 06309 or PSY 08220
This course studies factors that facilitate or inhibit organizational change as well as research findings and theory which deal with methods for diagnosing organizational climate, and selecting and utilizing techniques for bringing about change and overcoming resistance to change. It also analyzes and evaluates roles and strategies used by change agents to initiate structure and direct organizational change.

MGT 06305: Operations Management 3 s.h.
Prerequisites: STAT 02260 and (MATH 01130 or MATH 01125 or MATH 01140)
This course provides a critical study of the operational functions of the business enterprise. Its topics include capital costs and investment criteria, plant location and layout, process planning and production design, job designs, work methods and cost controls.

MGT 06309: Organizational Behavior (Wi) 3 s.h.
Prerequisites: COMP 01112 and 57 credits required
This course examines human relations in management. The course studies the concern for both task and process in the light of structure, goals and human relationships found in organized efforts. It also covers the application of new management theories in the areas of motivation, leadership and group problem-solving by a variety of means, including simulation, case studies, and role playing.

MGT 06310: Leadership And Supervision For Managers 3 s.h.
Prerequisites: MGT 06300
The course is designed for undergraduate business students. Course content will cover the theories of business leadership and supervision, with the focus on first line supervisors. Students will focus on the theory and acquisition of various business leadership and supervisory tasks and skills necessary to work with other business managers in a global market world and to supervise workers with diverse backgrounds. These business skills will include establishing workplace goals, organizing work units for productivity, conducting interviews, giving feedback to subordinate employees, designing and implementing employee motivation programs, and supervising workteams. By the end of the course, students will be able to effectively diagnose the complex dynamics of leadership and supervision in business environments and take action as leaders and supervisors to improve individual and organization performance.

MGT 06311: Decision-Making Tools For Managers 3 s.h.
Prerequisites: (STAT 02260 and MATH 05125) or MATH 01130
The course will focus on how the quality of managerial problem solving and decision-making can be enhanced by the use of business statistical tools and quantitative models. It will increase students’ knowledge of how to identify business situations which would benefit by the application of common business analytical methods and models and require that they use these methods and models to solve realistic business problems. Spreadsheet applications will be emphasized.

MGT 06312: Selected Topics In Management I 3 s.h.
Prerequisites: 45 credits required
The course will provide students with the opportunity to learn about and respond to situations which are causing changes in the current business environment. Students will collect business information about the change and analyze it, make business decisions, discuss implementation of these decisions, and modification of those decisions in these situations. Students will also have the opportunity to become thoroughly familiar with all of the business aspects of the industries in South Jersey in which most of them will be employed.
MGT 06313: Selected Topics In Management II
Prerequisites: 45 credits required
The course will provide students with the opportunity to become thoroughly familiar with all of the business aspects of the industries in the local economic environment in which most of them will be employed. Students will become knowledgeable about a specific industry in the multiple business facets of accounting, finance, human resources, use of information systems, facilities, etc. Industries can include the gaming and hospitality industries, the manufacturing sector, the health-care industry.

MGT 06321: Managing Teams In Organizations
Prerequisite: MGT 06300
This course is designed for undergraduate students in the Management program. Course content will cover the theories of teamwork, team development, team dynamic, team creativity, team decision making, team productivity, team communication, team performance, team evaluation, team feedback and team leadership in business. By the end of the course, students will be able to effectively diagnose the complex dynamics of team leadership in business organizational environments and take action as team members and team leaders to improve industry or business organizations.

MGT 06330: Managing International Business
Prerequisites: MGT 06300, ECON 04101 and ECON 04102
Students will learn about the evolution and current environment for international trade and investment and understand the challenges and issues facing business organizations with international operations. They will apply these insights to the analysis of actual business decision-making situations by means of case studies and research projects.

MGT 06354: Managerial Data Analysis
Prerequisites: MATH 03125, STAT 02260 and 57 credits required
This course is designed to acquaint management students with the knowledge to collect and analyze business information from a variety of sources and under various conditions of uncertainty in order to analyze this data in order to increase the productivity and effectiveness of the businesses by which they are employed. The focus is placed upon the ability to collect relevant business data and report the findings of their analysis in order that the findings may be applied in specific business situations. The emphasis will be on the use of realistic business data, business analysis processes, business applications, and business reporting techniques.

MGT 06361: Supervised Internship
Prerequisites: MGT 06300 and 57 credits required
This course includes field experience in government, business, industry or non-profit organizations. Trainees are given assignments that prepare them for productive employment upon graduation. The learning process is monitored by the College of Business faculty members.

MGT 06375: Managing Services
Prerequisites: MGT 06304 and MGT 06309
This course is oriented to service industries, such as medical services, financial institutions, airlines, transportation companies and retail establishments. The course covers understanding services, designing and delivering services, managing capacity and demand, service quality, customer service, human resources in service organizations, information systems and service strategies.

MGT 06401: Independent Study - Management
Prerequisites: MGT 06300 and 57 credits required
This course is designed to acquaint students with a fundamental knowledge of the principals and techniques of quality management and operational control. Emphasis will be given to systems and the function of quality, technical methods and tools used in quality management, quality improvement and problem solving, and managerial issues of quality management as a new paradigm. Practical application with actual case studies for both product- and service-oriented fields will be provided.
Course Descriptions

MGT 06405: Business Management Simulation 3 s.h.
Prerequisites: FIN 04300, MKT 09200, MGT 06310, MGT 06311, MGT 06330 and WA 01408
This course is designed to provide students with the opportunity to experience many of the problems of risk and uncertainty that managers face when making decisions in the real world. Students work in teams while managing a computer simulated corporation in a highly competitive international business environment. Students are challenged to use and improve their business and leadership skills utilizing knowledge from previous business courses.

MGT 06406: Improving Business Processes 3 s.h.
Prerequisite: MGT 06305
This course introduces the fundamental Lean Six Sigma principles that underlay modern continuous improvement approaches for industry, government and other organizations. Lean emerged from the Japanese automotive industry, and is focused on the creation of value through the relentless elimination of waste. Six Sigma is a quality system developed at Motorola which focuses on elimination of variation from all processes. The basic principles have been applied to a wide range of organizations and sectors to improve quality, productivity, customer satisfaction, employee satisfaction, time-to-market and financial performance.

MGT 06407: Business Analytics 3 s.h.
Prerequisites: MGT 06305 and MIS 02234
This course provides an introduction to the field of business analytics, which has been defined as the extensive use of business data, analytical tools, exploratory and predictive skills, and fact-based management to drive decisions and actions. The development and use of business analytics is discussed. This course will use Enterprise Resource Planning systems as a platform to retrieve the data and draw meaningful information for business analytics.

MGT 06408: VISUAL BUSINESS INTELLIGENCE 3 s.h.
Prerequisites: MGT 06305, Operational Management and Management Information Systems MIS 02234
Thanks to the increasing amount of valuable data in every corner of our society, the visualization industry is growing rapidly and visual business intelligence is becoming a crucial skill for knowledge workers. Effective analysis of data through visualization will become more and more crucial because it is almost impossible to understand big, messy data without any visual aid. This course will explore effective ways of consuming business data by looking back at the history of visualization, by analyzing and criticizing existing visualizations, and by applying our own visualization with data from business cases or a research problem.

MGT 06430: Business Field Research Experience 3 s.h.
Prerequisites: MGT 06305, and 57 credits required
Students will choose a business activity approved by their instructor and do an in-depth research study of that activity. It will include library research as well as interviews with local businesses. Students will be guided by the instructor with the help of a classroom component during which students will share their research and experience with other students.

MGT 06629: Managing Organizational Strategy 3 s.h.
Prerequisites: Completion or Concurrent with Financial Decision Making (FIN 04500) AND Designing, Developing and Leading High Performances Organizations (MGT 06500), International Business and Society (MGT 06502), ANDMarketing Management (MKT 09500) OR Permissions of Instructor.
As understanding organizations in the context of their general and competitive environments is vital, future managers must learn how to utilize the perspectives and frameworks designed for strategic analyses and decision making. In this course students will learn how to conduct analyses across organizational functions and levels and effectively manage goals and strategies for different types of organizations.

MGT 98242: Legal Environment Of Business 3 s.h.
Students in this course examine the legal process and the legal environment within which business must operate, as well as the interrelationship of government and business. Students develop an understanding of the methods by which legal decisions are formulated as they affect both individual rights and business transactions.

MKT 09112: MKBIS Engagement and Career Exploration 0 s.h.
Prerequisite: Admission into the Marketing, MIS or BS/BA Supply Chain/Logistical Systems
This is a non-credit course that all Marketing, MIS and Supply Chain majors are enrolled in each semester. The course is graded on a Pass/No Credit basis. Each student will be required to complete a set of extracurricular activities in accordance with the program requirements.
BUS 01303: Business Practicum 3 s.h.

BUS 01401: Issues in Business: Directed Research (WI) 3 s.h.
Pre-req: COMP 01111, COMP 01112, BUS 01101 COLLEGE COMP 1 & 2 AND BUSINESS PERSPECTIVES OPEN ONLY TO LIBERAL STUDIES: HUMANITIES AND SOCIAL SCIENCES MAJORS

An upper-division course for students in Liberal Studies: Humanities & Social Sciences, Sequence B Perspectives of Business. Issues in Business: Directed Research is a course that focuses on the current issues and trends in business as found in the business media. The course is designed to allow students to explore areas of personal interest through the collection of research and the presentation of such material in written and spoken formats.

MIS 0250: Integrated Business Software Tools 3 s.h.
Students will expand their use of integrated software tools that include database management systems, spreadsheets, and other business applications. They will apply these tools to actual business decision-making situations by means of case studies and research projects.

MIS 02210: Enterprise Resource Planning Systems Laboratory 1 s.h.
Prerequisite: MIS 02233

Students will learn the role of enterprise resource planning systems (ERPS) in supporting key business processes. There will be hands-on computer laboratory exercises where students will gain experience in executing key business processes using a simulated ERP environment.

MIS 02233: Principles Of Management Information Systems 3 s.h.
Prerequisite: Sophomore standing

Today, information systems are an integral part of all business activities and careers. This course is designed to introduce students to contemporary information systems and demonstrate how these systems are used throughout organizations. The course will focus on the key components of information systems - people, software, hardware, data, and telecommunications, and how these components can be integrated and managed to create competitive advantage. Students will also gain hands-on experience with business software tools commonly applied to business data analysis and database management.

MIS 02234: Management Information Systems 3 s.h.
Prerequisites: 15 earned credits required and MATH 01123 or MATH 03125 or MATH 01130 or MATH 01140 or STAT 02260 or College Level Math test with minimum score 60

Information systems are an integral part of all business activities and careers. This course is designed to introduce students to contemporary information systems and demonstrate how these systems are used throughout organizations. This course focuses on the key components of information systems - organizations, people, software, hardware, data, and telecommunications - and how these components can be integrated and managed to create competitive advantage. Students will gain hands-on experience with business software tools commonly applied to business data analysis and database management. It is expected that students entering this class have completed College Algebra or its equivalent.

MIS 02310: Integrated Business Processes & Enterprise Resource Planning 3 s.h.
Prerequisites: MIS 01110 OR MIS 02234, and Junior standing, major or minor in business.

Students will learn the various key business processes, the role of enterprise resource planning systems (ERPS) in integrating and supporting these processes, and the many challenges an organization faces during implementation and management of such systems. There will be key hands-on computer laboratory exercises where students will gain experience in executing the key business steps and extracting meaningful information about the business processes using a well-regarded ERP software solution.

MIS 02320: Seminar In Management Information Systems 3 to 16 s.h.
Prerequisites: 57 credits required

A seminar course providing a broad overview of information system management technology, this course emphasizes investigation and application of state-of-the-art concepts. Topics will be relevant to current trends in the industry.

MIS 02322: Principles Of System Design 3 s.h.
Prerequisites: 57 credits required

This course explores the methodology and techniques in analysis and design of computer information systems. The systems analyst, the architect of information systems, is a liaison between user and programmer. The roles and responsibilities of the systems analyst are emphasized at all stages of the systems development life cycle.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIS 02325</td>
<td>Project Management</td>
<td>3 s.h.</td>
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<tr>
<td>Prerequisites: 57 credits required</td>
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<td>In this course, students will learn the Project Management Body of Knowledge (PMBOK) as put forward by the professional association, the Project Management Institute (PMI). Students will not only study the various phases and documents of project management, they will also have experience creating each of the documents for a given project.</td>
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| MIS 02327  | Network Management                               | 3 s.h.  |
| Prerequisites: 57 credits required |
| This course introduces students concepts associated with managing a network within a business setting. Furthermore, to solve business problems, students will apply theoretical concepts to fully design, specify, and justify networking solutions. |

| MIS 02330  | Business Systems                                 | 3 s.h.  |
| Prerequisites: 57 credits required |
| This course introduces students to the different tiers of an information system, with specific emphasis placed on design concepts and tools used to develop the presentation tier for web-enabled business information systems. |

| MIS 02332  | E-Business - Information Systems Perspectives    | 3 s.h.  |
| Prerequisites: 57 credits required |
| Students will explore the issues involved in e-business from a business, technological and societal viewpoint. Topics will include: B2C and B2B e-business models and strategies, concepts for building an effective e-business site, e-business security and encryption, e-payment systems, legal, ethical and international issues in e-commerce. |

| MIS 02333  | E-Business - Information Systems Perspectives - Wi| 3 s.h.  |
| Prerequisites: COMP 01112 and Junior standing |
| Students will explore the issues involved in e-business from a business, technological and societal viewpoint. Topics will include: B2C and B2B e-business models and strategies, concepts for building an effective e-business site, e-business security and encryption, e-payment systems, legal, ethical and international issues in e-commerce. |

| MIS 02336  | Advanced Database Management                     | 3 s.h.  |
| Prerequisites: MIS 02338 and Junior standing |
| The course provides students with an understanding of client-server databases, and the skills to develop one using a reputed database development. Students learn to use Structured Query Language (SQL) extensively to create an integrated database application. Knowledge of a programming language and a basic understanding of relational database concepts are expected. |

| MIS 02338  | Design Of Database Systems                       | 3 s.h.  |
| Prerequisite: Junior standing |
| This course explores the fundamentals of designing a database for a business organization. It emphasizes the relational model; however, the course also explores the hierarchical and network models. Additionally, the course covers such topics as recovery, integrity, security, concurrency, distributed databases, data dictionaries and the role of the database administrator. |

| MIS 02344  | Supervised Internship In Management Information Systems | 3 s.h.  |
| Prerequisites: 57 credits required |
| This course integrates the material covered in courses that are specific to the MIS program so that students can understand how each of the elements works together. It also affords an opportunity for students to complete a complex, realistic project where they must utilize and hone skills they learned in previous courses. |
Course Descriptions

MIS 02526: Project Management For Engineers 3 s.h.
In this course, students will learn the Project Management Body of Knowledge (PMBOK) as put forward by the professional association, the Project Management Institute (PMI). Students will not only study the various phases and documents of project management, they will also have experience creating each of the documents for a given project.

MIS 02599: Special Topics In Management Information Systems 3 s.h.
Prerequisites: Admission to the MBA Program OR Admission to Certificate of Graduate Study (COGS) in MIS OR Admission to Certificate of Advanced Graduate Study (CAGS) in MIS
Students will study advanced level topics in Management Information Systems. The exact topics to be covered will change over time. Contact the MBA office or the Management and MIS Department for details.

MKT 09101: Marketing And The Bus Development (Rs) 3 s.h.
Prerequisites: No more than 12 earned semester hours (freshman standing) and Admitted to the marketing major (0510) or permission of the marketing department
A required course for freshman majoring in marketing, this Rowan Seminar (RS) is designed to help students adjust to college, provides information needed to be a successful Rowan student, and introduces students to their chosen program of study. Upon completing the course, students will understand the current trends in business and scope of marketing in the modern business organizations. The course is limited to freshman students in the marketing major.

MKT 09200: Principles Of Marketing 3 s.h.
Prerequisites: COMP 01105 or COMP 01111 and 12 Credits Required
This course provides an overview of the theory and practice of marketing within a corporate and societal context in a dynamic environment. The major functions of marketing are covered from the perspective of management strategy seeking competitive advantage.

MKT 09305: Internet Marketing 3 s.h.
Prerequisites: MKT 09200 and 57 Credits Required
This course examines the Internet as a tool to enhance firms' marketing activities. The course presents a customer-centric view of marketing and focuses on how firms can create or maintain relationships with their potential or existing customers. Key online and offline marketing activities to that end are also discussed.

MKT 09315: Personal Selling 3 s.h.
Prerequisites: MKT 09200 and 57 Credits Required
This course examines the role of personal selling in the marketing mix. Students learn theory and gain practice in prospecting, presenting, overcoming objections, closing, and follow-up.

MKT 09330: Marketing Channels 3 s.h.
Prerequisites: MKT 09200 and 57 Credits Required
This course discusses how channels can be managed strategically to serve as a competitive advantage for the firm. Key topics include power and conflict within the channel, middlemen, vertical marketing systems and managing channel members.

MKT 09350: Management Of Advertising And Promotion 3 s.h.
Prerequisites: MKT 09200 and 57 Credits Required
This course explores the role of the V.P. Marketing in the development of the corporate mission statement and the translation of corporate objectives into advertising and promotion objectives, strategy and practice. The course also explores the relationship of the marketing management function to the advertising department, promotion department, market research, the advertising agency and other outside vendors.

MKT 09360: Services Marketing 3 s.h.
Prerequisites: MKT 09200 and 57 Credits Required
The course provides students with an understanding of the unique characteristics of services and the application of standard marketing tools in service marketing. It emphasizes consumer decision-making, marketing planning, and development of the marketing mix. Students will apply theoretical knowledge learned in class to real world case studies and projects.

MKT 09372: Retailing 3 s.h.
Prerequisites: MKT 09200 and 57 Credits Required
This course examines retailing as part of the marketing process. It emphasizes the qualitative and quantitative factors in location and merchandise selection, merchandise pricing, planning and management, as well as promotional activities. Other topics include market research, consumer behavior, organizational patterns and internal control procedures and their impact on the retail process.
MKT 09374: Research Methods In Marketing 3 s.h.  
Prerequisites: MKT 09200, STAT 02260 and 57 Credits Required  
This course focuses on the relevant methodologies and analytic tools that marketing researchers apply to obtain information for decision-making. Students are expected to get hands-on experience and develop proficiency in using primary and secondary sources of data.

MKT 09375: Business Logistics 3 s.h.  
Prerequisites: MKT 09200 and 57 Credits Required ORC918 Systems Engineering Concentration.  
This course focuses on the logistics of physical distribution and supply chains. Topics include traffic routing, inventory analysis and control, warehousing, location of production and storage facilities, and transportation.

MKT 09376: Consumer Behavior 3 s.h.  
Prerequisites: MKT 09200 and 57 Credits Required  
This course analyzes both the societal norms and the internal processes which impact on the consumer's purchase decisions. How consumers process product information and make decisions is evaluated for strategic marketing implications.

MKT 09378: Product, Price, New Venture Management 3 s.h.  
Prerequisites: MKT 09200 and 57 Credits Required  
In this course, students analyze new product development and new product management. The course covers idea screening, concept testing, new product evaluation, pricing theory and practice. Students study the use of marketing techniques, including advertising, promotion and pricing for each phase of the product life cycle.

MKT 09379: International Marketing 3 s.h.  
Prerequisites: MKT 09200 and 57 Credits Required  
Basic marketing concepts as they relate to foreign markets are analyzed in depth in this course. Two approaches are used: the environmental approach introduces the setting in which international marketing takes place; and the managerial approach incorporates marketing strategies of firms that choose to venture abroad.

MKT 09382: Sales Force Management 3 s.h.  
Prerequisites: MKT 09200 and 57 Credits Required  
From the viewpoint of a district manager, this course focuses on planning, directing, and controlling the marketing plan through a sales force. Topics include recruiting, selecting, training, motivating, and evaluating the sales force, as well as sales forecasting and time and territory management. Additionally, this course examines the role of personal selling in the marketing mix. Students learn theory and gain practice in prospecting, presenting, overcoming objections, closing and follow-up.

MKT 09384: Research Methods In Marketing-Wi 3 s.h.  
Prerequisites: COMP 01112 and MIS 02224 and STAT 02260 and 57 Credits Required  
This course focuses on the relevant methodologies and analytic tools that marketing researchers apply to obtain information for decision-making. Students are expected to get hands-on experience and develop proficiency in using primary and secondary sources of data. Writing is an essential component of the course as students will learn to present the results of their data analysis in professional and understandable written form.

MKT 09385: The Marketing Plan 3 s.h.  
Prerequisites: MKT 09375  
This course is designed to assist students in developing the analytical skills necessary to manage the processes and functions existent in modern supply chains. Using the Case Method, students will analyze realistic situations and problems confronting managers. They will identify solutions and develop implementation plans for their recommended solutions. Cases for analysis and discussion will include topics such as security in transportation and physical distribution, political barriers in global logistics, and information exchange across international boundaries.

MKT 09387: Supply Chain Management And Logistics 3 s.h.  
Prerequisites: MGT 06305  
The course is designed to assist students in developing the analytical skills necessary to manage the processes and functions existent in modern supply chains. Using the Case Method, students will analyze realistic situations and problems confronting managers. They will identify solutions and develop implementation plans for their recommended solutions. Cases for analysis and discussion will include topics such as security in transportation and physical distribution, political barriers in global logistics, and information exchange across international boundaries.
### MKT 09390: Selected Topics In Marketing
*Prerequisites: MKT 09200 and 57 Credits Required*

Students will investigate new areas and developments in theory, research and practice in Marketing. Specialized topics will vary each semester. Course activities will include in-depth study of current topics and preparation of case analyses and/or research papers. Students may consult with the department chair or the instructor for course details.

### MKT 09391: Business To Business Marketing
*Prerequisites: MKT 09200 and 57 Credits Required*

Students will investigate key concepts and strategic issues associated with marketing to business and organizational customers. Strategic differences between business and consumer marketing will be examined. Students will apply course concepts by means of analysis of case studies of actual decision situations.

### MKT 09403: Strategic Marketing Management
*Prerequisite(s): 9.0 Earned Semester Hours of Upper Division Marketing Courses and 87 total Earned Semester Hours Req’d.

Students will investigate the approaches and problems of developing marketing plans and marketing decision making under conditions of uncertainty. The course focuses on the major types of decisions facing marketing executives in their attempts to harmonize the objectives and resources of the firm with the opportunities in the market place.

### MKT 09406: Strategic Supply Chain Management
*Prerequisite: MKT 09375*

This course is the capstone experience for students majoring in Business Administration with a specialization in Supply Chains and Business Systems. The course utilizes the SAP software to provide students with a real-world experience in managing supply chains and developing competitive advantage through the effective development and maintenance of logistical systems.

### MKT 09411: Supervised Internship In Marketing
*Prerequisite(s): 6.0 earned semester hours of upper division Marketing Courses and 60 earned semster hours required.

This course is intended to provide students with actual business experience. Fieldwork is combined with reports and online discussion sessions in the classroom. Registration in the course and prior approval from the instructor are required.

### MATH 01115: Contemporary Mathematics

This course is designed to develop an appreciation of what mathematics is and how it is used today. Topics covered include: statistics and probability; graphs, trees and algorithms; geometrical perspectives including transformations, symmetry, and similarity; and the mathematics of social choice. Students are expected to have completed equivalents of Basic Algebra I and Basic Skills Reading.

### MATH 01122: Precalculus Mathematics

This course helps prepare students for Calculus I or Calculus T&A. The contents include: a brief review of intermediate algebra, the structure of the real number system, elementary analytic geometry, and algebraic, exponential, logarithmic and trigonometric functions (including their inverses and related functions). Graphs of functions and conic sections also are studied. A graphing calculator is required. Students are expected to have completed an equivalent of Basic Algebra II.

### MATH 01123: College Algebra

This course is designed to help students who are weak in algebra prepare for Statistics I or Calculus Techniques & Applications. The contents include: a brief review of intermediate algebra, the structure of the real number system, elementary analytic geometry, and algebraic, exponential and logarithmic functions (including their inverses and related functions). Graphs of functions are also studied. A graphing calculator is required. Students are expected to have completed Basic Algebra II or its equivalent.

### MATH 01130: Calculus I

This course begins with a discussion of functions, the limit concept and continuity. The concept of a derivative is introduced and the student learns to differentiate algebraic functions, exponential, functions, logarithmic and trigonometric functions. Differentiation is applied to analysis of functions, extreme problems and to problems in related rates. The integral as the unit of a sum is linked to the antiderivative by the Fundamental Theorem of Calculus and used to find areas. A graphing calculator is required for this course, and so is the use of a computer software, such as Mathematica. Students are expected to have completed an equivalent of (Math 01.122) Precalculus.

### MATH 01131: Calculus II
*Prerequisites: C- or better in MATH 01130*

This course begins with applications of integration (such as volume of a solid of revolution work, arc length, area of a surface of revolution, center of mass) and derivatives of inverse trigonometric functions. Integration by parts, partial fractions and other more advanced integration techniques are introduced, along with a discussion of numerical integration, improper integrals, indeterminate form, sequences and infinite series. A graphing calculator is required for this course, and so is the use of computer software, such as Mathematica.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MATH 01140:</td>
<td>Accelerated Calculus I</td>
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<td>This course covers limit concept and continuity,</td>
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<td>derivative and its applications, the integral</td>
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<td>and its applications. The techniques of</td>
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<td>integration as well as numerical integrations</td>
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<td>will be discussed. Students are expected to</td>
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<td>be familiar with basic ideas of calculus. A</td>
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<td>graphing calculator is required for this course,</td>
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<td>and so is the use of computer software, such as</td>
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<td>Mathematica.</td>
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<td>MATH 01141:</td>
<td>Accelerated Calculus II</td>
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<td><strong>Prerequisite:</strong> C- or better in MATH 01140</td>
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<td>This course covers sequences and infinite series,</td>
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<td>polar coordinates and parametric equations,</td>
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<td>vectors, vector functions, velocity, acceleration</td>
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<td>partial differentiation, directional derivatives,</td>
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<td>and multiple integrations. The student is</td>
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<td>expected to use computer software, such as</td>
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<td></td>
<td>Mathematica, in addition to a graphing calculator.</td>
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<td>MATH 01201:</td>
<td>Structures Of Mathematics I</td>
<td>3 s.h.</td>
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<td></td>
<td><strong>Prerequisite:</strong> MATH 01095</td>
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<td>This course is designed primarily for elementary</td>
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<td>education majors. The course concerns the</td>
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<td>development of number systems and algebraic</td>
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<td>structures, including the natural numbers, the</td>
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<td>integers, rational numbers, and real and complex</td>
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<td>numbers. Concrete examples of selected algebraic</td>
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<td>structures are included. Students will be</td>
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<td>required to reason mathematically, solve problems,</td>
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<td></td>
<td>and communicate mathematics effectively at</td>
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<td>different levels of formality, using a variety of</td>
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<td>representations of mathematical concepts and</td>
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<td>procedures. Use of calculators is required.</td>
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<td>MATH 01202:</td>
<td>Introduction To Geometry</td>
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<td>This course develops the fundamental concepts of</td>
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<td>Euclidean geometry from a modern point of view.</td>
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<td>Its topics include sets, points, lines, space,</td>
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<td>betweenness, incidence, congruence, parallelism,</td>
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<td>similarity, transformations, volumes, and areas.</td>
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<td>Non-Euclidean geometries are introduced. Not</td>
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<td>open to mathematics majors. Use of calculators</td>
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<td>is required. Students are expected to have</td>
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<td></td>
<td>completed an equivalent of Basic Algebra II.</td>
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<td>MATH 01205:</td>
<td>Technological Tools For Discovering Mathematics</td>
<td>2 s.h.</td>
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<td><strong>Prerequisites:</strong> C- or better in CS 01104 and</td>
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<td></td>
<td>MATH 01351 and MATH 03150</td>
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<td>This course will use mathematics-specific</td>
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<td>technologies to help students discover</td>
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<td>mathematics and to develop a better</td>
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<td>understanding of new content. Throughout the</td>
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<td>course students will become aware of the broad</td>
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<td>range of mathematics-specific technologies</td>
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<td>available to mathematicians, become proficient</td>
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<td>in the use of these, and pursue the advantages,</td>
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<td>disadvantages, and limitations of such</td>
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<td>technologies. Students will solve problems and</td>
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<td>advance their understanding of topics in the</td>
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<td>areas of pre-calculus, calculus, geometry and</td>
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<td></td>
<td>statistics.</td>
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<td>MATH 01210:</td>
<td>Linear Algebra</td>
<td>3 s.h.</td>
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<td></td>
<td><strong>Prerequisites:</strong> C- or better in MATH 01311</td>
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<td></td>
<td>and (MATH 03150 or MATH 03160)</td>
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<td>This course includes: linear equations and</td>
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<td>matrices, vector spaces, linear dependence and</td>
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<td>independence, dimension and basis of a vector</td>
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<td>space, linear transformations, inner product and</td>
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<td>cross product, orthogonality, eigenvalues and</td>
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<td>eigenvectors. Use of graphing calculators is</td>
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<td>required and computers may be used at the option</td>
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<td>of the instructor.</td>
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<td>MATH 01230:</td>
<td>Calculus III</td>
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<td><strong>Prerequisites:</strong> C- or better in MATH 01311</td>
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<td>This course includes: vectors, vector functions,</td>
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<td>velocity, acceleration, partial differentiation,</td>
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<td>directional derivatives, multiple integration,</td>
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<td>and vector calculus. The student is expected to</td>
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<td></td>
<td>use computer software, such as Mathematica, in</td>
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<td>addition to the graphing calculator.</td>
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<td>MATH 01231:</td>
<td>Ordinary Differential Equations</td>
<td>3 s.h.</td>
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<td></td>
<td><strong>Prerequisites:</strong> C- or better in both MATH</td>
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<td>01210 and MATH 01230</td>
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<td></td>
<td>Applications of ordinary differential equations</td>
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<td>and their methods of solution form the major</td>
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<td>part of this course. It also includes the</td>
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<td>solution of nth order equations, particularly of</td>
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<td>first and higher degree linear differential</td>
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<td>equations, and series and Laplace Transform</td>
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<td>solutions. Students might be asked to use</td>
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<td>computers and/or graphics calculators as an aid</td>
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<td>in solving equations.</td>
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<td>MATH 01235:</td>
<td>Mathematics For Engineering Analysis</td>
<td>4 s.h.</td>
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<td><strong>Prerequisites:</strong> MATH 01230 with a grade of C-</td>
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<td>or better</td>
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<td>This course provides a comprehensive introduction</td>
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<td>to Linear Algebra and Ordinary Differential</td>
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<td>Equations. Topics in Linear Algebra include</td>
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<td>solutions to linear systems of equations,</td>
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<td>matrices, determinants, vector spaces,</td>
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<td>eigenvalues, eigenvectors, symmetric matrices</td>
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<td>and orthogonality. The ODE part consists of</td>
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<td>separable equations, exact equations, linear</td>
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<td>differential equations of first, second and</td>
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<td>higher orders, systems of linear differential</td>
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<td>equations, numerical methods, and applications.</td>
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<td>MATH 01236</td>
<td>Mathematics For Engineering Analysis II</td>
<td>4 s.h.</td>
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<td>This course is a continuation of Mathematics for</td>
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<td>Engineering Analysis I. Topics include systems of</td>
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<td>first-order ordinary differential equations, Laplace</td>
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<td>transform and partial differential equations,</td>
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<td>Fourier series, data analysis, probability and</td>
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<td>complex analysis. A computer algebra system</td>
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<td>system such as Mathematica is required.</td>
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<td>MATH 01301</td>
<td>Structures Of Mathematics II</td>
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<td>This course is designed primarily for elementary</td>
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<td>education majors. The course will require students</td>
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<td>to investigate problems in order to deepen their</td>
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<td>conceptual and procedural understanding in the</td>
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<td>areas of algebra, data analysis, probability,</td>
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<td>geometry, measurement, systematic listing and</td>
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<td>counting.</td>
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<td>MATH 01310</td>
<td>College Geometry</td>
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<td>This geometry course will use both synthetic and</td>
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<td>analytic approaches to study advanced concepts in</td>
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<td>Euclidean geometry, to introduce non-Euclidean</td>
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<td>geometry, to explore the basics of Transformational</td>
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<td>geometry and Higher Dimensional geometry, and to</td>
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<td>trace the historical development of geometry.</td>
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<td>Computer use will be emphasized throughout the</td>
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<td>MATH 01330</td>
<td>Introduction To Real Analysis I</td>
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<td>This course prepares students for more advanced</td>
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<td>courses in analysis as well as introducing</td>
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<td>rigorous mathematical thought processes. Topics</td>
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<td>included are sets, functions, the real number</td>
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<td>system, sequences, limits, continuity and</td>
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<td>derivatives.</td>
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<td>MATH 01331</td>
<td>Introduction To Real Analysis II</td>
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<td>This course is a continuation of Introduction to</td>
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<td>Real Analysis I. The purpose is to extend</td>
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<td>student's understanding of basic analysis and the</td>
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<td>calculus. Topics included are: the mean-value</td>
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<td>theorem, existence of the Riemann integral,</td>
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<td></td>
<td>Riemann-Stieljes integration, infinite series,</td>
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<td>convergence tests and Fourier series.</td>
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<td>MATH 01332</td>
<td>Numerical Analysis</td>
<td>3 s.h.</td>
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<td>This course includes: elements of error analysis,</td>
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<td>real roots of an equation, polynomial approximation</td>
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<td>by finite difference and least square methods,</td>
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<td></td>
<td>interpolation, quadrature, numerical solution of</td>
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<td>ordinary differential equations, and numerical</td>
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<td>solutions of systems of linear equations. The</td>
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<td>student should expect to program a computer in</td>
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<td></td>
<td>addition to using a graphing calculator.</td>
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<td>MATH 01340</td>
<td>Modern Algebra I</td>
<td>3 s.h.</td>
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<tr>
<td></td>
<td>This course includes: the natural numbers,</td>
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<td>integers, rationals, and reals as mathematical</td>
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<td>systems, and the introductory theory of groups,</td>
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<td></td>
<td>rings, integral domains, and fields. Also included</td>
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<td></td>
<td>are homomorphisms and isomorphisms, subgroups,</td>
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<td>kernels, rings and ideals and polynomial rings.</td>
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<td>At the option of the instructor, computer use can</td>
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<td></td>
<td>be required.</td>
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<tr>
<td>MATH 01341</td>
<td>Modern Algebra II</td>
<td>3 s.h.</td>
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<td></td>
<td>This course extends the study begun in Modern</td>
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<td></td>
<td>Algebra I to a more detailed investigation of</td>
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<td>abstract algebraic structures. Included are Sylow</td>
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<td>theorems, rings and ideals, polynomial rings, ring</td>
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<td>and field extension and Galois theory.</td>
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<td>MATH 01350</td>
<td>Theory Of Numbers</td>
<td>3 s.h.</td>
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<td>This course includes divisibility properties of</td>
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<td>integers, theory of congruence, Diophantine</td>
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<td>Analysis, congruences of higher degree, quadratic</td>
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<td>residues and famous problems of number theory.</td>
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<td>MATH 01351</td>
<td>Introduction To Topology</td>
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<td>This course covers the properties of general</td>
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<td>topological spaces, separation, compactness,</td>
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<td>connectedness and the Heine-Borel and Bolzano-</td>
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<td>Weierstrass theorems.</td>
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<td>MATH 01360</td>
<td>Introduction to Real and Complex Variables</td>
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<td>The course introduces the basic ideals of real</td>
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<td>analysis: sequences, continuity, differentiability</td>
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<td>and their rigorous treatment, and introduces the</td>
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<td>basic elements of complex analysis up to</td>
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<td>derivatives rules.</td>
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MATH 01386: Introduction To Partial Differential Equations 3 s.h.
Prerequisites: C- or better in MATH 01231 or MATH 01236
This course is a study of partial differential equations and their applications. Topics include the derivation of the wave equation, Laplace’s equation and the heat equation, Fourier series and integrals, boundary value problems, Bessel functions and Legendre Polynomials.

MATH 01410: History Of Mathematics 3 s.h.
Prerequisites: C- or better in two 300-level (or higher) Math major courses
This course includes a survey of the development of mathematical ideas from early times up to present day college mathematics. Emphasis is on historical mathematical problems and their solution. Readings and reports on selected topics are required.

MATH 01421: Mathematics Field Experience 3 s.h.
Prerequisites: MATH 01131 and STAT 02360
Students accept assigned projects in a professional environment. These projects normally involve applied mathematics or statistics. Students are expected to work at least 150 hours during the semester for which they receive credit. Written reports are required.

MATH 01430: Introduction To Complex Analysis 3 s.h.
Prerequisites: C- or better in MATH 01330
This course includes properties of complex numbers and their conjugates, functions of a complex variable, limits, continuity and derivatives for complex functions. Also included are: Integration and the Cauchy integral theorems, uniform convergence, Taylor’s and Laurent’s series and conformal mapping.

MATH 01498: Math Seminar (Wi) 3 s.h.
Prerequisite: C- or better in each of MATH 01231, MATH 01330, MATH 01340, and either MATH 01310 or STAT 02360
This course is designed to integrate students’ knowledge of mathematics and to further develop their problem solving abilities. The course content includes problem-solving techniques, a review of the literature of mathematics, solving problems drawn from a variety of current resources, and study of techniques of proof and issues in the philosophy of mathematics and its foundation. Additionally, each student is required to write and to present orally, a research report on a mathematical topic.

MATH 03125: Calculus: Techniques And Applications 3 s.h.
Prerequisite(s): College Level Math or College Level Math Re-test with a score of 60 or higher or MATH 01123 with a minimum grade of D- or MATH 01122 with a minimum grade of D-
Introduces students to the techniques of differential and integral calculus. Emphasis is placed on practical applications of limits, derivatives, and integrals with business applications highlighted. This course also provides experience with and information about the significance and specific uses of the calculus in today’s world. A graphing calculator is required. Students are expected to have completed an equivalent of College Algebra.

MATH 03150: Discrete Mathematics 3 s.h.
This course provides an overview of the branch of mathematics commonly known as discrete mathematics. Topics included are sets, relations, functions, induction and other methods of proof, recursion, combinatorics, graph theory, and algorithms. Emphasis is placed on the solution of problems and proofs. The use of graphing calculator is required.

MATH 03160: Discrete Structures 3 s.h.
This course covers mathematical topics essential for work in computer science. This material includes number bases, mathematical induction, sets, relations, functions, congruence, recursion, combinatorics, graphs, trees, logic, Boolean algebras, and proof techniques. While this is a course in mathematics, many of the examples and applications will be taken from computer science. The instructor may require use of a graphing calculator and/or computer. This course covers much of the same material as Discrete Mathematics (MATH 03.150), but with a computer science focus. In no case will a student be allowed to receive credit for both courses. Both courses will be treated as equivalent for the purposes of satisfying prerequisites and course requirements.

MATH 03305: Patterns In Nature I: Visual Geometry 3 s.h.
Prerequisites: C- or better in each of BIOL 01105, CS 01102, CS 01200, STAT 02260, (PHYS 02150 or PHS 00150) and CHEM 05102
This course for students in the natural/science track of the Liberal Studies major illustrates the connections between geometry and the natural sciences, using computers, manipulatives, and hands-on models. Concepts covered include properties of two- and three-dimensional shapes, transformations, dimension, and non-Euclidean geometries.
MATH 03315: Patterns In Nature II: Projects In Calculus 4 s.h.
Prerequisites: C- or better in MATH 03305
This project-oriented course for students in the Liberal Studies Math/Science program provides an introduction to the mathematics of change. Topical coverage includes a review of functions, limits, continuity, the notion of the derivative and its applications, and the notion of integration and its applications. The use of numerical methods will be included in the context of mathematical modeling and various types of technologies, including graphing calculators, spreadsheets, and mathematical software packages will be utilized.

MATH 03400: Applications Of Mathematics 3 s.h.
Prerequisite: C- or better in MATH 01210, MATH 01230, and MATH 01231
This course may include examples of mathematical models applied to the various fields of the biological, physical and social sciences. The process of building a mathematical model to describe a real world system will be demonstrated. Emphasis will be placed on the value of mathematical models for solving problems and obtaining new results. Computers and graphing calculators will be used.

MATH 03411: Deterministic Models In Operations Research 3 s.h.
Prerequisites: C- or better in (MATH 01230 or MATH 01141) and C- or better in (MATH 01210 or MATH 01235)
This course is an introduction to mathematical modeling, analysis, and solution procedures applicable to decision-making problems in deterministic environment. Methodologies covered include the simplex and interior point methods of solving linear programming models, inventory theory, assignment and transportation problems, dynamic programming and sensitivity analysis. Solutions will be obtained using theoretical methods and software packages.

MATH 03412: Stochastic Models In Operations Research 3 s.h.
Prerequisites: C- or better in each of STAT 02360 and MATH 03411 or C- or better in each of STAT 02360 and either MATH 01230 or MATH 01141 and either MATH 01210 or MATH 01235
This course is an introduction to mathematical modeling, analysis, and solution procedures applicable to decision-making problems in an uncertain (stochastic) environment. Methodologies covered include dynamic programming, Markov chains, queuing theory, decision trees, system reliability and inventory theory. Solutions will be obtained using theoretical methods and software packages.

STAT 02100: Elementary Statistics 3 s.h.
This course gives a basic introduction to the fundamental concepts and methods of statistics. Its topics include: basic measures of central tendency and variability, graphical displays, elementary design of experiments, descriptive simple linear regression, elementary probability, the normal and t-distributions, confidence intervals and hypothesis testing. Use of a statistical calculator, graphing calculator or software package is required. Note: many majors require a different introductory statistics course; students should check their major requirements before signing up for this course.

STAT 02260: Statistics I 3 s.h.
Students learn to use various graphical displays and measures of location and variability to describe data. The course considers elementary probability and sampling distributions, and uses the normal and t-distributions in estimation and hypotheses testing. It includes descriptive techniques for simple linear regression and correlation. Use of a graphing calculator is required; computer software may be used. Students are expected to have completed an equivalent of College Algebra.

STAT 02261: Statistics II 3 s.h.
Prerequisites: C- or better in STAT 02260
This course is a continuation of Statistics I. Confidence intervals and hypothesis tests are studied in more detail, beginning with two sample inference for means and proportions. The inferences in simple linear regression and multiple regression are presented. Analysis of variance and experimental design are introduced. Other topics include chi-square tests for goodness-of-fit and independence, and the principles of nonparametric tests. Use of statistical software such as Minitab, SPSS or SAS, is also required.

STAT 02280: Biometry 4 s.h.
Prerequisites: MATH 01130 and BIOL 01104 and BIOL 01105 or MATH 01130 and BIOL 01202 or MATH 01130 and BIOL 01100 and BIOL 01101
This laboratory course considers elementary data analysis, probability and sampling distributions. It uses the normal and t-distributions to introduce estimation and hypotheses testing. It includes descriptive techniques and inference for simple linear regression and correlation. Analyses of variance, nonparametric tests and chi-square tests are covered in this course. Emphasis is placed on experimentation and the application of statistical methods to the biological sciences. Computer software is used regularly in data manipulation, statistical analyses, and formal presentation of results.
STAT 02284: Statistics for the Biomedical Sciences 3 s.h.
Prerequisite(s): MATH 01140 with a grade of C- or higher or MATH 01131 with a grade of C- or better.
This course introduces statistical concepts and analytical methods as applied to data encountered in the biomedical sciences and engineering. It emphasizes the basic concepts of experimental design, quantitative analysis of data, and statistical inference. Topics include probability theory and distributions; population parameters and their sample estimates; descriptive statistics for central tendency and dispersion; hypothesis testing and confidence intervals for means and proportions; categorical data analysis including relative risk, odds ratios, and the chi-square statistic; correlation and simple linear regression.

STAT 02290: Probability And Statistical Inference For Computing Systems 3 s.h.
Prerequisites: MATH 03160 and MATH 01131 and (CS 04113 or CS 04112)
This laboratory course considers descriptive techniques for presenting and summarizing data, techniques in probability, discrete and continuous random variables, estimation and hypothesis testing. Emphasis is placed on concepts and simulation, regularly using computer software for data manipulation and presentation, function manipulation and presentation, simulation, and statistical analyses. Examples will be drawn from the field of Computer Science.

STAT 02320: Concepts in Statistical Data Analysis 3 s.h.
Prerequisites: MATH 01.131 and MATH 01.210 and CS 01.104, each with a grade of C- or better.
This course examines the concepts behind statistical thinking in data analysis. Using rudimentary programming, simulation, and mathematical techniques, students will see what is behind the meaning of statistical significance (and the P-value), as well as the conclusions that can justifiably be made from a study. They will use a statistically software package, be introduced to the modern techniques of randomization of bootstrapping, and learn some classical statistical techniques as well. This course is required for the math education track and is a restricted elective for other math majors.

STAT 02360: Probability And Random Variables 3 s.h.
Prerequisites: C- or better in MATH 03150 and either MATH 01230 or MATH 01141
This course is an introduction to the theory and application of probability and random variables, with a short introduction to mathematical statistics, as the post-calculus level. Topics covered include sample spaces, random variables, discrete and continuous probability distributions, mathematical expectation, and multivariate distributions. At the end of the course the concept of estimation, from mathematical statistics, will be introduced. A few of the concepts of descriptive statistics will be introduced as needed. Use of a graphing calculator is required.

STAT 02361: Mathematical Statistics 3 s.h.
Prerequisites: C- or better in STAT 02360
A continuation of STAT 02.360, the course emphasizes the theory of inferential statistics and its applications. The Central Limit Theorem is more fully developed as are the concepts of estimation and hypothesis testing. The properties of estimators are covered and tests using normal, t, chi-square, and F distributions are studied. Nonparametric methods, regression, and correlation are also covered. Use of a graphing calculator is required.

STAT 02371: Design Of Experiments: Analysis Of Variance 3 s.h.
Prerequisites: STAT 02360 and MATH 01210 and (STAT 02261 or STAT 02361)
Students will gain an understanding of the major theoretical and practical concepts in the design of experiments using the statistical technique called the analysis of variance (ANOVA). A brief discussion of the concept of power, and the minimum number of experimental trials to achieve that power, will be used as this motivation for careful design. Students will be introduced to several aspects of the design of experiments beyond one- and two-way ANOVA, such as blocking, factorial designs, fractional designs, and random factors.

ENGR 01273: Strength Of Materials 3 s.h.
Prerequisite: ENGR 01271
The course presents the theory and analytical techniques used in the design and analysis of engineered structural components. The course addresses the principles of stress and strain, mechanical properties of materials, and beam and bar analysis. The study of structural components includes axial forces, torsion, bending, shear, combined loading, buckling, and design. Concepts such as principal stresses, Hooke's Law for plane stress, and failure criteria are introduced.

ENGR 01412: Introduction To Nanotechnology 3 s.h.
Prerequisite(s): PHYS 00222 and CHEM 06100
This course explores the science and engineering at the nanometer scales. Topics include fundamentals of nanotechnology, types and properties of nanomaterials; methods of fabrication; how these materials are characterized and the potential applications.
ME 10101: Introduction To Mechanical Design  
3 s.h.  
This course introduces the student to mechanical design process, synthesis techniques, and modern analysis tools. It focuses on synthesis of linkage and cam mechanisms. Laboratory experience will include computer simulation and analysis. Design experience will be integrated throughout the course and culminate in a design project.

ME 10211: Mechanical Engineering Laboratory  
2 s.h.  
This course introduces the student to many of the tools used by practicing mechanical engineers, including CAD software, mathematical modeling software, analysis software, rapid prototyping techniques and data acquisition.

ME 10301: Machine Design  
4 s.h.  
Prerequisites: ENGR 01291 and ENGR 01273  
This course introduces students to machine design. It deals with the design and selection of machine elements such as shafts, couplings, bearings, gears, springs, screws and fasteners. Significant emphasis will be placed upon stress analysis and failure theories. Laboratory experience will include computer simulation and analysis. Design experience will be integrated throughout the curriculum and culminate in a design project.

ME 10320: Principles Of Mechanical Engineering For Ece Majors  
3 s.h.  
Prerequisite(s): PHYS 00220 and MATH 01230  
This course introduces Electrical and Computer Engineering students to basic concepts in statics, dynamics and the thermal/fluid sciences. Special emphasis is placed upon the design and analysis of systems relevant to electrical engineers including actuators, motors and other electromechanical devices. Heat generation and removal from electronic devices will also be given significant coverage.

ME 10321: Thermal-Fluid Sciences I  
6 s.h.  
Prerequisite(s): CHEM 06100 and (MATH 01235 or MATH 01231) and PHYS 00220  
This course introduces students to thermal-fluid sciences. It deals primarily with thermodynamic property relations, energy transfer, and mass, momentum, and energy balance principles. Students will be able to analyze engineering systems from a mass, momentum, and energy standpoint as well as perform heat transfer, thermodynamic, fluid static, fluid momentum, and fluid energy calculations. Laboratory experience will include computer simulation and analysis. Design experience will be integrated throughout the curriculum and culminate in a design project.

ME 10322: Thermal-Fluid Sciences II  
6 s.h.  
Prerequisite: ME 10321  
This course advances student knowledge of the thermal-fluid sciences. It deals primarily with the second law of thermodynamics, internal/external flow, and steady flow devices. Students will be able to design systems for power production, propulsion, and heating/cooling. Design experience will be integrated throughout the curriculum and culminate in a design project.

ME 10342: Quality & Reliability In Design And Manufacture  
3 s.h.  
Prerequisite(s): MATH 01131 or MATH 01141  
This course introduces concepts of quality and reliability for application in design and manufacture. Basic aspects of dimensioning, tolerancing, and fits are introduced through application of the normal distribution and its variations. Geometric tolerances of form, orientation, position and runout are presented. Aspects of process capability and statistical process control are discussed. Concepts of failure and reliability are presented.

ME 10343: System Dynamics And Control I  
3 s.h.  
Prerequisite(s): ENGR 01291 and MATH 01235  
This course introduces students to system modeling, analysis and control. The course focuses on modeling, simulation and design of mechanical, electrical, electromechanical and fluid systems. Time- and frequency-domain analysis of engineering systems will be covered.

ME 10344: System Dynamics And Control II  
3 s.h.  
Prerequisite: ME 10343  
This course introduces students to modern control systems. The course focuses on modeling, simulation and design of engineering systems with control. Time- and frequency-domain analysis of control systems will be covered. The course will culminate in a large-scale design project incorporating a modern control system.

ME 10401: Introduction To Computer Integrated Manufacturing And Automation  
3 s.h.  
Prerequisites: ENGR 01283  
The course covers the basic aspects of computer integrated manufacturing and automation systems. Hard and flexible automation concepts are introduced. Various automation strategies are presented. Coding and classification ideas of group technology are related to computer aided process planning. Topics of numerical control, industrial robotics, and artificial intelligence are discussed.
### Course Descriptions

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tr>
<td>ME 10405</td>
<td>Special Topics In Mechanical Engineering</td>
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<td>This course covers special topics in individual areas of Mechanical Engineering. Specific prerequisites are determined by the nature of the course when it is announced.</td>
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<td>ME 10406</td>
<td>Introduction To Computational Materials Science</td>
<td>3 s.h.</td>
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<td>Prerequisite(s): (ENGR 01283 or INTR 01486) and MATH 01235 and CS 04203</td>
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<td>This course is intended to introduce two classes of computational stimulation techniques used in materials science: molecular structure and molecular statics. In addition, emphasis is placed on the numerical methods utilized in each. Topics to be covered include molecular gelation/polymerization stimulations, basic Monte Carlo methods, use of the Lennard-Jones potential, static minimum energy unit-cell crystallographic configurations and nonlinear minimization techniques. Students should have a working knowledge of computer programming methods.</td>
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<tr>
<td>ME 10411</td>
<td>Introduction To Combustion</td>
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<td>Prerequisites: ME 10322</td>
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<td>This course serves as an introduction to combustion, chemically reacting flow systems and flames. It covers the fundamental concepts of chemically reacting systems along with many practical applications. Specific topics include chemical equilibrium, chemical kinetics, premixed laminar flames, detonations, diffusion flames and environmental issues.</td>
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<td>ME 10412</td>
<td>Introduction To Rocket Propulsion</td>
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<td>Prerequisite: ME 10322</td>
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<td>In this course, the principles of rocket propulsion theory are presented along with practical applications of rocket propulsion design. Theoretical topics include performance analysis of ideal rocket engines, departure from ideal performance and detailed thermochemical propellant calculations. Practical design issues are addressed for both liquid propellant engines and solid rocket motors. The course also includes an introduction to electric propulsion.</td>
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<td>ME 10413</td>
<td>Advanced Heat And Mass Transfer</td>
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<td>Prerequisite: ME 10322</td>
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<td>The topics covered in this course extend and complement the Transfer Processes I course. While Transfer Processes I provides an overview and introduction to the engineering fundamentals of heat transfer, Advanced Heat Transfer will provide a deeper knowledge of heat transfer principles, and will allow more rigorous and open-ended problems to be examined. The course will include two additional topics: radiation and mass transfer. Students successfully completing this course will be able to solve a wider range of heat and mass transfer problems encountered in industry.</td>
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<td>ME 10414</td>
<td>Introduction To Energy Conversion Systems</td>
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<td>Prerequisite: ME 10322</td>
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<td>This course will introduce energy conversion technologies for the generation of electrical power. Topics will include a review of power cycles, steam and gas cycles, generation of thermal power, combustion and fuels, steam power plant design considerations, gas turbine power plant operation and design considerations, combined cycles, co-generation, nuclear power, alternative energy sources, fuel cells, and environmental considerations in power generation.</td>
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<td>ME 10421</td>
<td>Introduction To Gas Dynamics</td>
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<td>Prerequisite: ME 10322</td>
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<td>This course emphasizes application of the conservation equations of mass, momentum and energy to solve problems in one-dimensional and two-dimensional compressible flow. Specific applications of one-dimensional compressible flow include one-dimensional isentropic flow, flow with area change, adiabatic flow with friction, normal shock waves and flow with heat addition. The method of characteristics is introduced to solve two-dimensional compressible flow problems.</td>
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<td>ME 10422</td>
<td>Introduction To Computational Fluid Dynamics</td>
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<td>Prerequisite: ME 10322</td>
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<td>This course introduces computational fluid dynamics (CFD) using a primarily software-based approach. Following an overview of the key steps involved with CFD, the class reviews the fundamental mathematics that govern fluid dynamics. An overview of governing equation discretization techniques is presented with assignments that involve building custom algorithms to solve simplified CFD problems. CFD essentials such as consistency, stability and convergence are covered in-depth. Several modeling labs are used to build software skill and explore internal and external flows that are largely incompressible and viscous. The final weeks of this class are dedicated to a final project on a student-selected topic.</td>
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<td>ME 10441</td>
<td>Advanced Mechanism Design For Undergraduates</td>
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<td>Prerequisite(s): ME 10101 and MATH 01235</td>
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<td>This course presents an indepth coverage of the design of mechanisms using matrix methods as the platform to model, synthesize, analyze and simulate mechanisms. It covers advanced design techniques that include type synthesis, numerical optimization techniques as applied to mechanism design synthesis, as well as branch defects and circuit defects that occur during mechanism synthesis. In addition, it covers the modeling and simulation of mechanical systems using appropriate mechanism design software. Students will perform analysis and simulation of mechanisms.</td>
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ME 10442: Mechatronics
Prerequisite: ECE 09205
This course introduces the students to the design and development of mechatronic systems. It introduces the students to the multidisciplinary nature of mechatronic products and teaches them to design and develop such products. Students will learn about mechatronic design philosophy, mechatronic system modeling, sensors, actuators, microprocessors and their interfaces. The course project will involve the design of a real-world mechatronic system.

ME 10443: Design For X
Prerequisites: ENGR 01302
This course introduces the students to the design of systems from Design for X perspective. The Design for X course teaches how to deal with conflicting and ever increasing number of constraints in the design process. It teaches the students to adopt a systematic design approach that addresses issues related to manufacture, assembly, environment, reliability and other factors from concept design stage to product manufacture. Students also learn to customize CAD systems with their own intelligent design assistants to help them in the design process.

ME 10444: Introduction To Automotive Engineering
Prerequisites: ENGR 01291, ME 10101, ME 10301, ME 10322
This Course deals with the engineering of automobiles at the undergraduate level. The course draws upon knowledge from the fields of dynamics, thermodynamics, fluid mechanics, heat transfer, and machine design. Topics covered include vehicle dynamics, internal combustion engines, power transmission, and advanced technology vehicles. The course includes appropriate exams and automobile related design project.

ME 10450: Introduction To Advanced Solid Mechanics
Prerequisite(s): ENGR 01273 and MATH 01235
This course will provide students with a basic understanding of the methods involved in solving problems that combine stresses, strains, and displacement in solid bodies. The course extends topics covered in the sophomore-level solid mechanic course to include derivations of well-used solutions, transformations between coordinate systems, strength, and failure used in design, and, most importantly, application of these topics to the solution of relevant problems.

ME 10451: Introduction To The Mechanics Of Continuous Media
Prerequisite(s): ENGR 01273 and MATH 01235
The fundamental concepts governing the behavior of continuous media, primarily solids, are introduced. Governing equations are derived for classical problems such as the spinning disk. Constitutive laws are employed in the solution of boundary value problems in both Cartesian and cylindrical coordinate systems. Classical solutions are examined using symbolic mathematics and finite element software.

ME 10452: Introduction To Structural Acoustics
Prerequisite(s): ENGR 01273 and MATH 01235
The control of noise is an important part of engineering practice in many industries today. Vital to effective noise control is an understanding of wave behavior in structures. This course will teach engineers the fundamentals of the generation of noise in structures, with an emphasis on the phenomena of mechanical resonance and modal behavior. Topics covered include vibration of strings, bars, beams and plates. An introduction to simple acoustic sources will be given.

ME 10454: Introduction To The Elastic Stability Of Structures
Prerequisite(s): ENGR 01291 and ENGR 01273
Many important structures (e.g. buildings, bridges, aircraft frames) have buckling as a primary mode of failure. Because of this, it is important for structural engineers to have at least a cursory knowledge of elastic stability phenomena. This course will provide senior level Mechanical Engineering students with an overview of elastic stability in structures, and a brief introduction to dynamic stability, as applied to rotating shafts. Applications of mathematical theory to real-world structural design problems will be emphasized.

ME 10470: Introduction To Biomechanics
Prerequisites: ENGR 01291
This course presents an introduction to biomechanics of human motion. The course will encompass the use of engineering principles to describe, analyze and assess human movement. Topics will include kinematics, kinetics, anthropometry applied to the synthesis of human movement and muscle mechanics.

ME 10471: Introduction To Biotransport
Prerequisites: ME 10322
This course introduces biotransport in terms of heat transfer, mass transfer, and fluid mechanics related to the human body. Some examples include cryosurgery of warts and drug delivery from skin patches. Beginning with biotransport problem formulation, the course explores software tools that enable mathematical modeling. Fundamental principles of model validation, mesh convergence, sensitivity analysis, and objective functions are presented. Several modeling labs are used to build software skill and explore various heat and mass transfer processes inside and around the human body. Medical
device development concepts are presented, making a connection between modeling activities and product development. The final weeks of this class are dedicated to a final project on a student-selected topic.

ME 10472: Introduction To Biomaterials 3 s.h.
Prerequisites: ENGR 01283
The goal of this course is to present an introduction to the numerous issues that factor into the choice of material selection for biomedical devices. Issues to be examined include mechanical properties, biocompatibility, production costs, and ease of manufacture. This course will familiarize students with relevant material issues and highlight the process for matching material performance with the desired design characteristics and functionality.

MUS 01029: Major Applied Voice 3 2 s.h.
The student must pass a departmental audition before being accepted into this course. Performance in student recitals and ensembles is required each semester. See Department Curriculum Guides for specific requirements for vocal majors.

MUS 01050: STUDENT RECITALS 0 s.h.
Students perform for both faculty and students. Seven or eight semesters are required, depending on the chosen curriculum.

MUS 01051: Student Recitals 0 s.h.
Students perform for both faculty and students. Seven or eight semesters are required, depending on the chosen curriculum.

MUS 01053: Student Recitals 0 s.h.
Students perform for both faculty and students. Seven or eight semesters are required, depending on the chosen curriculum.

MUS 01054: Student Recitals 0 s.h.
Students perform for both faculty and students. Seven or eight semesters are required, depending on the chosen curriculum.

MUS 01055: Student Recitals 0 s.h.
Students perform for both faculty and students. Seven or eight semesters are required, depending on the chosen curriculum.

MUS 01056: Student Recitals 0 s.h.
Students perform for both faculty and students. Seven or eight semesters are required, depending on the chosen curriculum.

MUS 01057: Student Recitals 0 s.h.
Students perform for both faculty and students. Seven or eight semesters are required, depending on the chosen curriculum.

MUS 01101: Professional Applied Instrument 1 4 s.h.
An intensive study of one’s major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester.

MUS 01102: Professional Applied Instrument 2 4 s.h.
An intensive study of one’s major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester.

MUS 01103: Major Applied Instrument 1 2 s.h.
An intensive study of one’s major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester.
Course Descriptions

MUS 01104: Major Applied Instrument 2
An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester.

MUS 01105: Secondary Applied Instrument 1
An intensive study of one's major instrument (for music minors) or additional instrument (for music majors) in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester.

MUS 01106: Secondary Applied Instrument 2
An intensive study of one's major instrument (for music minors) or additional instrument (for music majors) in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester.

MUS 01107: Professional Applied Voice 1
A weekly hour private lesson designed to develop the vocal technique by learning the curricular vocal literature assigned for each level. Emphasis on the aspects of performance: musicality, tone quality, projection, diction, interpretation and style. For Vocal Performance majors only.

MUS 01108: Professional Applied Voice 2
A weekly hour private lesson designed to develop the vocal technique by learning the curricular vocal literature assigned for each level. Emphasis on the aspects of performance: musicality, tone quality, projection, diction, interpretation and style. For Vocal Performance majors only.

MUS 01109: Major Applied Voice 1
A weekly hour private lesson designed to develop the vocal technique by learning the curricular vocal literature assigned for each level. Emphasis on the aspects of performance: musicality, tone quality, projection, diction, interpretation and style. For Music Education and Bachelor of Arts in Music students only.

MUS 01110: Major Applied Voice 2
A weekly hour private lesson designed to develop the vocal technique by learning the curricular vocal literature assigned for each level. Emphasis on the aspects of performance: musicality, tone quality, projection, diction, interpretation and style. For Music Education and Bachelor of Arts in Music students only.

MUS 01111: Secondary Applied Voice 1
Weekly half hour instruction designed to develop the student's vocal instrument. Acceptance is by audition only.

MUS 01112: Secondary Applied Voice 2
Weekly half hour instruction designed to develop the student's vocal instrument. Acceptance is by audition only.

MUS 01113: Jazz Improvisation 1
This graduated course presents improvisational devices, major and minor scales, chord scales, patterns, jazz harmony, solo structure and a thorough understanding of song forms. Students learn the fundamentals of improvisation through performance and written composition. Transcribing solos and learning of the jazz repertoire are mastered.

MUS 01114: Jazz Improvisation 2
This graduated course presents improvisational devices, major and minor scales, chord scales, patterns, jazz harmony, solo structure and a thorough understanding of song forms. Students learn the fundamentals of improvisation through performance and written composition. Transcribing solos and learning of the jazz repertoire are mastered.

MUS 01115: Secondary Jazz Improvisation 1
This graduated course presents improvisational devices, major and minor scales, chord scales, patterns, jazz harmony, solo structure and a thorough understanding of song forms. Students learn the fundamentals of improvisation through performance and written composition. Transcribing solos and learning of the jazz repertoire are mastered.

MUS 01116: Secondary Jazz Improvisation 2
This graduated course presents improvisational devices, major and minor scales, chord scales, patterns, jazz harmony, solo structure and a thorough understanding of song forms. Students learn the fundamentals of improvisation through performance and written composition. Transcribing solos and learning of the jazz repertoire are mastered.
### Course Descriptions

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 01129</td>
<td>Chamber Music I</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>Small groups in which the individual performer has the opportunity to develop skills under the guidance of a more skilled musician. These small groups can explore literature unique to their composite formation.</td>
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<tr>
<td>MUS 01130</td>
<td>Chamber Music II</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>Small groups in which the individual performer has the opportunity to develop skills under the guidance of a more skilled musician. These small groups can explore literature unique to their composite formation.</td>
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<tr>
<td>MUS 01131</td>
<td>Chamber Music III</td>
<td>1 s.h.</td>
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<tr>
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<td>Small groups in which the individual performer has the opportunity to develop skills under the guidance of a more skilled musician. These small groups can explore literature unique to their composite formation.</td>
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<tr>
<td>MUS 01132</td>
<td>Chamber Music IV</td>
<td>1 s.h.</td>
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<tr>
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<td>Small groups in which the individual performer has the opportunity to develop skills under the guidance of a more skilled musician. These small groups can explore literature unique to their composite formation.</td>
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<tr>
<td>MUS 01150</td>
<td>Jazz Education Seminar</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>Jazz Education Seminar is a seminar which is repeated over four semesters. The Seminar is designed to address topics in jazz education in a group performance setting.</td>
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<tr>
<td>MUS 01201</td>
<td>Professional Applied Instrument 3</td>
<td>4 s.h.</td>
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<td>An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester.</td>
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<tr>
<td>MUS 01202</td>
<td>Professional Applied Instrument 4</td>
<td>4 s.h.</td>
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<td>An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester.</td>
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<td>MUS 01203</td>
<td>Major Applied Instrument 3</td>
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<tr>
<td>MUS 01204</td>
<td>Major Applied Instrument 4</td>
<td>2 s.h.</td>
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<td>An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester.</td>
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<td>MUS 01205</td>
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<tr>
<td>MUS 01206</td>
<td>Secondary Applied Instrument 4</td>
<td>1 s.h.</td>
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<td>An intensive study of one's major instrument (for music minors) or additional instrument (for music majors) in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester.</td>
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<tr>
<td>MUS 01207</td>
<td>Professional Applied Voice 3</td>
<td>4 s.h.</td>
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<tr>
<td></td>
<td>A weekly hour private lesson designed to develop the vocal technique by learning the curricular vocal literature assigned for each level. Emphasis on the aspects of performance: musicality, tone quality, projection, diction, interpretation and style. For Vocal Performance majors only.</td>
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<tr>
<td>MUS 01208</td>
<td>Professional Applied Voice 4</td>
<td>4 s.h.</td>
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<td></td>
<td>A weekly hour private lesson designed to develop the vocal technique by learning the curricular vocal literature assigned for each level. Emphasis on the aspects of performance: musicality, tone quality, projection, diction, interpretation and style. For Vocal Performance majors only.</td>
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### Course Descriptions

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<td>MUS 01209:</td>
<td>Major Applied Voice 3</td>
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<td>A weekly hour private lesson designed to develop the vocal technique by learning the curricular vocal literature assigned for each level. Emphasis on the aspects of performance: musicality, tone quality, projection, diction, interpretation and style. For Music Education and Bachelor of Arts in Music students only.</td>
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<tr>
<td>MUS 01210:</td>
<td>Major Applied Voice 4</td>
<td>2 s.h.</td>
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<td>A weekly hour private lesson designed to develop the vocal technique by learning the curricular vocal literature assigned for each level. Emphasis on the aspects of performance: musicality, tone quality, projection, diction, interpretation and style. For Music Education and Bachelor of Arts in Music students only.</td>
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<tr>
<td>MUS 01211:</td>
<td>Secondary Applied Voice 3</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>Weekly half hour instruction designed to develop the student's vocal instrument. Acceptance is by audition only.</td>
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<tr>
<td>MUS 01212:</td>
<td>Secondary Applied Voice 4</td>
<td>1 s.h.</td>
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<td>Weekly half hour instruction designed to develop the student's vocal instrument. Acceptance is by audition only.</td>
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<tr>
<td>MUS 01213:</td>
<td>Jazz Improvisation 3</td>
<td>2 s.h.</td>
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<td></td>
<td>This graduated course presents improvisational devices, major and minor scales, chord scales, patterns, jazz harmony, solo structure and a thorough understanding of song forms. Students learn the fundamentals of improvisation through performance and written composition. Transcribing solos and learning of the jazz repertoire are mastered.</td>
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<tr>
<td>MUS 01214:</td>
<td>Jazz Improvisation 4</td>
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<td>This graduated course presents improvisational devices, major and minor scales, chord scales, patterns, jazz harmony, solo structure and a thorough understanding of song forms. Students learn the fundamentals of improvisation through performance and written composition. Transcribing solos and learning of the jazz repertoire are mastered.</td>
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<td>MUS 01215:</td>
<td>Secondary Jazz Improvisation 3</td>
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<td>This graduated course presents improvisational devices, major and minor scales, chord scales, patterns, jazz harmony, solo structure and a thorough understanding of song forms. Students learn the fundamentals of improvisation through performance and written composition. Transcribing solos and learning of the jazz repertoire are mastered.</td>
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<tr>
<td>MUS 01216:</td>
<td>Secondary Jazz Improvisation 4</td>
<td>1 s.h.</td>
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<td>This graduated course presents improvisational devices, major and minor scales, chord scales, patterns, jazz harmony, solo structure and a thorough understanding of song forms. Students learn the fundamentals of improvisation through performance and written composition. Transcribing solos and learning of the jazz repertoire are mastered.</td>
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</tr>
<tr>
<td>MUS 01301:</td>
<td>Professional Applied Instrument 5</td>
<td>4 s.h.</td>
</tr>
<tr>
<td></td>
<td>An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester.</td>
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</tr>
<tr>
<td>MUS 01302:</td>
<td>Professional Applied Instrument 6</td>
<td>4 s.h.</td>
</tr>
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<td></td>
<td>An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester.</td>
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<tr>
<td>MUS 01303:</td>
<td>Major Applied Instrument 5</td>
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<td>An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester.</td>
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<tr>
<td>MUS 01304:</td>
<td>Major Applied Instrument 6</td>
<td>2 s.h.</td>
</tr>
<tr>
<td></td>
<td>An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester.</td>
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<tr>
<td>MUS 01305:</td>
<td>Secondary Applied Instrument 5</td>
<td>1 s.h.</td>
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<td></td>
<td>An intensive study of one's major instrument (for music minors) or additional instrument (for music majors) in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester.</td>
<td></td>
</tr>
</tbody>
</table>
MUS 01306: Secondary Applied Instrument 6 1 s.h.
An intensive study of one’s major instrument (for music minors) or additional instrument (for music majors) in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester.

MUS 01307: Professional Applied Voice 5 4 s.h.
A weekly hour private lesson designed to develop the vocal technique by learning the curricular vocal literature assigned for each level. Emphasis on the aspects of performance: musicality, tone quality, projection, diction, interpretation and style. For Vocal Performance majors only.

MUS 01308: Professional Applied Voice 6 4 s.h.
A weekly hour private lesson designed to develop the vocal technique by learning the curricular vocal literature assigned for each level. Emphasis on the aspects of performance: musicality, tone quality, projection, diction, interpretation and style. For Vocal Performance majors only.

MUS 01309: Major Applied Voice 5 2 s.h.
A weekly hour private lesson designed to develop the vocal technique by learning the curricular vocal literature assigned for each level. Emphasis on the aspects of performance: musicality, tone quality, projection, diction, interpretation and style. For Music Education and Bachelor of Arts in Music students only.

MUS 01310: Major Applied Voice 6 2 s.h.
A weekly hour private lesson designed to develop the vocal technique by learning the curricular vocal literature assigned for each level. Emphasis on the aspects of performance: musicality, tone quality, projection, diction, interpretation and style. For Music Education and Bachelor of Arts in Music students only.

MUS 01311: Secondary Applied Voice 5 1 s.h.
Weekly half hour instruction designed to develop the student’s vocal instrument. Acceptance is by audition only.

MUS 01312: Secondary Applied Voice 6 1 s.h.
Weekly half hour instruction designed to develop the student’s vocal instrument. Acceptance is by audition only.

MUS 01313: Jazz Improvisation 5 2 s.h.
This graduated course presents improvisational devices, major and minor scales, chord scales, patterns, jazz harmony, solo structure and a thorough understanding of song forms. Students learn the fundamentals of improvisation through performance and written composition. Transcribing solos and learning of the jazz repertoire are mastered.

MUS 01314: Jazz Improvisation 6 2 s.h.
This graduated course presents improvisational devices, major and minor scales, chord scales, patterns, jazz harmony, solo structure and a thorough understanding of song forms. Students learn the fundamentals of improvisation through performance and written composition. Transcribing solos and learning of the jazz repertoire are mastered.

MUS 01315: Secondary Jazz Improvisation 5 1 s.h.
This graduated course presents improvisational devices, major and minor scales, chord scales, patterns, jazz harmony, solo structure and a thorough understanding of song forms. Students learn the fundamentals of improvisation through performance and written composition. Transcribing solos and learning of the jazz repertoire are mastered.

MUS 01316: Secondary Jazz Improvisation 6 1 s.h.
This graduated course presents improvisational devices, major and minor scales, chord scales, patterns, jazz harmony, solo structure and a thorough understanding of song forms. Students learn the fundamentals of improvisation through performance and written composition. Transcribing solos and learning of the jazz repertoire are mastered.

MUS 01401: Professional Applied Instrument 7 4 s.h.
An intensive study of one’s major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester.

MUS 01402: Professional Applied Instrument 8 4 s.h.
An intensive study of one’s major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester.
MUS 01403: Major Applied Instrument 7  
An intensive study of one’s major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester.

MUS 01404: Major Applied Instrument 8  
An intensive study of one’s major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester.

MUS 01405: Secondary Applied Instrument 7  
An intensive study of one’s major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

MUS 01406: Secondary Applied Instrument 8  
An intensive study of one’s major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

MUS 01407: Professional Applied Voice 7  
A weekly hour private lesson designed to develop the vocal technique by learning the curricular vocal literature assigned for each level. Emphasis on the aspects of performance: musicality, tone quality, projection, diction, interpretation and style. For Vocal Performance majors only.

MUS 01408: PROFESSIONAL APPLIED VOICE 8  
A weekly hour private lesson designed to develop the vocal technique by learning the curricular vocal literature assigned for each level. Emphasis on the aspects of performance: musicality, tone quality, projection, diction, interpretation and style. For Vocal Performance majors only.

MUS 01409: Major Applied Voice 7  
A weekly hour private lesson designed to develop the vocal technique by learning the curricular vocal literature assigned for each level. Emphasis on the aspects of performance: musicality, tone quality, projection, diction, interpretation and style. For Music Education and Bachelor of Arts in Music students only.

MUS 01410: Major Applied Voice 8  
A weekly hour private lesson designed to develop the vocal technique by learning the curricular vocal literature assigned for each level. Emphasis on the aspects of performance: musicality, tone quality, projection, diction, interpretation and style. For Music Education and Bachelor of Arts in Music students only.

MUS 01411: Secondary Applied Voice 7  
Weekly half hour instruction designed to develop the student’s vocal instrument. Acceptance is by audition only.

MUS 01412: Secondary Applied Voice 8  
Weekly half hour instruction designed to develop the student’s vocal instrument. Acceptance is by audition only.

MUS 01413: Jazz Improvisation 7  
This graduated course presents improvisational devices, major and minor scales, chord scales, patterns, jazz harmony, solo structure and a thorough understanding of song forms. Students learn the fundamentals of improvisation through performance and written composition. Transcribing solos and learning of the jazz repertoire are mastered.

MUS 01414: Jazz Improvisation 8  
This course presents the blues scale, major, and minor scales/chords for a thorough understanding of the blues form. Students learn the fundamentals of improvisation through performance and written compensation.
Course Descriptions

MUS 01415: Secondary Jazz Improvisation 7 1 s.h.
This graduated course presents improvisational devices, major and minor scales, chord scales, patterns, jazz harmony, solo structure and a thorough understanding of song forms. Students learn the fundamentals of improvisation through performance and written composition. Transcribing solos and learning of the jazz repertoire are mastered.

MUS 01416: Secondary Jazz Improvisation 8 1 s.h.
This graduated course presents improvisational devices, major and minor scales, chord scales, patterns, jazz harmony, solo structure and a thorough understanding of song forms. Students learn the fundamentals of improvisation through performance and written composition. Transcribing solos and learning of the jazz repertoire are mastered.

MUS 04050: Student Recitals 0 s.h.
Students perform for both faculty and students. Seven or eight semesters are required, depending on the chosen curriculum.

MUS 04110: Sight Singing And Ear Training 2 s.h.
The techniques of singing at sight, solfeggio, and taking dictation are reviewed and applied.

MUS 04118: Music Fundamentals 3 s.h.
This course leads to a broader understanding of music through study of its basic elements: melody, rhythm, harmony and form.

MUS 04121: Professional Applied Instrument 1 4 s.h.

MUS 04122: Professional Applied Instrument 2 4 s.h.

MUS 04125: Music Composition I 3 s.h.
A detailed study of compositional devices emphasizing the twentieth century is made. Compositions are written for available media and performed in class.

MUS 04126: Music Composition II 3 s.h.
This is a continuation of Music Composition I. A detailed study of compositional devices emphasizing the twentieth century is made. Compositions are written for available media and performed in class.

MUS 04129: Jazz Improvisation 1 to 2 s.h.
This course presents the blues scale, major, and minor scales/chords for a thorough understanding of the blues form. Students learn the fundamentals of improvisation through performance and written composition.

MUS 04130: Music Theory I - Written 2 s.h.
Corequisites: MUS 04133 Prerequisites: MUS 04130 and MUS 04132 minimum Grade of C-
A detailed study of the visual aspects of writing and performing music. The corresponding aural theory section must be taken concurrently. The departmental entrance exams for written and aural theory must be passed before admission to these courses. These courses must be taken in sequence.

MUS 04131: Music Theory II - Written 2 s.h.
Corequisites: MUS 04133 Prerequisites: MUS 04130 and MUS 04132 minimum Grade of C-
A detailed study of the visual aspects of writing and performing music. The corresponding aural theory section must be taken concurrently. The departmental entrance exams for written and aural theory must be passed before admission to these courses. These courses must be taken in sequence.

MUS 04132: Music Theory I - Aural 2 s.h.
Corequisites: MUS 04131 Prerequisites: MUS 04130 and MUS 04132 minimum Grade C-
A detailed study of the aural aspects of writing and performing music. The corresponding written theory section must be taken concurrently. The departmental entrance exams for written and aural theory must be passed before admission to these courses. These courses must be taken in sequence.

MUS 04133: Music Theory II - Aural 2 s.h.
Corequisites: MUS 04131 Prerequisites: MUS 04130 and MUS 04132 minimum Grade C-
A detailed study of the aural aspects of writing and performing music. The corresponding written theory section must be taken concurrently. The departmental entrance exams for written and aural theory must be passed before admission to these courses. These courses must be taken in sequence.
MUS 04140: Wind Ensemble
Variable credit is given to those students who participate. o to 1 s.h.

MUS 04141: String Ensemble
Variable credit is given to those students who participate. o to 1 s.h.

MUS 04142: College Band
Variable credit is given to those students who participate. o to 1 s.h.

MUS 04143: Jazz Band
Variable credit is given to those students who participate. o to 1 s.h.

MUS 04144: Orchestra
Variable credit is given to those students who participate. o to 1 s.h.

MUS 04145: Lab Band
Variable credit is given to those students who participate. o to 1 s.h.

MUS 04146: Concert Choir
Variable credit is given to those students who participate. o to 1 s.h.

MUS 04147: Contemp Music Ensemble
Variable credit is given to those students who participate. o to 1 s.h.

MUS 04148: Percussion Ensemble
Variable credit is given to those students who participate. o to 1 s.h.

MUS 04149: Guitar Ensemble
Variable credit is given to those students who participate. o to 1 s.h.

MUS 04150: Flute Ensemble
Variable credit is given to those students who participate. o to 1 s.h.

MUS 04151: Opera Company
Variable credit is given to those students who participate. o to 1 s.h.

MUS 04152: Saxophone Ensemble
Variable credit is given to those students who participate. o to 1 s.h.

MUS 04153: Clarinet Ensemble
Variable credit is given to those students who participate. o to 1 s.h.

MUS 04154: Women’S Chorus
Variable credit is given to those students who participate. o to 1 s.h.

MUS 04155: Men’S Chorus
Variable credit is given to those students who participate. o to 1 s.h.

MUS 04160: Professional Applied Instrumental: Bassoon
An intensive study of one’s major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors. 1 to 4 s.h.

MUS 04161: Professional Applied Instrumental: Bass
An intensive study of one’s major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors. 1 to 4 s.h.
MUS 04162: Professional Applied Instrumental: Cello 1 to 4 s.h.
An intensive study of one’s major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

MUS 04163: Professional Applied Instrumental: Clarinet 1 to 4 s.h.
An intensive study of one’s major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

MUS 04164: Professional Applied Instrumental: Euphonium 1 to 4 s.h.
An intensive study of one’s major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

MUS 04165: Professional Applied Instrumental: Flute 1 to 4 s.h.
An intensive study of one’s major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

MUS 04166: Professional Applied Instrumental: French Horn 1 to 4 s.h.
An intensive study of one’s major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

MUS 04167: Professional Applied Instrumental: Guitar 1 to 4 s.h.
An intensive study of one’s major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

MUS 04168: Professional Applied Instrumental: Harp 1 to 4 s.h.
An intensive study of one’s major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

MUS 04169: Professional Applied Instrumental: Oboe 1 to 4 s.h.
An intensive study of one’s major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

MUS 04170: Professional Applied Instrumental: Organ 1 to 4 s.h.
An intensive study of one’s major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

MUS 04171: Professional Applied Instrumental: Percussion 1 to 4 s.h.
An intensive study of one’s major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.
MUS 04172: Professional Applied Instrumental: Piano
An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

MUS 04173: Professional Applied Instrumental: Saxophone
An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

MUS 04174: Professional Applied Trombone

MUS 04175: Professional Applied Instrumental: Trumpet
An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

MUS 04176: Professional Applied Instrumental: Tuba
An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

MUS 04177: Professional Applied Instrumental: Viola
An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

MUS 04178: Professional Applied Instrumental: Violin
An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

MUS 04179: Professional Applied Instrumental: Jazz Piano
An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

MUS 04180: Applied Voice
The student must pass a departmental audition before being accepted into this course. Performance in student recitals and ensembles is required each semester. See Department Curriculum Guides for specific requirements for vocal majors.

MUS 04202: Language Through Vocal Repertoire (Italian)
Study of the phonetic rules and sounds of the classical pronunciations of Italian as found in Art Song and Opera. The International Phonetic Alphabet is utilized. Singing and class performance is required.

MUS 04203: Language Through Vocal Repertoire (French)
Study of the phonetic rules and sounds of the classical pronunciations of French as found in Art Song and Opera. The International Phonetic Alphabet is utilized. Singing and class performance is required.

MUS 04204: Language Through Vocal Repertoire (German)
Study of the phonetic rules and sounds of the classical pronunciations of German as found in Art Song and Opera. The International Phonetic Alphabet is utilized. Singing and class performance is required.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MUS 04221</td>
<td>Professional Applied Instrument 3</td>
<td>4 s.h.</td>
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<tr>
<td>MUS 04222</td>
<td>Professional Applied Instrument 4</td>
<td>4 s.h.</td>
</tr>
<tr>
<td>MUS 04225</td>
<td>Music Composition III</td>
<td>3 s.h.</td>
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<tr>
<td></td>
<td>This is a continuation of Music Composition II. A detailed study of compositional devices emphasizing the twentieth century is made. Compositions are written for available media and performed in class.</td>
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<tr>
<td>MUS 04226</td>
<td>Music Composition IV</td>
<td>3 s.h.</td>
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<tr>
<td></td>
<td>This is a continuation of Music Composition III. A detailed study of compositional devices emphasizing the twentieth century is made. Compositions are written for available media and performed in class.</td>
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<tr>
<td>MUS 04229</td>
<td>Secondary Applied Piano (Jazz)</td>
<td>1 s.h.</td>
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<td></td>
<td>This course includes a basic approach to playing and using the piano in jazz music through an introduction to chords, chord symbols, voicings, root movement, scales (and their relation to chords) and song melodies as played and realized by the jazz pianist.</td>
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<tr>
<td>MUS 04230</td>
<td>Secondary Applied Piano II (Jazz)</td>
<td>1 s.h.</td>
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<td></td>
<td>Emphasis is placed on learning how to &quot;comp&quot; and solo on the piano. A comprehensive array of advanced chords and scales is studied, with an introduction to more complicated songs than Secondary Applied Piano I.</td>
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</tr>
<tr>
<td>MUS 04240</td>
<td>Music Theory III - Written</td>
<td>2 to 4 s.h.</td>
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<tr>
<td></td>
<td>Corequisites: MUS 04242Prerequisites: MUS 04131 and MUS 04133 minimum Grade C-</td>
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<tr>
<td></td>
<td>A detailed study of the visual aspects of writing and performing music. The corresponding aural theory section must be taken concurrently. The departmental entrance exams for written and aural theory must be passed before admission to these courses. These courses must be taken in sequence.</td>
<td></td>
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<tr>
<td>MUS 04241</td>
<td>Music Theory IV - Written</td>
<td>2 to 4 s.h.</td>
</tr>
<tr>
<td></td>
<td>Corequisites: MUS 04243Prerequisites: MUS 04240 and MUS 04242 minimum Grade C-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A detailed study of the visual aspects of writing and performing music. The corresponding aural theory section must be taken concurrently. The departmental entrance exams for written and aural theory must be passed before admission to these courses. These courses must be taken in sequence.</td>
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<tr>
<td>MUS 04242</td>
<td>Music Theory III - Aural</td>
<td>2 s.h.</td>
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<tr>
<td></td>
<td>Corequisites: MUS 04243Prerequisites: MUS 04131 and MUS 04133 minimum Grade C-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A detailed study of the aural aspects of writing and performing music. The corresponding written theory section must be taken concurrently. The departmental entrance exams for written and aural theory must be passed before admission to these courses. These courses must be taken in sequence.</td>
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<tr>
<td>MUS 04243</td>
<td>Music Theory IV - Aural</td>
<td>2 s.h.</td>
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<tr>
<td></td>
<td>Corequisites: MUS 04241Prerequisites: MUS 04240 and MUS 04242 minimum Grade C-</td>
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<td>A detailed study of the aural aspects of writing and performing music. The corresponding written theory section must be taken concurrently. The departmental entrance exams for written and aural theory must be passed before admission to these courses. These courses must be taken in sequence.</td>
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<tr>
<td>MUS 04309</td>
<td>Chamber Music I</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>Small groups in which the individual performer has the opportunity to develop skills under the guidance of a more skilled musician. These small groups can explore literature unique to their composite formation. Courses must be taken in sequence: MUS04.309, MUS04.310, MUS04.409, and MUS04.410.</td>
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<tr>
<td>MUS 04310</td>
<td>Chamber Music II</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>Small groups in which the individual performer has the opportunity to develop skills under the guidance of a more skilled musician. These small groups can explore literature unique to their composite formation. Courses must be taken in sequence: MUS04.309, MUS04.310, MUS04.409, and MUS04.410.</td>
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<tr>
<td>MUS 04321</td>
<td>Professional Applied Instrument 5</td>
<td>4 s.h.</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
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<tr>
<td>MUS 04322</td>
<td>Professional Applied Instrument 6</td>
<td>4 s.h.</td>
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<tr>
<td>MUS 04325</td>
<td>Music Composition V</td>
<td>3 s.h.</td>
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<tr>
<td></td>
<td>This is a continuation of Music Composition IV. A detailed study of compositional devices emphasizing the twentieth century is made. Compositions are written for available media and performed in class.</td>
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<tr>
<td>MUS 04326</td>
<td>Music Composition Vi</td>
<td>3 s.h.</td>
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<tr>
<td></td>
<td>This is a continuation of Music Composition V. A detailed study of compositional devices emphasizing the twentieth century is made. Compositions are written for available media and performed in class.</td>
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<tr>
<td>MUS 04329</td>
<td>Junior Recital</td>
<td>0 s.h.</td>
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<td></td>
<td>Prerequisites: MUS 04322 and MUS 04324 and MUS 97405 or MUS 04322 and MUS 04324 and MUS 97308</td>
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<td>The Junior Recital is the recital performance culminating six semesters of applied lessons for performance majors.</td>
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<tr>
<td>MUS 04332</td>
<td>ACOUSTICS OF MUSIC</td>
<td>3 s.h.</td>
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<tr>
<td>MUS 04333</td>
<td>Stage Band Rehearsal Techniques</td>
<td>3 s.h.</td>
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<td></td>
<td>For music majors only, required in the Jazz Studies and Jazz Education Program and may be elected by others. The course examines the history of big bands, interpretation and conducting for different styles and eras. Score reading, score preparations and high school level rehearsal techniques are examined.</td>
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<tr>
<td>MUS 04361</td>
<td>Arranging For Large/Small Jazz Ensembles</td>
<td>3 s.h.</td>
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<td></td>
<td>Prerequisites: MUS 0.42.41 and MUS 04243</td>
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<td></td>
<td>This course provides the experience of writing for the traditional big band and jazz studio orchestra, as well as a small number of instruments. Students explore the possibilities with voicings, chord selection and compositional structures used in the aforementioned ensembles. In addition, contemporary compositional techniques are introduced to encourage the continuation of the ensembles in jazz music of the 21st century.</td>
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<tr>
<td>MUS 04363</td>
<td>Writing In Contemporary/Traditional Jazz Styles</td>
<td>3 s.h.</td>
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<td>Prerequisites: MUS 0.42.17 and MUS 04305</td>
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<td>Students explore contemporary and traditional jazz styles by listening to and analyzing the music of masters such as Chick Corea, Miles Davis, Duke Ellington, Sammy Nestico along with songs from the be-bop, hard-bop and cool eras. Students compose scores in this style for performance in class and on Department of Music jazz concerts.</td>
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<tr>
<td>MUS 04403</td>
<td>Choral Arranging</td>
<td>2 s.h.</td>
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<td></td>
<td>Students explore the art of arranging songs for choral groups with or without accompaniment. Music for different choral ensembles is written, rehearsed and sung by the class.</td>
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<tr>
<td>MUS 04404</td>
<td>Orchestration</td>
<td>2 s.h.</td>
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<td></td>
<td>Prerequisites: MUS 0.42.10, MUS 04310, MUS 04240 and MUS 04241</td>
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<td></td>
<td>Characteristics of string, wind and percussion instruments (including harp) are examined through lectures and demonstrations. Transcriptions for ensembles and orchestra are made from piano music and performed in class.</td>
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<tr>
<td>MUS 04409</td>
<td>Chamber Music III</td>
<td>1 s.h.</td>
</tr>
<tr>
<td></td>
<td>Small groups in which the individual performer has the opportunity to develop skills under the guidance of a more skilled musician. These small groups can explore literature unique to their composite formation. Courses must be taken in sequence: MUS04.309, MUS04.310, MUS04.409, and MUS04.410.</td>
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<tr>
<td>MUS 04410</td>
<td>Chamber Music IV</td>
<td>1 s.h.</td>
</tr>
<tr>
<td></td>
<td>Small groups in which the individual performer has the opportunity to develop skills under the guidance of a more skilled musician. These small groups can explore literature unique to their composite formation. Courses must be taken in sequence: MUS04.309, MUS04.310, MUS04.409, and MUS04.410.</td>
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<tr>
<td>MUS 04421</td>
<td>Professional Applied Instrument 7</td>
<td>4 s.h.</td>
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<tr>
<td>MUS 04422</td>
<td>Professional Applied Instrument 8</td>
<td>4 s.h.</td>
</tr>
</tbody>
</table>
Course Descriptions

MUS 04425: Music Composition VII 3 s.h.
This is a continuation of Music Composition VI. A detailed study of compositional devices emphasizing the twentieth century is made. Compositions are written for available media and performed in class.

MUS 04426: Music Composition VIII 3 s.h.
This is a continuation of Music Composition VII. A detailed study of compositional devices emphasizing the twentieth century is made. Compositions are written for available media and performed in class.

MUS 04430: Senior Recital 0 s.h.
Prerequisites: MUS 97406 and MUS 97408 or MUS 97406 and MUS 04422 or MUS 97406 and MUS 04424
The Senior Recital is the recital performance culminating eight semesters of applied lessons for majors in the Bachelor of Music programs.

MUS 04450: Form And Analysis 3 s.h.
An in-depth study and examination of musical scores from various style periods with an emphasis on large-scale forms and structures.

MUS 04455: Counterpoint 3 s.h.
This course is a study of the principles of constructing a multilinear musical texture and the application of those principles analytically to music literature.

MUS 06356: Selected Topics In Music 3 to 9 s.h.
This is an advanced musicology course that will focus on a detailed study of a single composer, style period, or specific topic from music history. Specialized topics will vary each semester. Course activities include in-depth study of selected topics, analysis, and research.

MUS 06449: European Music in America, 1825-1950-WI 3 s.h.
Prerequisites: MUSG 06.215 and MUSG 06.335 or by permission of the instructor.
The aim of this course is to provide a deeper understanding of the musical interactions between Europe and the United States from the first performance of an Italian opera sung in its original language in America (Gioachino Rossini’s Il barbiere di Siviglia, 1825) until Arnold Schoenberg’s death in Los Angeles in 1951. The course will address issues such as identity and cultural pride through music, the concept of a musical canon in America, and reception of European culture in the United States.

MUS 08100: Wind Ensemble 1 s.h.
The Wind Ensemble is the university's premier wind band, performing difficult and challenging repertoire. Membership is by audition only.

MUS 08101: Wind Ensemble 1 s.h.
The Wind Ensemble is the university's premier wind band, performing difficult and challenging repertoire. Membership is by audition only.

MUS 08102: Wind Ensemble 1 s.h.
The Wind Ensemble is the university's premier wind band, performing difficult and challenging repertoire. Membership is by audition only.

MUS 08103: Wind Ensemble 1 s.h.
The Wind Ensemble is the university's premier wind band, performing difficult and challenging repertoire. Membership is by audition only.

MUS 08104: Wind Ensemble 1 s.h.
The Wind Ensemble is the university's premier wind band, performing difficult and challenging repertoire. Membership is by audition only.

MUS 08105: Wind Ensemble 1 s.h.
The Wind Ensemble is the university's premier wind band, performing difficult and challenging repertoire. Membership is by audition only.
Course Descriptions

MUS 08106: Wind Ensemble 1 s.h.
The Wind Ensemble is the university's premier wind band, performing difficult and challenging repertoire. Membership is by audition only.

MUS 08107: Wind Ensemble 1 s.h.
The Wind Ensemble is the university's premier wind band, performing difficult and challenging repertoire. Membership is by audition only.

MUS 08108: String Ensemble 1 s.h.
The String Ensemble performs a variety of chamber music repertoire.

MUS 08109: String Ensemble 1 s.h.
The String Ensemble performs a variety of chamber music repertoire.

MUS 08110: String Ensemble 1 s.h.
The String Ensemble performs a variety of chamber music repertoire.

MUS 08111: String Ensemble 1 s.h.
The String Ensemble performs a variety of chamber music repertoire.

MUS 08112: STRING ENSEMBLE 1 s.h.
The String Ensemble performs a variety of chamber music repertoire.

MUS 08113: String Ensemble 1 s.h.
The String Ensemble performs a variety of chamber music repertoire.

MUS 08114: String Ensemble 1 s.h.
The String Ensemble performs a variety of chamber music repertoire.

MUS 08116: College Band 1 s.h.
The College Band is open to all Rowan students and performs a wide variety of wind band repertoire.

MUS 08117: College Band 1 s.h.
The College Band is open to all Rowan students and performs a wide variety of wind band repertoire.

MUS 08118: College Band 1 s.h.
The College Band is open to all Rowan students and performs a wide variety of wind band repertoire.

MUS 08119: College Band 1 s.h.
The College Band is open to all Rowan students and performs a wide variety of wind band repertoire.

MUS 08120: College Band 1 s.h.
The College Band is open to all Rowan students and performs a wide variety of wind band repertoire.

MUS 08121: College Band 1 s.h.
The College Band is open to all Rowan students and performs a wide variety of wind band repertoire.

MUS 08122: College Band 1 s.h.
The College Band is open to all Rowan students and performs a wide variety of wind band repertoire.

MUS 08123: College Band 1 s.h.
The College Band is open to all Rowan students and performs a wide variety of wind band repertoire.

MUS 08124: Jazz Band 1 s.h.
The Jazz Band performs and explores the history of the traditional and contemporary Big Band repertoire such as Duke Ellington, Count Basie, Woody Herman, Stan Kenton, Maynard Ferguson, Buddy Rich, Bob Mintzer and more.
Course Descriptions

MUS 08125: Jazz Band
The Jazz Band performs and explores the history of the traditional and contemporary Big Band repertoire such as Duke Ellington, Count Basie, Woody Herman, Stan Kenton, Maynard Ferguson, Buddy Rich, Bob Mintzer and more.

MUS 08127: Jazz Band
The Jazz Band performs and explores the history of the traditional and contemporary Big Band repertoire such as Duke Ellington, Count Basie, Woody Herman, Stan Kenton, Maynard Ferguson, Buddy Rich, Bob Mintzer and more.

MUS 08128: Jazz Band
The Jazz Band performs and explores the history of the traditional and contemporary Big Band repertoire such as Duke Ellington, Count Basie, Woody Herman, Stan Kenton, Maynard Ferguson, Buddy Rich, Bob Mintzer and more.

MUS 08129: Jazz Band
The Jazz Band performs and explores the history of the traditional and contemporary Big Band repertoire such as Duke Ellington, Count Basie, Woody Herman, Stan Kenton, Maynard Ferguson, Buddy Rich, Bob Mintzer and more.

MUS 08130: Jazz Band
The Jazz Band performs and explores the history of the traditional and contemporary Big Band repertoire such as Duke Ellington, Count Basie, Woody Herman, Stan Kenton, Maynard Ferguson, Buddy Rich, Bob Mintzer and more.

MUS 08131: Jazz Band
The Jazz Band performs and explores the history of the traditional and contemporary Big Band repertoire such as Duke Ellington, Count Basie, Woody Herman, Stan Kenton, Maynard Ferguson, Buddy Rich, Bob Mintzer and more.

MUS 08132: Orchestra
The Orchestra performs a wide range of symphonic orchestral repertoire and is open by audition only.

MUS 08133: Orchestra
The Orchestra performs a wide range of symphonic orchestral repertoire and is open by audition only.

MUS 08134: Orchestra
The Orchestra performs a wide range of symphonic orchestral repertoire and is open by audition only.

MUS 08135: Orchestra
The Orchestra performs a wide range of symphonic orchestral repertoire and is open by audition only.

MUS 08136: Orchestra
The Orchestra performs a wide range of symphonic orchestral repertoire and is open by audition only.

MUS 08137: Orchestra
The Orchestra performs a wide range of symphonic orchestral repertoire and is open by audition only.

MUS 08138: Orchestra
The Orchestra performs a wide range of symphonic orchestral repertoire and is open by audition only.

MUS 08139: Orchestra
The Orchestra performs a wide range of symphonic orchestral repertoire and is open by audition only.

MUS 08140: Lab Band
The Lab Band stresses improvisation, arranging, solo construction, rehearsal techniques and performance. The group stresses orchestrational versatility. Students are taught how to create a simple arrangement for the band.

MUS 08141: Lab Band
The Lab Band stresses improvisation, arranging, solo construction, rehearsal techniques and performance. The group stresses orchestrational versatility. Students are taught how to create a simple arrangement for the band.

MUS 08142: Lab Band
The Lab Band stresses improvisation, arranging, solo construction, rehearsal techniques and performance. The group stresses orchestrational versatility. Students are taught how to create a simple arrangement for the band.
### Course Descriptions

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Class Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MUS 08143</td>
<td>Lab Band</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>The Lab Band stresses improvisation, arranging, solo construction, rehearsal techniques and performance. The group stresses orchestrational versatility. Students are taught how to create a simple arrangement for the band.</td>
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</tr>
<tr>
<td>MUS 08144</td>
<td>Lab Band</td>
<td>1 s.h.</td>
</tr>
<tr>
<td></td>
<td>The Lab Band stresses improvisation, arranging, solo construction, rehearsal techniques and performance. The group stresses orchestrational versatility. Students are taught how to create a simple arrangement for the band.</td>
<td></td>
</tr>
<tr>
<td>MUS 08145</td>
<td>Lab Band</td>
<td>1 s.h.</td>
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<td></td>
<td>The Lab Band stresses improvisation, arranging, solo construction, rehearsal techniques and performance. The group stresses orchestrational versatility. Students are taught how to create a simple arrangement for the band.</td>
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<tr>
<td>MUS 08146</td>
<td>Lab Band</td>
<td>1 s.h.</td>
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<td></td>
<td>The Lab Band stresses improvisation, arranging, solo construction, rehearsal techniques and performance. The group stresses orchestrational versatility. Students are taught how to create a simple arrangement for the band.</td>
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<tr>
<td>MUS 08148</td>
<td>Concert Choir</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>The Concert Choir is the university's premiere mocal ensemble. It is open by audition only and performs a wide range of historical and contemporary choral repertoire.</td>
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<tr>
<td>MUS 08149</td>
<td>Concert Choir</td>
<td>1 s.h.</td>
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<td>The Concert Choir is the university's premiere mocal ensemble. It is open by audition only and performs a wide range of historical and contemporary choral repertoire.</td>
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<tr>
<td>MUS 08150</td>
<td>Concert Choir</td>
<td>1 s.h.</td>
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<td>The Concert Choir is the university's premiere mocal ensemble. It is open by audition only and performs a wide range of historical and contemporary choral repertoire.</td>
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<tr>
<td>MUS 08151</td>
<td>Concert Choir</td>
<td>1 s.h.</td>
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<td>The Concert Choir is the university's premiere mocal ensemble. It is open by audition only and performs a wide range of historical and contemporary choral repertoire.</td>
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<tr>
<td>MUS 08152</td>
<td>Concert Choir</td>
<td>1 s.h.</td>
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<td></td>
<td>The Concert Choir is the university's premiere mocal ensemble. It is open by audition only and performs a wide range of historical and contemporary choral repertoire.</td>
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<tr>
<td>MUS 08153</td>
<td>Concert Choir</td>
<td>1 s.h.</td>
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<td></td>
<td>The Concert Choir is the university's premiere mocal ensemble. It is open by audition only and performs a wide range of historical and contemporary choral repertoire.</td>
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<tr>
<td>MUS 08154</td>
<td>Concert Choir</td>
<td>1 s.h.</td>
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<td></td>
<td>The Concert Choir is the university's premiere mocal ensemble. It is open by audition only and performs a wide range of historical and contemporary choral repertoire.</td>
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<tr>
<td>MUS 08155</td>
<td>Concert Choir</td>
<td>1 s.h.</td>
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<td></td>
<td>The Concert Choir is the university's premiere mocal ensemble. It is open by audition only and performs a wide range of historical and contemporary choral repertoire.</td>
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<tr>
<td>MUS 08156</td>
<td>Contemporary Music Ensemble</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>Dedicated to the performance of new music, this ensemble performs the works of Rowan composition students and other contemporary composers.</td>
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<tr>
<td>MUS 08157</td>
<td>Contemporary Music Ensemble</td>
<td>1 s.h.</td>
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<td></td>
<td>Dedicated to the performance of new music, this ensemble performs the works of Rowan composition students and other contemporary composers.</td>
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<tr>
<td>MUS 08158</td>
<td>Contemporary Music Ensemble</td>
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<td>Dedicated to the performance of new music, this ensemble performs the works of Rowan composition students and other contemporary composers.</td>
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<td>Course Code</td>
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<td>MUS 08159</td>
<td>Contemporary Music Ensemble</td>
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<td></td>
<td>Dedicated to the performance of new music, this ensemble performs the works of Rowan composition students and other contemporary composers.</td>
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<tr>
<td>MUS 08160</td>
<td>Contemporary Music Ensembles</td>
<td>1 s.h.</td>
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<td></td>
<td>Dedicated to the performance of new music, this ensemble performs the works of Rowan composition students and other contemporary composers.</td>
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<tr>
<td>MUS 08161</td>
<td>Contemporary Music Ensemble</td>
<td>1 s.h.</td>
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<td></td>
<td>Dedicated to the performance of new music, this ensemble performs the works of Rowan composition students and other contemporary composers.</td>
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<tr>
<td>MUS 08162</td>
<td>Contemporary Music Ensemble</td>
<td>1 s.h.</td>
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<td></td>
<td>Dedicated to the performance of new music, this ensemble performs the works of Rowan composition students and other contemporary composers.</td>
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<tr>
<td>MUS 08163</td>
<td>Contemporary Music Ensemble</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>Dedicated to the performance of new music, this ensemble performs the works of Rowan composition students and other contemporary composers.</td>
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<tr>
<td>MUS 08164</td>
<td>Percussion Ensemble</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>The Percussion Ensemble performs challenging repertoire for many configurations of percussion instruments.</td>
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<tr>
<td>MUS 08165</td>
<td>Percussion Ensemble</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>The Percussion Ensemble performs challenging repertoire for many configurations of percussion instruments.</td>
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<tr>
<td>MUS 08166</td>
<td>Percussion Ensemble</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>The Percussion Ensemble performs challenging repertoire for many configurations of percussion instruments.</td>
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<tr>
<td>MUS 08167</td>
<td>Percussion Ensemble</td>
<td>1 s.h.</td>
</tr>
<tr>
<td></td>
<td>The Percussion Ensemble performs challenging repertoire for many configurations of percussion instruments.</td>
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</tr>
<tr>
<td>MUS 08168</td>
<td>Percussion Ensemble</td>
<td>1 s.h.</td>
</tr>
<tr>
<td></td>
<td>The Percussion Ensemble performs challenging repertoire for many configurations of percussion instruments.</td>
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<tr>
<td>MUS 08169</td>
<td>Percussion Ensemble</td>
<td>1 s.h.</td>
</tr>
<tr>
<td></td>
<td>The Percussion Ensemble performs challenging repertoire for many configurations of percussion instruments.</td>
<td></td>
</tr>
<tr>
<td>MUS 08170</td>
<td>Percussion Ensemble</td>
<td>1 s.h.</td>
</tr>
<tr>
<td></td>
<td>The Percussion Ensemble performs challenging repertoire for many configurations of percussion instruments.</td>
<td></td>
</tr>
<tr>
<td>MUS 08171</td>
<td>Percussion Ensemble</td>
<td>1 s.h.</td>
</tr>
<tr>
<td></td>
<td>The Percussion Ensemble performs challenging repertoire for many configurations of percussion instruments.</td>
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<tr>
<td>MUS 08172</td>
<td>Guitar Ensemble</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>The Guitar Ensemble performs a range of repertoire for classical guitar.</td>
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<tr>
<td>MUS 08173</td>
<td>Guitar Ensemble</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>The Guitar Ensemble performs a range of repertoire for classical guitar.</td>
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<tr>
<td>MUS 08174</td>
<td>Guitar Ensemble</td>
<td>1 s.h.</td>
</tr>
<tr>
<td></td>
<td>The Guitar Ensemble performs a range of repertoire for classical guitar.</td>
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<tr>
<td>MUS 08175</td>
<td>Guitar Ensemble</td>
<td>1 s.h.</td>
</tr>
<tr>
<td></td>
<td>The Guitar Ensemble performs a range of repertoire for classical guitar.</td>
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</tr>
<tr>
<td>MUS 08176</td>
<td>Guitar Ensemble</td>
<td>1 s.h.</td>
</tr>
<tr>
<td></td>
<td>The Guitar Ensemble performs a range of repertoire for classical guitar.</td>
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</tbody>
</table>
Course Descriptions

MUS 08177: Guitar Ensemble
The Guitar Ensemble performs a range of repertoire for classical guitar.

MUS 08178: Guitar Ensemble
The Guitar Ensemble performs a range of repertoire for classical guitar.

MUS 08179: Guitar Ensemble
The Guitar Ensemble performs a range of repertoire for classical guitar.

MUS 08180: Flute Ensemble
The Flute Ensemble explores repertoire composed for flute choir.

MUS 08181: Flute Ensemble
The Flute Ensemble explores repertoire composed for flute choir.

MUS 08182: Flute Ensemble
The Flute Ensemble explores repertoire composed for flute choir.

MUS 08183: Flute Ensemble
The Flute Ensemble explores repertoire composed for flute choir.

MUS 08184: Flute Ensemble
The Flute Ensemble explores repertoire composed for flute choir.

MUS 08185: Flute Ensemble
The Flute Ensemble explores repertoire composed for flute choir.

MUS 08186: Flute Ensemble
The Flute Ensemble explores repertoire composed for flute choir.

MUS 08187: Flute Ensemble
The Flute Ensemble explores repertoire composed for flute choir.

MUS 08188: Flute Ensemble
The Opera Company is designed to give singers the opportunity to develop and refine singing/acting skills through the study of operatic literature. Students will present the assigned literature in a staged performance at the end of the semester. Solo roles by audition. The opera chorus is open to all without audition. Previous choral experience is suggested.

MUS 08189: Opera Company
The Opera Company is designed to give singers the opportunity to develop and refine singing/acting skills through the study of operatic literature. Students will present the assigned literature in a staged performance at the end of the semester. Solo roles by audition. The opera chorus is open to all without audition. Previous choral experience is suggested.

MUS 08190: Opera Company
The Opera Company is designed to give singers the opportunity to develop and refine singing/acting skills through the study of operatic literature. Students will present the assigned literature in a staged performance at the end of the semester. Solo roles by audition. The opera chorus is open to all without audition. Previous choral experience is suggested.

MUS 08191: Opera Company
The Opera Company is designed to give singers the opportunity to develop and refine singing/acting skills through the study of operatic literature. Students will present the assigned literature in a staged performance at the end of the semester. Solo roles by audition. The opera chorus is open to all without audition. Previous choral experience is suggested.

MUS 08192: Opera Company
The Opera Company is designed to give singers the opportunity to develop and refine singing/acting skills through the study of operatic literature. Students will present the assigned literature in a staged performance at the end of the semester. Solo roles by audition. The opera chorus is open to all without audition. Previous choral experience is suggested.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MUS 08193:</td>
<td>Opera Company</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>The Opera Company is designed to give singers the opportunity to develop and refine singing/acting skills through the study of operatic literature. Students will present the assigned literature in a staged performance at the end of the semester. Solo roles by audition. The opera chorus is open to all without audition. Previous choral experience is suggested.</td>
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<tr>
<td>MUS 08195:</td>
<td>OPERA COMPANY</td>
<td>1 s.h.</td>
</tr>
<tr>
<td></td>
<td>The Opera Company is designed to give singers the opportunity to develop and refine singing/acting skills through the study of operatic literature. Students will present the assigned literature in a staged performance at the end of the semester. Solo roles by audition. The opera chorus is open to all without audition. Previous choral experience is suggested.</td>
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<tr>
<td>MUS 08196:</td>
<td>Saxophone Ensemble</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>The Saxophone Ensemble performs classical and jazz repertoire written for saxophone quartet, quintet and choir.</td>
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<tr>
<td>MUS 08197:</td>
<td>Saxophone Ensemble</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>The Saxophone Ensemble performs classical and jazz repertoire written for saxophone quartet, quintet and choir.</td>
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<tr>
<td>MUS 08198:</td>
<td>Saxophone Ensemble</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>The Saxophone Ensemble performs classical and jazz repertoire written for saxophone quartet, quintet and choir.</td>
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<tr>
<td>MUS 08199:</td>
<td>Saxophone Ensemble</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>The Saxophone Ensemble performs classical and jazz repertoire written for saxophone quartet, quintet and choir.</td>
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<tr>
<td>MUS 08200:</td>
<td>Saxophone Ensemble</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>The Saxophone Ensemble performs classical and jazz repertoire written for saxophone quartet, quintet and choir.</td>
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<tr>
<td>MUS 08201:</td>
<td>Saxophone Ensemble</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>The Saxophone Ensemble performs classical and jazz repertoire written for saxophone quartet, quintet and choir.</td>
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<tr>
<td>MUS 08202:</td>
<td>Saxophone Ensemble</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>The Saxophone Ensemble performs classical and jazz repertoire written for saxophone quartet, quintet and choir.</td>
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<tr>
<td>MUS 08203:</td>
<td>Saxophone Ensemble</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>The Saxophone Ensemble performs classical and jazz repertoire written for saxophone quartet, quintet and choir.</td>
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<tr>
<td>MUS 08204:</td>
<td>Clarinet Ensemble</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>The Clarinet Choir explores and performs clarinet choir repertoire.</td>
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<tr>
<td>MUS 08205:</td>
<td>Clarinet Ensemble</td>
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<tr>
<td></td>
<td>The Clarinet Choir explores and performs clarinet choir repertoire.</td>
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<tr>
<td>MUS 08206:</td>
<td>Clarinet Ensemble</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>The Clarinet Choir explores and performs clarinet choir repertoire.</td>
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<tr>
<td>MUS 08207:</td>
<td>Clarinet Ensemble</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>The Clarinet Choir explores and performs clarinet choir repertoire.</td>
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<tr>
<td>MUS 08208:</td>
<td>Clarinet Ensemble</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>The Clarinet Choir explores and performs clarinet choir repertoire.</td>
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<tr>
<td>MUS 08209:</td>
<td>Clarinet Ensemble</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>The Clarinet Choir explores and performs clarinet choir repertoire.</td>
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<tr>
<td>MUS 08210:</td>
<td>Clarinet Ensemble</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>The Clarinet Choir explores and performs clarinet choir repertoire.</td>
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<tr>
<td>MUS 08211:</td>
<td>Women’s Chorus</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>The Women’s Choir is open to all who wish to participate and performs high quality music written for women’s voices.</td>
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</table>
### Course Descriptions

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<tbody>
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<td>MUS 08212</td>
<td>Women's Chorus</td>
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<td></td>
<td>The Women's Choir is open to all who wish to participate and performs high quality music written for women's voices.</td>
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<tr>
<td>MUS 08214</td>
<td>Women's Chorus</td>
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<td>The Women's Choir is open to all who wish to participate and performs high quality music written for women's voices.</td>
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<td>MUS 08215</td>
<td>Women's Chorus</td>
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<td>The Women's Choir is open to all who wish to participate and performs high quality music written for women's voices.</td>
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<tr>
<td>MUS 08216</td>
<td>Women's Chorus</td>
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<td>The Women's Choir is open to all who wish to participate and performs high quality music written for women's voices.</td>
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<tr>
<td>MUS 08217</td>
<td>Women's Chorus</td>
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<td>The Women's Choir is open to all who wish to participate and performs high quality music written for women's voices.</td>
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<tr>
<td>MUS 08218</td>
<td>Women's Chorus</td>
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<td></td>
<td>The Women's Choir is open to all who wish to participate and performs high quality music written for women's voices.</td>
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<tr>
<td>MUS 08219</td>
<td>Men's Chorus</td>
<td>1 s.h.</td>
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<td></td>
<td>The Men's Choir is open to all who wish to participate and performs high quality music written for men's voices.</td>
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<tr>
<td>MUS 08220</td>
<td>Men's Chorus</td>
<td>1 s.h.</td>
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<td>The Men's Choir is open to all who wish to participate and performs high quality music written for men's voices.</td>
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<tr>
<td>MUS 08221</td>
<td>Men's Chorus</td>
<td>1 s.h.</td>
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<td></td>
<td>The Men's Choir is open to all who wish to participate and performs high quality music written for men's voices.</td>
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<td>MUS 08222</td>
<td>Men's Chorus</td>
<td>1 s.h.</td>
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<td>The Men's Choir is open to all who wish to participate and performs high quality music written for men's voices.</td>
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<tr>
<td>MUS 08223</td>
<td>Men's Chorus</td>
<td>1 s.h.</td>
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<td></td>
<td>The Men's Choir is open to all who wish to participate and performs high quality music written for men's voices.</td>
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<tr>
<td>MUS 08224</td>
<td>Men's Chorus</td>
<td>1 s.h.</td>
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<td>The Men's Choir is open to all who wish to participate and performs high quality music written for men's voices.</td>
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<tr>
<td>MUS 08225</td>
<td>Men's Chorus</td>
<td>1 s.h.</td>
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<td></td>
<td>The Men's Choir is open to all who wish to participate and performs high quality music written for men's voices.</td>
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<tr>
<td>MUS 08226</td>
<td>Men's Chorus</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>The Men's Choir is open to all who wish to participate and performs high quality music written for men's voices.</td>
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<tr>
<td>MUS 32218</td>
<td>Vocal Pedagogy</td>
<td>3 s.h.</td>
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<td></td>
<td>Prerequisites: MUS 04130 and MUS 04131</td>
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<td></td>
<td>Basic principles and techniques of training the solo voice are addressed in this course. A survey of the history of vocal pedagogy, the anatomy of the voice and resource materials for teaching voices of all ages included. Students will experience practical training in teaching voice through class demonstration. Recommended for vocal majors at junior level and above.</td>
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<tr>
<td>MUS 32219</td>
<td>Piano Pedagogy</td>
<td>1 s.h.</td>
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<td></td>
<td>Method books for beginners and elementary students are examined and compared. The pedagogy of piano technique and interpretation is emphasized. Must be preceded by freshman and sophomore piano class or waiver of these requirements. This course may not be offered annually.</td>
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<tr>
<td>MUS 40111</td>
<td>BUSINESS OF MUSIC I</td>
<td>3 s.h.</td>
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<td></td>
<td>The student will be able to learn about the commercial aspects of the music business; introduces music students to music publishing, music copyright laws, music licensing, artist management, recording industry, music in advertising, etc. Field trips play a very important role in the development of this course. Finally, the students will be made aware of careers in music other than music education and performance.</td>
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</tbody>
</table>
Course Descriptions

MUS 40113: Business of Music II 3 s.h.
Prerequisite: MUS 40111
This course is a continuation of Business of Music I. Record deals, touring, promotion, publishing, and copyright are studies in more detail. Research and analysis of music-industry business models are introduced.

MUS 40121: AUDIO RECORDING I 3 s.h.
This course explores the techniques of audio recording. A study of equipment, microphones and microphone placement, sequencing programs and acoustics is integrated with hands-on training. Students actually record and produce finished products of recorded music or speech.

MUS 40122: COMPUTER TECHNOLOGY & MUSIC I 3 s.h.
This course focuses on the development of the student's skills in using digital audio software to create and edit audio files, repair field recordings, mix multi-track arrangements, synchronize audio and video, and perform other creative sound design techniques. Projects in these software environments are designed to develop fundamental musicianship, creativity, and a refined aesthetic sensibility.

MUS 40121: HISTORY OF POPULAR MUSIC 3 s.h.
A survey of the history and influence of popular music on modern culture, particularly in the United States and United Kingdom. Students will learn about how music has evolved, influenced, and been influenced by popular culture in the 20th and 21st centuries.

MUS 40122: Introduction to Music Performance 3 s.h.
Prerequisite: Music Industry majors only or permission of Instructor.
This course will provide a basic introduction of the typical performance skills utilized by performance ensembles. Students will participate in a variety of workshops and performances as they learn how each popular instrument is played (including guitar, bass, piano, drums, strings, and wind instruments as well as percussion workshops). In-class performances will teach performance skills such as how to develop a stage presence, using body language, handling a microphone, and dealing with unexpected situations during a live performance. This course culminated in a final concert.

MUS 40123: Music Industry Internship I 3 s.h.
Prerequisite: MUS 40111 and MUS 40113
This internship course provides students with field experience in the music industry. Under professional supervision, students practice theories and skills learned in the classroom and learn professionalism that will prepare them for productive employment upon graduation. Students keep a detailed log of working hours, write an analytical critique of the practicum, begin building a professional network, and are evaluated by their faculty supervisor and employer exit survey. The learning process is monitored by Music Industry program faculty members.

MUS 40124: Music Publishing 3 s.h.
Prerequisite: MUS 40111 and MUS 40113
The course provides an in-depth view of the music publishing industry. Topics covered include copyrights, publishing contracts, songwriter deals, how to register musical work, collection royalties, and revenue streams. This business aspects of music writing and composition are covered, as is a brief history of music publishing industry.

MUS 40125: Touring and Concert Promotion 3 s.h.
Prerequisite: MUS 40111 and MUS 40113
This course provides an in-depth view of the touring and concert promotion industry. Topics covered include bookings, ticketing, planning a tour, promotion, working with key players in the industry, logistics, contracts, and more. Students will participate in the production of a live concert.

MUS 40126: AUDIO RECORDING II 3 s.h.
Prerequisite: MUS 40121
In this course, students make a recorded project using advanced recording techniques. Topics include advanced microphone techniques, compressor types, classic EQ models, effects and professional standards for digital audio recording, mixing and delivery formats.

MUS 40127: COMPUTER TECHNOLOGY & MUSIC II 3 s.h.
Prerequisite: MUS 40122
In this course, students make a recorded project using advanced recording techniques. Topics include advanced microphone techniques, compressor types, classic EQ models, effects and professional standards for digital audio recording, mixing and delivery formats.
Course Descriptions

MUS 40223: Survey of Record Production 1 s.h.
Prerequisites: Music Industry majors only or permission of Instructor.
This course provides an overview of how records have been produced in the United States and United Kingdom from the 1950s to today. Topics include technological advances in the audio recording field, key record producers and their 'sounds,' the role of the producer, and record production techniques.

MUS 40311: Music Industry Internship II 3 s.h.
Prerequisite: MUS 40111 and MUS 40113
This internship course provides students with a second field experience in the music industry. Under professional supervision, students practice theories and skills learned in a classroom and learn professionalism that will prepare them for productive employment upon graduation. Students keep a detailed log of working hours, write analytical critique of the practicum, begin building a professional network, and are evaluated by their faculty supervisor and employer exit survey. The learning process is monitored by Music Industry program faculty members.

MUS 40314: Artist Services I 2 s.h.
Prerequisite: Junior standing, MUS 40111 and MUS 40113
This course is the first section of a three-term course sequence that also includes Artist Services II and Artist Services III. It provides the hands-on experience of working at a record company. Learning activities include choosing a band for a record release, developing an image for the project and managing the recording production. Students take on the roles and responsibilities of the real record-label positions, and these roles are emphasized at all stages of the record-production process.

MUS 40315: Entrepreneurship in the Music Industry 3 s.h.
Prerequisites: MUS 40111 and MUS 40113 and MUS 40212
This course provides an in-depth view of the major technological disruptions and the ensuring business opportunities that have shaped the music industry, from wax cylinder to vinyl record, cassette, CD, MP3, and Internet streaming services, with a particular focus on how the digital age has utterly transformed the music industry. Comprehensive research and analysis of current and cutting-edge music business models and marketing strategies complete this course curriculum.

MUS 40321: Producing the Record 3 s.h.
Prerequisite: MUS 40121 and MUS 40221
This course is the continuation of Audio Recording I and Audio Recording II. Students apply record production techniques learned in previous terms in a hands-on setting by producing an album in partnership with a band. Learning activities include choosing a band to record, pre-production tasks, managing a recording studio schedule and budget, recording a band, managing musicians during recording sessions, overdubbing, and analog mixing a mastering.

MUS 40322: Audio for Video 3 s.h.
Prerequisite: MUS 40122 and MUS 40222
Students will develop and understanding of the technology, business, and function of music as it pertains to various types of linear, non-linear and interactive visual media through studying the technical, creative, and post-production processes of real-world projects and through hands-on projects of their own.

MUS 40323: SOUND REINFORCEMENT I 3 s.h.
Prerequisites: MUS 40121 (Audio Recording I) AND MUS 40221 (Audio Recording II).
This course gives students the skill sets to understand and operate professional sound-reinforcement systems for live music and theatre performances. Topics covered include live audio mixing, sound systems, venues, audio equipment, microphone techniques for live situations, and how to work with artists, management, and venue personnel.

MUS 40331: Game Audio 3 s.h.
Prerequisite: MUS 40122 and MUS 40222
Students will develop an understanding of technology, composition techniques, and sound design concepts that are unique to the video game industry through real-world projects and analyses of popular game titles. Classroom learning will come to life as students compose music and create custom sound effects in an actual video-game engine.

MUS 40332: Recording Studio Design and Maintenance 3 s.h.
Prerequisites: MUS 40121 and MUS 40221
Students will learn to perform basic recording studio repairs and will develop and understanding of acoustics and studio design. The topics covered in this course include cables, connectors, transformers, power supplies, sound absorption, diffusion, and room acoustics. By the end of the course, students will be able to identify the sources of common signal path disruptions, read electronic schematics, and perform basic repairs as well as choose and install sound treatment in a recording-studio setting.
MUS 40333: Sound Synthesis and Remixing
Prerequisite: MUS 40122 and MUS 40222
The main objective of this course is to develop an understanding of sound synthesis, sampling, and remixing through in-class demonstrations, lectures, and hands-on projects. This course gives students in-depth instruction and experience in the various advanced techniques of MIDI sequencing, digital audio recording, editing, and mixing used in the making of modern pop, dance, and hip-hop recordings. Students will deliver custom-made synthesizer sounds, a sampling kit, and a remix integrating all aspects of the course.

MUS 40341: Music Industry Contracts and Copyrights
Prerequisites: MUS 40111 and MUS 40113 and MUS 40212
This course provides an in-depth view of music industry contracts and copyright issues. Topics covered include an advanced study of major record deals, independent record deals, touring contracts, music copyrights, publishing deals, and agreements between band members. Students will learn to protect their interests and avoid common problems.

MUS 40342: Public Relations in the Music Industry
Prerequisites: MUS 40111 and MUS 40113
This course provides an in-depth view of the public relations of the music industry, covering the skills involved in creating and distributing effective press release, press kits, and artist kits, cultivating relationships for radio and tour promotion, and canny social media management and internet communications techniques. Public Relations in the Music Industry addressed these topics from various points of view. Whether you want to become a PR agent or a recording artist, tour promoter, or label owner, among other roles, this course offers valuable insights on this vital function of the music industry.

MUS 40343: SONGWRITING
Prerequisite: MUS 40122, Music Industry majors only or permission of instructor
This course provides skills and knowledge related to writing a pop song. Students will analyze songs, hooks, rhythm, chord progressions, melodies, arrangements, and lyrics to understand what makes a hit. Students will be required to write and perform their own original songs and workshop the music and lyrics within the context of the class, working toward finished songs as class projects.

MUS 40412: CAPSTONE PROJECT MUS INDUSTR I
Prerequisite: Senior standing and 56 credits required
This capstone course is required of all Music Industry majors in their senior years and leads into Capstone Project in Music Industry II (MUS 40413). This two-semester hands-on-project integrates the material covered in Music Industry courses with practical experience, so that students can integrate various elements of their learning into career-related experience. It also affords students an opportunity to complete a complex, realistic project where they must utilize and hone skills from their coursework and internships.

MUS 40413: Capstone Project in Music Industry II
Prerequisite: MUS 40412
This capstone course is required of all Music Industry majors in their senior years and is a continuation of Capstone Project in Music Industry I (MUS 40412). This two-semester hands-on project integrates the material covered in Music Industry courses with practical experience, so that students can integrate various elements of their learning into career-related experience. It also affords students an opportunity to complete a complex, realistic project where they must utilize and hone skills from their coursework and internships.

MUS 40414: Artist Services II
Prerequisite: MUS 40111 and MUS 40113 and MUS 40314
This course is the second section of a three-term course sequence that includes Artist Services I and Artist Services III. It provides the hands-on experience of working at a record company. Learning activities include managing the recording production, developing an album artwork and creating a marketing strategy, as well as analyzing industry trends. Students take on the roles and responsibilities of real record-label positions, and these roles are emphasized at all stages of the record-release process.

MUS 40415: ARTIST SERVICES III
Prerequisite: MUS 40111 and MUS 40113 and MUS 40314 and MUS 40414
This course is the final section of a three-term course sequence that also includes Artist Services I and Artist Services II. It provides the hands-on experience of working at a record company; at the end of the third term, students release and launch their record. Learning activities include managing the mix and mastering of an album, marketing activities, and record launch, as well as analyzing industry trends. Students take on the roles and responsibilities of real record-label positions, and these roles are emphasized at all stages of the record-release process.
### Course Descriptions

**MUS 40431:** Mixing and Mastering  
*Prerequisite: MUS 40122 and MUS 40222.*
This course builds upon the skills acquired in Computer Technology and Music I (MUS 40122) and Computer Technology and Music II (MUS 40222). Topics include an advanced look at mixing music for a wide range of music styles, sound trends, processing. EQ’ing, setting up levels, panffing, automation, and using effects such as reverb and delays in professional and creative ways. The mastering section of the course emphasizes understanding audio signal quality, loudness, processing. EQ’ing and how to achieve a professional master for various formats such as CD, MP3, and vinyl record.

**MUS 97100:** Piano Class I  
*Prerequisites: MUS 97100.*
Instruction is given in classes including sight reading, improvising, and playing by ear. These courses must be taken in sequence, simultaneously with or after the indicated theory courses: Piano Class I (MUS97.100) with or after Written Theory I (MUS04.130); Piano Class II (MUS97.101) with or after Written Theory II (MUS04.131); Piano Class III (MUS97.200) with or after Written Theory III (MUS04.240), and Piano Class IV (MUS97.241) with or after Written Theory IV (MUS04.217). Not open to non-music majors.

**MUS 97101:** Piano Class II  
*Prerequisites: MUS 97100.*
Instruction is given in classes including sight reading, improvising, and playing by ear. These courses must be taken in sequence, simultaneously with or after the indicated theory courses: Piano Class I (MUS97.100) with or after Written Theory I (MUS04.130); Piano Class II (MUS97.101) with or after Written Theory II (MUS04.131); Piano Class III (MUS97.200) with or after Written Theory III (MUS04.240), and Piano Class IV (MUS97.241) with or after Written Theory IV (MUS04.217). Not open to non-music majors.

**MUS 97102:** Piano I For Non-Music Majors  
*For Non-Music Majors.*
Beginning piano taught in a class. No previous experience in music is necessary. For Non-Music Majors.

**MUS 97103:** Piano II For Non-Music Majors  

**MUS 97111:** String Class-Low  
The fundamentals of cello and bass are studied. The fundamentals of cello and bass are studied.

**MUS 97112:** String Class-High  
Fingering and bowing patterns, tone production, tuning, methods and materials are studied for the violin and viola.

**MUS 97114:** Secondary Applied Instrument 1  
**MUS 97115:** Secondary Applied Instrument 2  

**MUS 97200:** Piano Class III  
*Prerequisites: MUS 97101.*
Instruction is given in classes including sight reading, improvising, and playing by ear. These courses must be taken in sequence, simultaneously with or after the indicated theory courses: Piano Class I (MUS97.100) with or after Written Theory I (MUS04.130); Piano Class II (MUS97.101) with or after Written Theory II (MUS04.131); Piano Class III (MUS97.200) with or after Written Theory III (MUS04.240), and Piano Class IV (MUS97.241) with or after Written Theory IV (MUS04.217). Not open to non-music majors.

**MUS 97201:** Piano Class IV  
*Prerequisites: MUS 97200.*
Instruction is given in classes including sight reading, improvising, and playing by ear. These courses must be taken in sequence, simultaneously with or after the indicated theory courses: Piano Class I (MUS97.100) with or after Written Theory I (MUS04.130); Piano Class II (MUS97.101) with or after Written Theory II (MUS04.131); Piano Class III (MUS97.200) with or after Written Theory III (MUS04.240), and Piano Class IV (MUS97.241) with or after Written Theory IV (MUS04.217). Not open to non-music majors.

**MUS 97212:** Conducting-Instrumental I  
This course demonstrates and rehearses the skills of instrumental conducting through music for instrumental ensembles.
MUS 97213: Conducting-Choral I  2 s.h.
This course is an introduction to the art of choral conducting. Gestural techniques, (preparation, pattern, cues, releases, fermata, expression, and left-hand independence), are developed through class participation and other ensemble situations.

MUS 97228: Classroom Guitar  1 s.h.
This course is designed to enable classroom teachers to utilize and instruct basic guitar techniques with an emphasis on accompaniment skills.

MUS 97229: Guitar Class I  3 s.h.
A study of the guitar performance and a study of the materials available.

MUS 97230: Guitar Class II  3 s.h.
A continuation of the study of the guitar through performance and a study of the materials available.

MUS 97300: French Horn Class  .5 s.h.
Designed for Music Education majors, this course addresses horn pedagogy and basic horn performance.

MUS 97301: Trombone Class  .5 s.h.
Designed for Music Education majors, this course addresses trombone pedagogy and basic trombone performance.

MUS 97302: Percussion Class  1 s.h.
A study of rudimental and ensemble techniques of snare drum, timpani, bass drum, cymbals and accessory instruments.

MUS 97309: Trumpet Class  .5 s.h.
Designed for Music Education majors, this course addresses trumpet pedagogy and basic trumpet performance.

MUS 97310: Tuba Class  .5 s.h.
Designed for Music Education majors, this course addresses tuba pedagogy and basic tuba performance.

MUS 97312: Conducting-Instrumental II  2 s.h.
Prerequisites: MUS 97212
This course demonstrates and rehearses the skills of instrumental conducting through music for instrumental ensembles.

MUS 97313: Conducting-Choral II  2 s.h.
Prerequisites: MUS 97213
Students apply basic conducting techniques to repertoire spanning each of the major time periods. In addition to gesture, great emphasis is given to score reading and score analysis skills.

MUS 97400: Voice Class  1 s.h.
A study of the basic principles of singing taught in a group setting. Students will learn beginners breathing technique, tone placement and projection through the singing of group and solo repertoire. Course is open to non-music majors.

MUS 97401: Bassoon Class  .5 s.h.
This course teaches the fundamentals of the bassoon.

MUS 97402: Clarinet Class  .5 s.h.
Designed for Music Education majors, this course addresses clarinet pedagogy and basic clarinet performance.

MUS 97403: Saxophone Class  .5 s.h.
Designed for Music Education majors, this course addresses saxophone pedagogy and basic saxophone performance.

MUS 97404: Reedmaking And Instrument Repair  .5 to 3 s.h.
The fundamentals of reedmaking and repair of instruments are studied.

MUS 97409: Flute Class  .5 s.h.
Designed for Music Education majors, this course addresses flute pedagogy and basic flute performance.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MUS 97410</td>
<td>Oboe Class</td>
<td>5 s.h.</td>
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<td></td>
<td>Designed for Music Education majors, this course addresses oboe pedagogy and basic oboe performance.</td>
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<tr>
<td>MUSG 06100</td>
<td>Signals, Systems And Music</td>
<td>3 s.h.</td>
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<td></td>
<td>This course is an introduction to the analysis and creative production of electronic music. The student will experience music using the principles of music theory, electronic signal analysis and system development. Both lecture and laboratory sessions are presented culminating in the development and production of electronic music using recorded sound, software generated signals and electronically produced signals.</td>
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<tr>
<td>MUSG 06102</td>
<td>General Music History</td>
<td>3 s.h.</td>
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<td></td>
<td>An introduction to styles and analysis of music through a historical overview. The techniques of listening and aural analysis of representative works serves as exercise material for the course.</td>
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<tr>
<td>MUSG 06109</td>
<td>Music Appreciation</td>
<td>3 s.h.</td>
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<td></td>
<td>Music literature is approached through recordings, live performance and appropriate reading.</td>
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<tr>
<td>MUSG 06114</td>
<td>Growth And Development Of Jazz</td>
<td>3 s.h.</td>
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<td></td>
<td>African and European influences, the evolution of jazz styles and the influence of jazz on the musical world are covered.</td>
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<tr>
<td>MUSG 06115</td>
<td>Development Of Musical Styles And Form I</td>
<td>3 s.h.</td>
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<td>The principle forms and styles of music and their place in the history of Western Civilization from ancient times through the Renaissance are studied.</td>
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<tr>
<td>MUSG 06117</td>
<td>Development Of Musical Styles And Form II</td>
<td>3 s.h.</td>
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<tr>
<td></td>
<td>A continuation of Development Of Musical Styles and Forms I from the Baroque era through Impressionism.</td>
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<tr>
<td>MUSG 06120</td>
<td>Keyboard Literature</td>
<td>3 s.h.</td>
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<td>The course is a survey of the important compositions written for keyboard instruments, primarily piano, from ca. 1600 to the present. This course may not be offered annually.</td>
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<tr>
<td>MUSG 06210</td>
<td>Vocal Literature</td>
<td>3 s.h.</td>
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<td></td>
<td>A survey of solo vocal literature through these vocal periods: Renaissance, Baroque, Classical, Romantic, Late Romantic and Contemporary. Through lecture, demonstration and presentation, students will study the composers of each period, their body of work, style, interpretation and performance practice.</td>
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<tr>
<td>MUSG 06211</td>
<td>Brass And Woodwind Literature</td>
<td>3 s.h.</td>
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<td>Brass and woodwind literature informs the music students of the availability of the following brass and woodwind materials: methods and studies, ensemble literature, solos, books, periodicals and recordings. This course may not be offered annually.</td>
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<tr>
<td>MUSG 06214</td>
<td>Development Of Musical Styles And Form I</td>
<td>3 s.h.</td>
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<td></td>
<td>The major trends in the music of our time, their role in our society and their relation to other arts are examined.</td>
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</table>
Course Descriptions

MUSG 06337:  Music And The Theater  3 s.h.
The variety of musical styles, the function of music in this environment and its psychological effect on audiences of the past and present are studied. This course may not be offered annually.

MUSG 06435:  Collegium Musicum  1 s.h.
An investigation of little known musical works, utilizing instruments and techniques of style of the period in study. Performance of these works will constitute much of the study of them.

MUSG 06439:  New Jazz Structures  3 s.h.
A comprehensive study of compositional and improvisational techniques employed by contemporary jazz writers and performers. Jazz application of classical twentieth century classical music techniques are analyzed.

MUSG 06447:  Music In World Cultures: Asia & Oceania  3 s.h.
A survey is made of the musical cultures of the world (excluding western art music), the role of music in society, and its relationship to other arts. Consideration will also be given to scale structure, instruments, musical forms and performance standards. Cultural areas of particular concern are Asia and Oceania.

MUSG 06448:  Music In World Cultures: Africa, India, Near & Middle East  3 s.h.
A survey is made of the musical cultures of the world (excluding western art music), the role of music in society and its relationship to other arts. Consideration will also be given to scale structure, instruments, musical forms and performance standards. Cultural areas of particular concern are Africa, India, and the Near and Middle East.

SMED 01120:  Foundations Of Music Education  3 s.h.
Foundations of Music Education is an introductory course in the music education program. It provides a broad overview of the field of music education, addressing the historical development of music education in the United States as well as current approaches and issues in the field. The course is framed by three guiding questions: What is the purpose of music education?: How can students best explore music?: and How can teachers best create music learning experiences for their students? In addition, two projects that extend throughout the music education major are introduced: a personal philosophy of music education, and a digital portfolio.

SMED 01229:  Teaching/Learning Music A: Elementary General Music  3 s.h.
Prerequisites: C- or better in MUS 04130, MUS 04131, MUS 04132, MUS 04133, MUS 04240, MUS 04241, MUS 04242, MUS 04243, EDUC 01284, READ 0319 and SMED 01220
The methods, materials and techniques of teaching music from K through 12 are surveyed. Attention is given to the developmental sequence in the building of musical concepts necessary for the organization of an effective general music program in the public schools.

SMED 01230:  Teaching/Learning Music B: Vocal Methods And Techniques  3 s.h.
This course, along with other courses in a series, helps to prepare students to teach the choral arts in the public schools with particular attention to grades 7-12. Techniques of teaching, vocal training, choral organization and the philosophy of teaching choral music are the areas to be emphasized.

SMED 01231:  Teaching/Learning Music B: Instrumental Methods And Techniques  3 s.h.
A survey is made of the necessary understanding, techniques, and materials to develop an effective instrumental music program. Consideration is given to the place of instrumental music and its relationship to the total school program.

SMED 01240:  Marching Band Techniques  3 s.h.
This course applies the fundamentals of precision marching and marching maneuvers along with new materials and techniques for the half-time show.

NURS 01302:  Foundations Of Nursing Practice  6 s.h.
This course enables students to explore the historical and theoretical foundations of the profession of nursing. Students will focus on Maslow’s Hierarchy of Needs in providing nursing care. Classroom experience and seminars provide students with opportunities to utilize critical thinking skills to explore concepts basic to nursing. Faculty supervised learning laboratory practice and clinical experiences enable students to apply acquired knowledge in a variety of clinical settings. This course also explores issues that impact health promotion and the role of the nurse in promoting health and preventing disease. Such factors as population changes, health policy, ethics, and the therapeutic nurse-client relationship are discussed. Assessment of health in individuals, families, and communities is examined. Interventions for health promotion are discussed along with their application across the lifespan. Finally, future trends in health promotion are reviewed.
NURS 03303: Comprehensive Health Assessment 3 s.h.
This course builds upon the Registered Nurse's fundamental knowledge and skills of health assessment. In utilizing a systematic approach, the student will develop a holistic approach in assessing the patient throughout the lifespan. Upon completion, the student will show competency in obtaining a thorough health history and becoming efficient in the physical skills of inspection, palpation, percussion and auscultation. Differences between normal and abnormal findings will be explored and appropriate documentation of findings will be stressed. Students will also be exposed to the cultural differences in health and will incorporate evidence based approaches to assessment.

NURS 03304: Nursing Informatics 3 s.h.
This course reviews the information needs and information systems related to nursing practice. Students will experience the manner in which informatics supports all areas of practice, including education, clinical practice, administration and research.

NURS 03305: Pathophysiology 3 s.h.
Prerequisites: NURS 03303 and NURS 03307
Fundamental concepts of physiology, the changes that produce signs, symptoms, and the body's remarkable ability to compensate for these changes are reviewed and extended in this course.

NURS 03306: Pharmacology 3 s.h.
This course reviews and extends the students' previous knowledge of pharmacological science. It explores mechanisms of action of drugs used to treat various health conditions at the cellular level. 3 credits Elective.

NURS 03307: Epidemiology In Nursing Practice 3 s.h.
In this course, the professional nursing student is introduced to a population-based approach to health care. Students will incorporate information on the etiology and predictors of events in order to design health promotion and disease prevention strategies.

NURS 03309: Topics In Health Care Ethics 3 s.h.
Students in this nursing course will examine moral dilemmas created or intensified by recent advances in medical technology and study ways of analyzing those dilemmas. Discussion topics include: euthanasia and the right to die, abortion, behavior modification, allocation of scarce medical resources, in vitro fertilization, genetic screening and engineering and human experimentation. These moral dilemmas will be related to nursing.

NURS 03310: Gerontological Nursing 2 s.h.
Prerequisites: NURS 03302 and NURS 03303 and NURS 03305 and NURS 03306 and NURS 03350 and NURS 03360 and NURS 03370
This course reviews and analyzes issues of aging from a physiological, psychosocial and cognitive perspective. Emphasis is placed on health maintenance, ethical considerations and legal issues as they relate to the care of the aging population.

NURS 03340: ADULT HEALTH NURSING 8 s.h.
Prerequisites: NURS 03302 and NURS 03303 and NURS 03305 and NURS 03306 and NURS 03350 and NURS 03360 and NURS 03370
This course enables students to identify multi-cultural interactions as they relate to nursing practice. Classroom experience and seminars provide students with opportunities to utilize critical thinking skills to explore concepts basic to nursing care of adult humans (18 years to senescence). Faculty supervised learning laboratory practice and clinical experiences enable students to apply acquired knowledge in a variety of settings.

NURS 03350: Childrearing Family 4 s.h.
Prerequisites: NURS 03302 and NURS 03303 and NURS 03305
This course enables students to identify their understanding of the human-environmental interactions and evolving family patterns within diverse cultures to promote optimal health. The student is provided with an opportunity to understand the patterns and organization of families, growth and development perspectives, and the nursing implications of common and complex health patterns from infancy through adolescence. Faculty supervised learning laboratory practice and clinical experiences enable students to apply acquired knowledge in a variety of settings.

NURS 03360: Childbearing Family 4 s.h.
Prerequisites: NURS 03302 and NURS 03303 and NURS 03305
This course enables students to expand their understanding of human-environmental interactions and evolving family patterns within diverse cultures to promote optimal health. The student is provided with an opportunity to understand the family as a unified whole, its patterns and organization and the implications of common and complex health patterns from conception through birth.
### Course Descriptions

**NURS 03370:** Mental Health Nursing  
*Prerequisites:* NURS 03302 and NURS 03303 and NURS 03305  
This course enables students to expand their understanding of human-environmental interactions and evolving mental health patterns within diverse cultures to promote optimal health. The student is provided with an opportunity to understand the organization of mental health patterns as they appear in normative growth and development, as well as the alterations in patterns with resulting nursing implications. The progression will be from common to more complex mental health patterns as they relate to nursing practice.

**NURS 03401:** Community Health Nursing  
*Prerequisite:* NURS 03303  
This course will explore how community health nurses use concepts from nursing and public health to provide comprehensive, continuous, preventative healthcare thereby promoting health for communities, populations at risk, aggregates, families, and individuals. This course prepares the RN to BSN student to develop competencies in managing health status in the context of multicultural communities. Students will be able to expand current knowledge and skills, develop enhanced research and critically thinking skills with the application of these skills to the multicultural community and the global society considering the biopsychosocial, cultural, ethical, legal, and economic issues that impact the community as a client. The clinical practicum focuses on clients with diverse needs in a variety of settings.

**NURS 03402:** Environmental And Occupational Health  
*Prerequisites:* NURS 03301, NURS 03303, NURS 03304, NURS 03306 and NURS 03307  
The relationships that exist between the environment, the workplace, and health are the focus of this course. Key concepts, principles, and strategies related to environmental and occupational health nursing are explored. Teaching-learning strategies focus on critical thinking skills related to these areas of health care. Knowledge obtained from this course will prepare students to assess changes in health status that may be related to the environment or the workplace. Students are provided with the skills needed to recognize, evaluate, and recommend control strategies for these phenomena.

**NURS 03403:** Nursing Care Delivery Systems  
*Prerequisite:* NURS 03303  
The focus of this course is the professional nurse’s leadership and management role within health care delivery systems. The multi-faceted aspects of the role of the nurse as leader and manager are explored in depth, with emphasis on the role of the nurse as change agent. Organizational behavior, decision-making, the change process and the management of health care organizations are components of this course. The concepts of professionalism, leadership-management, research and teaching-learning are integrated with the professional nurse’s role. This course prepares students to function as change agents in the health care delivery system. The clinical component focuses on the application of relevant theory and research as a basis for decision-making. Students are mentored by faculty, and interact with members of the nursing leadership team to explore Nursing leadership.

**NURS 03404:** Research Applications In Nursing Practice - Wi  
*Prerequisites:* STAT 02100 and COMP 01112  
This course introduces students to the concepts and process of research in nursing. Emphasis is placed on writing and critiquing published studies and developing plans for using research findings in practice.

**NURS 03405:** Health Care Policy And Finance  
*Prerequisites:* NURS 03302 and NURS 03303 and NURS 03305  
The focus of this course is the professional nurse’s role in health care policy and finances within health care systems. The multi-faceted aspects of health care policy making and financing within today’s ever-changing health care environment are explored. Risk management and quality care are integrated into the course. This course gives the student a financial understanding of the health care delivery system. Students are exposed to the political and legislative process within health care agencies and health care policy development at the state and federal levels. Ethical and legal issues in nursing and health care are explored.

**NURS 03416:** Transition To Professional Nursing Practice  
*Prerequisites:* NURS 03302 and NURS 03303 and NURS 03304 and NURS 03306 and NURS 03307 and NURS 03308 and NURS 03403 and NURS 03404  
This course examines issues that must be addressed for the nursing student to successfully transition to the role of the professional nurse. The emphasis is on the application of the professional role in the clinical setting. Faculty supervised learning laboratory practice and clinical experiences enable students to apply acquired knowledge in a variety of settings.

**NURS 03504:** Advanced Pathophysiology  
*Prerequisite:* Licensure as a registered nurse and NURS 03303  
This course describes the disordered physiology and clinical consequences resulting from common disease processes. Seminar discussions focus on alterations in normal functions of major organ systems. Through problem-solving exercises and case studies, students are encouraged to recognize the pathophysiologic basis of clinical findings associated with disease processes. This course serves as an essential link between the basic sciences and clinical management.
### Course Descriptions

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>NURS 05505</td>
<td>Advanced Pharmacology</td>
<td>3 s.h.</td>
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<tr>
<td></td>
<td><strong>Prerequisite:</strong> Licensure as a registered nurse and NURS 03303 and NURS 05504</td>
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<td></td>
<td>This course expands students’ knowledge of clinical pharmacology to provide a sound basis from which to engage in prescriptive drug management. Pharmacodynamics, pharmacokinetics and pharmaco therapeutics of drug classes are explored through a variety of teaching-learning methodologies, including seminar discussion, problem-based case study presentations, focused readings, and web-based exercises.</td>
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<tr>
<td>PHIL 09110</td>
<td>The Logic Of Everyday Reasoning</td>
<td>3 s.h.</td>
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<td>This course in informal logic aims at improving the student’s reasoning through a thorough exposure to common logical fallacies as these appear in ordinary language, and through a study of rational procedures for problem-solving. Students have opportunities for extensive practice at discovering and overcoming their own logical faults in writing and speech as well as practice at rational problem-solving.</td>
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<tr>
<td>PHIL 09120</td>
<td>Introduction To Philosophy</td>
<td>3 s.h.</td>
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<td></td>
<td>This basic course in the methods of philosophical inquiry investigates how these methods have been applied to selected philosophical issues by classical and contemporary philosophers.</td>
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<tr>
<td>PHIL 09121</td>
<td>Introduction To Philosophy - Wi</td>
<td>3 s.h.</td>
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<td></td>
<td><strong>Prerequisites:</strong> COMP 01112</td>
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<td></td>
<td>Same as PHIL 09.120, but meets general education writing intensive guidelines with a variety of graded and ungraded writing assignments.</td>
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<tr>
<td>PHIL 09130</td>
<td>Introduction To Symbolic Logic</td>
<td>3 s.h.</td>
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<td>This course provides students with a working familiarity with the principles and procedures involved in deductive logic.</td>
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<tr>
<td>PHIL 09150</td>
<td>INTRODUCTION TO ETHICS</td>
<td>3 s.h.</td>
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<td></td>
<td>This historically structured course emphasizes both the natural of moral problems and the variety and adequacy of selected moral theories. The course involves reflection and analysis of classic and contemporary theories and thinkers.</td>
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<tr>
<td>PHIL 09151</td>
<td>INTRODUCTION TO ETHICS-WI</td>
<td>3 s.h.</td>
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<td></td>
<td><strong>Prerequisites:</strong> COMP 01112 - College Composition II.</td>
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<tr>
<td></td>
<td>This historically structured course emphasizes both the natural of moral problems and the variety and adequacy of selected moral theories. The course involves reflection and analysis of classic and contemporary theories and thinkers. This course meets general education writing intensive guidelines with a variety of graded and ungraded writing assignments.</td>
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<tr>
<td>PHIL 09211</td>
<td>World Philosophy I</td>
<td>3 s.h.</td>
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<td></td>
<td><strong>Prerequisites:</strong> COMP 01112</td>
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<td></td>
<td>This course addresses questions about the nature of reality, and the nature and possibility of knowledge, through examination of selected texts by western and non-western philosophers from the ancient, medieval and renaissance periods.</td>
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<tr>
<td>PHIL 09213</td>
<td>World Philosophy II</td>
<td>3 s.h.</td>
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<td></td>
<td><strong>Prerequisites:</strong> COMP 01112</td>
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<tr>
<td></td>
<td>This course addresses questions about the nature of reality, and the nature and possibility of knowledge, through the examination of selected texts by western and non-western philosophers from the modern and contemporary period.</td>
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<tr>
<td>PHIL 09222</td>
<td>BUSINESS ETHICS</td>
<td>3 s.h.</td>
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<td>This course considers issues of human values in management, the relevance of ethical norms for management decisions and the relationship between business and society. Case studies of corporations are utilized to illustrate and clarify these issues.</td>
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<tr>
<td>PHIL 09226</td>
<td>Philosophy Of Mind</td>
<td>3 s.h.</td>
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<td>This course addresses philosophical questions about the nature of the mind. Some of these questions include: What is the relationship between the mind and the body? Can science fully understand the mind? Are minds like computers? What type of minds do non-human animals have? Students will learn the responses of classical and contemporary philosophers to these questions. Students will also develop and refine their own views in response to these questions.</td>
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<tr>
<td>PHIL 09227</td>
<td>Philosophy Of Mind - Wi</td>
<td>3 s.h.</td>
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<td></td>
<td><strong>Prerequisites:</strong> COMP 01112</td>
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<tr>
<td></td>
<td>Same as PHIL 09.226, but meets general education writing intensive guidelines with a variety of graded and ungraded writing assignments.</td>
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</tbody>
</table>
PHIL 09240: Philosophy And Society  
This is a basic course in political and social philosophy. Through selected readings from classical and modern philosophers, students gain a better understanding of the philosophical issues which underlie the theory and practice of political and social life.

PHIL 09241: Philosophy And Society - Wi  
Prerequisites: COMP 01112  
Same as PHIL09.240, but meets general education writing intensive guidelines with a variety of graded and ungraded writing assignments.

PHIL 09310: Aesthetics  
Prerequisite: at least one PHIL 09 course, or more than one Arts course (ART, ARHS, MUS, MUSG, THD, RTF).  
This course offers students an approach to such philosophical issues as the nature; the role of the arts in human culture; and the articulation of criteria for interpretation and criticism. Students will refine their own approach to these issues by attending to specific works of poetry, fiction, drama, music, painting, sculpture, and other arts, including student works.

PHIL 09311: Aesthetics - Wi  
Prerequisites: COMP 01112 AND at least on PHIL 09 course, or more than one Arts course, (ART, MUS, MUSG, THD, RTF).  
Same as PHIL09.310, but meets general education writing intensive guidelines with a variety of graded and ungraded writing assignments.

PHIL 09323: Environmental Ethics  
This is a multidisciplinary course that addresses ethical issues and concerns regarding the environment; the relationships between the individual, society and the natural environment; the importance of common attitudes and prevailing world-views for understanding and responding to environmental challenges; and the need for changes in those attitudes and world-views. Students will be encouraged to think about the profound ethical, political, economic, religious, scientific, and technological implications of these environmental challenges.

PHIL 09325: American Philosophy  
This course examines the thought of selected American philosophers from the colonial period to the present. It stresses the distinctive American philosophical movement, Pragmatism, and some of its representative figures such as Charles Sanders Peirce, William James and John Dewey.

PHIL 09328: Philosophy And Gender  
This course will explore philosophical issues relating to gender as considered by classical, modern and contemporary philosophers. Recent work by feminist philosophers will be emphasized.

PHIL 09329: Philosophy And Gender - Wi  
This course will explore philosophical issues relating to gender as considered by classical, modern and contemporary philosophers. Recent work by feminist philosophers will be emphasized.

PHIL 09330: Asian Thought  
This course attempts to identify the key concepts in the intellectual histories of both India and China. The course studies important thinkers in both traditions to discover how they used these concepts in their own systems of thought and what they contributed to later developments of the concept.

PHIL 09341: Biomedical Ethics-WI  
Prerequisites: COMP 01112 and one Philosophy course or Permission from Instructor  
Ethical issues in health care, medicine and bio-technology; for example, abortion, termination of treatment, euthanasia, truth-telling and confidentiality, medical experimentation and informed consent, genetics, transplant surgery, artificial reproductive techniques, the allocation of medical resources and the impact of race, class and gender as they relate to biomedical issues.

PHIL 09346: Feminist Ethics  
Examines the central currents of feminist ethics, such as ethics of care and justice, abortion, parenting, social ethics, violence, eating disorders and embodiment, prostitution, medical and reproductive ethics, aging, disability, theological ethics.
Course Descriptions

PHIL 09368:  Philosophy Of Science 3 s.h.
This course offers the student a basic understanding of some of the philosophical issues involved in modern science. The nature of scientific explanation and prediction, the character of scientific change, the structure and function of scientific theories, and the confirmation of scientific hypotheses are among the issues treated. Furthermore, attention is given to epistemological issues arising from the social structure of science, such as whether science is neutral or biased with respect to questions about gender, race, and religion.

PHIL 09369:  Philosophy Of Science - Wi 3 s.h.
Prerequisites: COMP 01112 or ENGR 01102
Same as PHIL09.368, but meets general education writing intensive guidelines with a variety of graded and ungraded writing assignments.

PHIL 09370:  Epistemology 3 s.h.
This course addresses philosophical questions concerning the nature of knowledge. Some of these questions include: How can we be sure that our knowledge of the world is accurate? What is the relation of evidence to our understanding of the world? What distinguishes mathematical knowledge from scientific and ethical knowledge? Students will study and criticize both traditional and contemporary approaches to the understanding of knowledge. Students will also develop and refine their own views in response to these issues.

PHIL 09371:  Epistemology- Wi 3 s.h.
Prerequisite(s): COMP 01112
This course addresses philosophical questions concerning the nature of knowledge. Some of these questions include: How can we be sure that our knowledge of the world is accurate? What is the relation of evidence to our understanding of the world? What distinguishes mathematical knowledge from scientific and ethical knowledge? Students will study and criticize both traditional and contemporary approaches to the understanding of knowledge. Students will also develop and refine their own views in response to these issues. Meets general education writing intensive guidelines with a variety of graded and ungraded writing assignments.

PHIL 09372:  Topics In The History Of Philosophy 3 s.h.
This course offers in-depth study of an important philosopher, movement or school. Topic varies. May not be offered every semester. May be taken more than once.

PHIL 09376:  Philosophy Of Medicine-WI 3 s.h.
Prerequisite: COMP 01112
This course addresses philosophical and methodological questions about medicine. Through a study of historical and contemporary medical practice and theory, this course examines the epistemological and institutional commitments of medicine. Some of the topics covered in the course are the nature of illness and health, epidemiology, drug testing, physician error, the relation of western and non-western approaches to healing, and the role of gender and race in medicine. The goal of the course is to develop a critically informed approach to the research and practical problems of medicine. This course meets general education writing intensive guidelines with a variety of graded and ungraded writing assignments.

PHIL 09392:  Contemporary Moral Problems 3 s.h.
This course will acquaint the student with recent work in applying moral theory to such issues as the environment, computers, nuclear war and deterrence, and to such professions as medicine, nursing, business, education and law.

PHIL 09393:  Contemporary Moral Problems- Wi 3 s.h.
Prerequisites: COMP 01112
Same as PHIL09.392, but meets general education writing intensive guidelines with a variety of graded and ungraded writing assignments.

PHIL 09440:  Selected Topics In Philosophy 3 s.h.
This course offers advanced study in a particular topical area of philosophy. Topic varies. May not be offered every semester. May be taken more than once.

PHIL 09490:  Independent Study 3 to 6 s.h.

PHRE 11300:  Philosophy Of Religion 3 s.h.
Prerequisites: at least one PHIL 09 course or one REL 10 or PHRE 11 course, or permission of instructor.
This course investigates such basic problems as the nature of religion and religious experience, the possibility of religious knowledge, the similarities and differences between the world's diverse religions, the basis for interfaith dialogue, the nature of religious practice and religious truth claims, the concept of God, the relation of religion to science and to morality, and the role of religion in modern global society.

ROWAN UNIVERSITY UNDERGRADUATE CATALOG 2016-2017 492
Course Descriptions

PHRE 11310: Introduction To Buddhism 3 s.h.
Prerequisite: REL 1011 or REL 10200 or REL 1030 or PHIL 10330
This course introduces students to the central teachings and practices of Buddhism, from its Indian origins and East Asian development to its interactions with the modern West. Instructional methods include observation of Buddhist practice as well as study of Buddhist scriptures.

PHRE 11330: Introduction To Daoism 3 s.h.
Prerequisite: REL 10100 or REL 10200 or REL 1030 or PHIL 10330
This course introduces students to the central teachings and practices of Daoism, from its early founders Laozi and Zhuangzi to its interactions with the modern West. Instructional methods include observations of Daoist practice as well as study of Daoist scriptures.

PHRE 11340: Selected Topics In Philosophy & Religion Studies 3 s.h.
This interdisciplinary course examines intersections between philosophy and religion studies. May not be offered every year.

PHRE 11350: Spirituality And Healing 3 s.h.
This course examines the health and healing issues from a cross-cultural perspective. It investigates how different religious traditions interpret and assign meanings to sickness and disease, how they address matters of suffering and affliction, and how they practice healing and therapy. It explores the role and place of spiritual healing in the modern scientific age, and its implications for contemporary health care system and policies.

PHRE 11490: Senior Seminar In Philosophy And Religion 3 s.h.
This captone course for the Philosophy and Religion major engages students in advanced level work in the disciplines of philosophy and religion studies, by focusing on a particular topic of the instructor’s choice. Students complete individual projects. Required for Philosophy and Religion majors.

REL 10100: Introduction To Religion 3 s.h.
This introductory course studies the relationship of religion to culture. It explores varieties of religious expression as well as methods used in studying religion as a human phenomenon.

REL 10200: Religions Of The World 3 s.h.
This course surveys the major world religions in both the Eastern and Western traditions.

REL 10210: Religion In America 3 s.h.
This course explores the wide variety of religious movements that have existed and continue to exist in America. Both traditional religions and cults are considered within the context of American culture.

REL 10214: Religions Of The Western World 3 s.h.
This course will offer you the opportunity to explore the beliefs, literature, ethics and social implications of Judaism, Roman Catholicism, Orthodoxy, Protestantism, Islam and other religions as time permits.

REL 10230: Religions Of Asia 3 s.h.
This course introduces students to major religions in Asia: Hinduism, Buddhism, Confucianism, Taoism and Shinto. It focuses on the historical contexts, central teachings and traditional practices of these religions and their dynamic relations with societies and cultures. Instructional methods include observation of religious practice as well as study of religious scriptures.

REL 10240: Introduction To The Bible 3 s.h.
This course acquaints students with the Bible by a study of its books with the aid of the findings of archeology, literary criticism and other related fields.

REL 10301: Introduction To Judaism 3 s.h.
This course introduces the student to the primary beliefs, texts, and spiritual approaches of the Jewish religious tradition. Covering approximately 3,000 years, this tradition has undergone many changes as the conditions of Jewish life changed. Students will study primary texts such as biblical accounts and commentaries along with contemporary personal reflections.
REL 10320: Introduction To Christianity  
**Prerequisites:** COMP 01112 and one HHL Course  
This course will introduce students to the history, texts, worldview, and contemporary issues of the Christian religious tradition. Spanning two thousand years, the Christian tradition has undergone many changes as it had evolved in the world. Students will study basic texts and historical events while also reflecting on contemporary issues.

REL 10328: Development Of Western Religious Thought  
This course emphasizes the contributions to the Western, and more specifically the Christian, tradition of such figures as Augustine, Aquinas, Luther, Kierkegaard, Tillich and Barth.

REL 10340: Selected Topics In Religion Studies  
**Prerequisite:** COMPOSITION 1 (01111) AND COMPOSITION 2 (01112) OR Equivalents.  
This course examines one topic in religion in depth. Its topic may vary. This course may not be offered annually.

ASTR 11120: Introduction To Astronomy (Lecture And Lab)  
This course is a descriptive study of the universe that emphasizes the physical concepts that explain astronomical phenomena. The evolutionary, structural, and dynamical aspects of the solar system, stars, nebulae, galaxies, and the entire universe are discussed. The laboratory experience has both quantitative and qualitative components that include outdoor observations of night sky objects, daytime solar observations, and computer simulations. There is occasional evening viewing outside of class.

ASTR 11200: Exploration Of The Solar System  
In the study of planetary science, the students will explore geology, chemistry, physics and astronomy in their applications to the composition, dynamics, atmospheres, surfaces, and magnetospheres of objects within the solar system. The search for life or conditions suitable for life in other parts of the solar system is a driving force of solar system exploration., thus biology is incorporated as well. This course will help the student develop skills necessary to discuss and write about science.

ASTR 11220: Observational Astronomy  
**Prerequisite:** MATH 01122 OR MATH 01130 OR MATH 01140 OR MATH 03125  
This course surveys current methods in modern astronomy research and education. The topics include, but are not limited to, modern telescopes (optical and radio), CCD cameras, astronomical data, imaging software, solar observing, and planetarium operation. Topics during a given term may be chosen around a theme of either research or education. This course features the use of precision instruments and quantitative methods. Evening observational projects, field trips, and oral presentations are part of this course.

ASTR 11230: Introduction To Astronomy And Astrophysics  
**Prerequisite:** MATH 01130 OR MATH 01140  
This course is an overview of astrophysics, with an emphasis on the relevant physics in modern astronomy. Topics include the solar system, properties of stars, stellar structure and evolution, supernovae, white dwarfs, neutron stars, black holes, the Milky Way galaxy, star formation, interstellar medium, normal galaxies, active galaxies and quasars, and Big Bang cosmology. The relevant physics will be briefly presented in the course. This course is intended for students majoring in the natural sciences, mathematics, computer science, and engineering.

ASTR 11250: Astronomy Research I  
**Prerequisite:** minimum 3.0 GPA within major/minor AND permission of instructor  
This course introduces and/or develops modern research techniques used in astronomy. Research is performed in collaboration with astronomy faculty. Emphasis will be placed on developing research skills, developing technical writing skills, and the development of skills needed for scientific presentations.

ASTR 11251: Astronomy Research II  
**Prerequisite:** minimum 3.0 GPA within major/minor AND permission of instructor  
This course introduces and/or develops modern research techniques used in astronomy. Research is performed in collaboration with astronomy faculty. Emphasis will be placed on developing research skills, developing technical writing skills, and the development of skills needed for scientific presentations.

ASTR 11301: Planetary Astronomy  
**Prerequisites:** (ASTR 11241 or ASTR 11230) or (PHYS 02201 or PHYS 00222)  
The science of planetary systems, both solar and extra-solar, is examined. Topics include planet formation, radioactive dating, small-body dynamics, interactions of radiation with matter, tides, planetary interiors, atmospheres, and magnetospheres.
ASTR 11302: Stellar Astrophysics 3 s.h.
Prerequisites: (ASTR 11241 or ASTR 11230) or (PHYS 02201 or PHYS 00220)
This course presents the properties, structure, formation, evolution, and deaths of stars. The physics of stellar atmospheres and stellar spectroscopy is presented, and the development of the Hertzsprung-Russell diagram is examined. The theory of stellar structure is detailed including the process of stellar nucleosynthesis. Degenerate matter and the structure of collapsed stars are described. Other topics include: stellar pulsation, close binary systems, accretion, novae, supernovae, pulsars, black holes, and star clusters.

ASTR 11303: Galactic Astronomy And Cosmology 3 s.h.
Prerequisites: (ASTR 11241 or ASTR 11230) or (PHYS 02201 or PHYS 00220)
The structure, kinematics, formation, and evolution of the Milky Way Galaxy and other galaxies are studied. Elements of general relativity are introduced as the physics of supermassive black holes and active galaxies are examined. This course covers relativistic (Big Bang) cosmology, the large-scale structure of the Universe, the expansion history and fate of the Universe, and current estimates of the age of the Universe. Observations that measure the matter and energy content of the Universe are presented. Cosmic inflation, primordial nucleosynthesis, the Cosmic Microwave Background, and the Hubble flow are covered in depth.

ASTR 11350: Astronomy Research III 1 to 3 s.h.
Prerequisite: PHYS 00300 AND minimum 3.0 GPA within major/minor AND permission of instructor
This course introduces and/or develops modern research techniques used in astronomy. Research is performed in collaboration with astronomy faculty. Emphasis will be placed on developing research skills, developing technical writing skills, and the development of skills needed for scientific presentations.

PHSC 01110: Principles Of Physical Science 3 s.h.
This course provides experiences and information that will develop a better understanding of the function and significance of science in today’s world. It emphasizes the general principles of physics and stresses their influences in the development of all the physical sciences.

PHSC 01310: Independent Study (Physical Sciences) 1 to 6 s.h.
Prerequisites: permission of instructor.
Students who enter the independent study program working under the supervision of a faculty member are required to identify and select an appropriate project area, develop an achievable plan, execute the project and prepare a presentation of the completed study.

PHYS 00120: Selected Topics In Physics 3 s.h.
The content of this course varies to reflect the role of physics in society. A limited number of topics are selected from among the following: mechanics, thermodynamics, sound, light and optics, electricity and magnetism, electric circuits, modern physics or the investigation of the physics of applied technologies. It studies the fundamental principles underlying the topics and considers connections to the physical and social environment.

PHYS 00140: Physics Of Current Technologies 4 s.h.
This course introduces contemporary concepts of physics through their application in commercially available technologies. The course mostly focuses on information storage technologies but actual course content evolves to reflect the specialties of the instructor. Concepts such as electrical resistance, magnetic fields, magnetic domains, electron tunneling, and assorted microscopic techniques will be introduced. Laboratories consist of hands-on activities including the imaging of magnetic information (magnetic domains), optical information (CD dyes) and individual atoms.

PHYS 00150: Physics Of Everyday Life 4 s.h.
The goal of this course is to expose students with a non-science background to physics. The students will experience the excitement of physics by examining phenomena of our everyday environment. The historical development of such ideas will be studied as well. Topics selected for study include Mechanics, Matter, Heat, Sound, Light, Electricity, Magnetism, Atomic and Nuclear Physics. Physics will be communicated conceptually rather than mathematically.
PHYS 00175: Physics Of Sound And Music (Lecture And Lab) 4 s.h.
The goal of this course is to expose students to physics through its application to sound and music. The students will study these applications by examining the phenomena of voice, sound, hearing, musical instruments, acoustics, electronic technology and reproduction of sound and music. The historical development of such topics will be studied as well.

PHYS 00210: Physics I Without Calculus 4 s.h.
Prerequisites: Score of at least 60 on CLM OR MATH 01122 OR MATH 01130 with concurrent registration allowed OR MATH 01140 with concurrent registration allowed
This course studies the principles of mechanics, heat, and fluids. Calculus is not used. The course emphasizes problem work involving the use of Algebra, Trigonometry, and Geometry.

PHYS 00211: Physics II Without Calculus 4 s.h.
Prerequisite: PHYS 00210 or PHYS 00220
This course studies the basic principles of electricity, magnetism, and light. Calculus is not used. The course emphasizes problem work involving the use of Algebra, Trigonometry, and Geometry.

PHYS 00220: Introductory Mechanics 4 s.h.
Co/Prerequisite: MATH 01130 or MATH 01140
This course studies the basic principles of mechanics and is equivalent to most calculus based introductory mechanics courses often entitled Physics I. The course is designed to cover introductory mechanics. (Newton’s laws, energy and momentum conservation, rotating systems, statics, gravity and simple harmonic motion) at a level appropriate for future scientists and engineers. The course includes a laboratory component and it emphasizes problem-solving techniques.

PHYS 00221: Introductory Thermodynamics, Fluids, Waves, & Optics 4 s.h.
Prerequisite: PHYS 00220Corequisite: MATH 01131 or MATH 01141
This introductory course studies the basic principles of thermodynamics, fluids, waves, and optics and their application. The concepts will be applied through problem solving and laboratory experiences. A large portion of the content of this course builds from the concept of conservation of energy covered in the introductory mechanics course. The course is required for any physical science major and recommended for those majoring in biochemistry, chemistry, biology, engineering, or mathematics. The specific topics covered include elastic properties of materials, fluid mechanics, mechanical waves, sound, conduction of heat, kinetic theory of gases, the laws of thermodynamics, light, geometric optics, interference and diffraction.

PHYS 00222: Introductory Electricity & Magnetism 4 s.h.
Prerequisite: PHYS 00220Corequisite: MATH 01131 or MATH 01141
This course studies the basic principles of electricity and magnetism and is equivalent to most calculus based introductory electricity and magnetism courses often entitled Physics II. The course is designed to cover introductory electricity and magnetism (charge, current, potential, fields, AC and DC circuits, Maxwell’s Equations, and electromagnetic waves) at a level appropriate for future scientists and engineers. The course includes a laboratory component and it emphasizes problem-solving techniques.

PHYS 00250: Physics Research I 1 to 3 s.h.
Prerequisite: Minimum 3.0 GPA within major/minor AND permission of instructor.
This course introduces and/or develops modern research techniques used in physics. Research is performed in collaboration with one or more faculty in an area of specialization of the faculty. Emphasis will be placed on developing research skills, developing technical writing skills, and the development of skills needed for scientific presentations.

PHYS 00251: PHYSICS RESEARCH II 1 to 3 s.h.
Prerequisite: Minimum 3.0 GPA within major/minor AND permission of instructor.
This course introduces and/or develops modern research techniques used in physics. Research is performed in collaboration with one or more faculty in an area of specialization of the faculty. Emphasis will be placed on developing research skills, developing technical writing skills, and the development of skills needed for scientific presentations.

PHYS 00300: Modern Physics 4 s.h.
Prerequisites: (MATH 01131 or MATH 01141) AND(PHYS 00211 or PHYS 00222)
This course covers modern physics developed since the turn of the 20th century. After a review of some classical physics, course topics include special relativity, wave and particle aspects of radiation, matter waves, models of the atom, ionization, spectra, x-rays, and introductory quantum theory. It also covers theories developed by Planck, Einstein, Rutherford, Bragg, Bohr, Compton, de Broglie, Pauli, Schrodinger and Heisenberg.
PHYS 00310: Analytical Mechanics
Prerequisite: PHYS 00300
This course teaches students Newtonian, Lagrangian and Hamiltonian formulations of mechanics, and their applications to such problems as Central Force Motion, Linear and Nonlinear Oscillations, Collisions between particles, Noninertial Systems, Coupled Oscillations and Normal Coordinates, and Rigid Bodies.

PHYS 00315: Instrumentation for Biomedical Sciences
Prerequisite: PHYS 00300 or BMS 02230
The design and use of advanced instrumentation are critical in all areas of the biomedical sciences for analysis of biomedical systems and for synthesis of new biomedical technologies. This course will familiarize students with a wide range of the instrumentation they are likely to encounter in a biomedical career. Various instruments will be examined with respect to: (1) Theoretical basis of the measurement or synthesis and relation to instrumentational architecture, (2) Implementation of the method and experimental design, and (3) Data interpretation and analysis. The course will integrate primary scientific literature and discuss the evolution of instrumentation with new technologies and/or applications. The course will include inspection of instruments and observation of experimental execution, providing students with experience over a broad range of modern biomedical instrumentation.

PHYS 00320: ELECTRICITY & MAGNETISM I
Prerequisite: PHYS 00300
This course studies classical electro-magnetism. Its topics include: the laws of electromagnetic force, Maxwell’s equations, electromagnetic induction, interaction of currents, and electromagnetic energy and waves. This course may not be offered annually.

PHYS 00321: Electricity And Magnetism II
Prerequisite: PHYS 00320
This course studies advanced applications of Maxwell’s equations. For example, the generation of electromagnetic radiation and its propagation through matter will be discussed. The connection between Maxwell’s equations and the special theory of relativity will be emphasized.

PHYS 00325: Electric Circuits
Prerequisite: PHYS 00300
This course provides a lab-intensive introduction to electronic circuit design, construction, and troubleshooting, developing many of the analytical and laboratory skills needed to work with circuits commonly encountered in experimental physics research. Although the emphasis is on analog circuits, elementary digital circuits will be studied as time permits. A required final project integrates elements learned throughout the term.

PHYS 00330: Mathematical Physics
Prerequisite: PHYS 00300
This introductory course studies topics as they apply to physics: infinite series, complex numbers, determinants and matrices, partial differentiation, vector calculus, Fourier series. Certain more advanced topics may be treated: calculus of variations, gamma and beta functions, coordinate transformations, tensor analysis, functions of a complex variable, Legendre polynomials and Bessel functions. This course may not be offered annually.

PHYS 00340: Optics And Light
Prerequisite: PHYS 00300
This course studies the nature and propagation of light, dispersion, reflection and refraction at plane and spherical surfaces, lenses (thin and thick), aberrations of lenses and mirrors, optical instruments, polarization, diffraction and photometry. It also discusses modern developments and techniques (such as fiber optics, lasers, holography). This course may not be offered annually.

PHYS 00345: Introduction To Optical Design Program Zemax
Prerequisite: PHYS 00300
The ZEMAX optical design program is a comprehensive software tool for optical design. It integrates all the features required to conceptualize, design, optimize, analyze, tolerate, and document virtually any optical system. This course discusses the theory of optical system design with focus on geometrical optics and aberration theory. It introduces the computer program ZEMAX as a tool for lens designs such as spectrometers, scanning systems and telescopes. ZEMAX is widely used in the optics industry as a standard design tool.
higher level.
Perturbation theory, and scattering. Some topics may overlap with the ones in Quantum Mechanics I, but are taught on a more advanced level.

Some domains covered include (1) magnetism.

...quantum physics, particles in three-dimensions, spin and the Pauli exclusion principle.

...quantum statistical mechanics, time-independent perturbation theory, time-dependent perturbation theory, and scattering. Some topics may overlap with the ones in Quantum Mechanics I, but are taught on a higher level.

ROWAN UNIVERSITY UNDERGRADUATE CATALOG 2016-2017
PHYS 00430:  Statistical Physics  
Prerequisite: PHYS 00300  
The student will study in detail the laws of thermodynamics. The statistical derivation of these laws will be presented. 
Topics include: ideal gases, classical and quantum distribution functions, phase transitions, and other special topics.

PHYS 00440:  Advanced Laboratory  
Prerequisite: PHYS 00300  
This course introduces modern experimental techniques commonly used in physics. Experimental results will be correlated with existing theories. Technical writing skills will be developed and evaluated.

PHYS 00450:  Physics Research IV  
Prerequisite: PHYS 00300 AND minimum 3.0 GPA within major/minor AND permission of instructor  
This course introduces and/or develops modern research techniques used in physics. Research is performed in collaboration with one or more faculty in an area of specialization of the faculty. Emphasis will be placed on developing research skills, developing technical writing skills, and the development of skills needed for scientific presentations.

PHYS 00470:  Selected Topics In Advanced Physics  
Prerequisite: PHYS 00300 or permission of instructor  
This course is aimed to expose students to advanced physics topics that are important for their career development and their involvement with faculty research. The topics include, but are not limited to, Solid State Physics, Atomic and Molecular Physics, Occupational Physics, Special Relativity, and Elementary Particles. One topic from the above list will be chosen each time the course is offered.

PHYS 00475:  Radiation Physics  
Prerequisites: PHYS 00300 For Biology, Chemistry, and Biochemistry Majors: (BIOL 01202 or BIOL 01203) and PHYS 00211  
This course is a lecture course aimed at training students at understanding radiation and its role in measurement sciences, imaging, spectroscopy, diffraction, and ionization of biomaterials. This course is useful for students planning a career in biophysical sciences, health physics, or radiation physics. Radiation Physics will introduce students to x-ray, gamma, and neutron instrumentation and techniques. Students will gain an understanding of the interaction of radiation with matter and how radiation is used in imaging, measurement and for ionizing matter. This course will be part of a future Health Physics specialization.

PHYS 00499:  Independent Study - Physics  
1 to 4 s.h.

ECON 04100:  American Economic Systems  
3 s.h.  
Focuses on the fundamental ideology, mechanics, development, and contemporary state of American economic system with reference to the global economy. Course is recommended for all students who want only a one semester course in economics.

ECON 04101:  An Introduction To Economics-A Macroeconomic Perspective  
3 s.h.  
This course analyzes the overall level of economic activity in the United States and examines its major determinants, public stabilization policies, economic growth and international trade.

ECON 04102:  An Introduction To Economics-A Microeconomic Perspective  
3 s.h.  
This course analyzes resource allocation among alternative uses. It studies consumer demand, product and factor price determination, general equilibrium and optimal income distribution.

ECON 04200:  History Of Economic Ideas  
3 s.h.  
This course investigates the development of economic thought. It analyzes the significant contribution of philosophers and economists from the works of Plato to those of Keynes.

ECON 04205:  American Economic History  
3 s.h.  
This course surveys the process of U.S. economic development to the present day. It analyzes the factors behind the growth of the U.S. economy and the prospects for the future. This course may not be offered annually.

ECON 04210:  Environmental Economics  
3 s.h.  
Prerequisites: ECON 04102  
This course analyzes the economic causes and consequences of environmental deterioration and examines the relevant public policies. This course may not be offered annually.
ECON 04215: Current Economic Problems And Policies 3 s.h.
Prerequisites: ECON 04101 and ECON 04102
This course explores current significant problems confronting the United States' economy. This course may not be offered annually.

ECON 04225: Women In The Economy 3 s.h.
This course analyzes the economic roles of women in society and studies recent movements, policies and their implementation. This course may not be offered annually.

ECON 04269: Selected Topics In Economics 3 to 6 s.h.
Prerequisites: ECON 04101 or ECON 04102
This course focuses on a detailed study of a selected topic in economics. Students should consult the instructor regarding the course topic, methodology, and objectives. Any particular selected topic(s) may be offered once within a period of three years.

ECON 04282: Economic Statistics 3 s.h.
Prerequisites: ECON 04101, ECON 04102 and STAT 02100 or STAT 02260
This course studies statistical decision-making, linear regression, correlation and the construction and use of index numbers and time series through the explicit use of economic examples, illustrations and applications.

ECON 04292: Statistics For Economists 3 s.h.
Prerequisites: ECON 04101 and ECON 04102
This course is an introduction to the use of statistical concepts and their applications in economics. The course covers areas such as probability, hypothesis testing, regression analysis, correlation, and time series. Students cannot receive credit for both this class and Economic Statistics (ECON 04.282).

ECON 04301: Intermediate Macroeconomics 3 s.h.
Prerequisites: ECON 04101
This course analyzes in depth the factors determining the level of national income, employment, price levels and interest rates.

ECON 04302: Intermediate Microeconomics 3 s.h.
Prerequisites: ECON 04102 AND (MATH 01130 OR MATH 01140 OR MATH 03125)
This course analyzes factor price determination, general equilibrium, capital theory and optimal income distribution.

ECON 04303: Principles Of Economics: A Survey 3 s.h.
This course analyzes the market system and alternative mechanisms for determining prices and allocating resources. Pure competition, monopolistic competition, oligopoly and monopoly are examined. Additionally, the determinants of aggregate employment and national income, money, banking, monetary policy, international trade and finance are analyzed. This course is not available to economics majors.

ECON 04305: Money And Banking 3 s.h.
Prerequisites: ECON 04101
This course studies the operation of the money and banking system in the U.S. It stresses Federal Reserve control of money supply and credit conditions to combat inflation and unemployment. It considers monetary arrangements and problems among nations. This course may not be offered annually.

ECON 04307: Economic Development M/G 3 s.h.
Prerequisites: ECON 04101 and ECON 04102
This course studies the process of economic growth, the sources of increasing economic productivity, the resources for investment and the proper allocation of resources. This course may not be offered annually.

ECON 04310: Global Economics - M/G 3 s.h.
Prerequisites: ECON 04101 and ECON 04102
This course studies the economic aspects of globalization taking place amongst countries through linkages of international trade and commerce, foreign direct investment, short term capital flows, institutional lending, immigration, emigration, knowledge, and technology. Emphasis will be placed on the economic processes and ramifications of globalization. This course may not be offered annually.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
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<tbody>
<tr>
<td>ECON 04315</td>
<td>Public Finance</td>
<td>3 s.h.</td>
<td>ECON 04101 and ECON 04102</td>
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<td></td>
<td>This course investigates taxes and debts of government, its budgets and intergovernmental fiscal relationships and public expenditure theory (cost-benefit analysis). This course may not be offered annually.</td>
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<tr>
<td>ECON 04320</td>
<td>Contemporary Economic Systems M/G</td>
<td>3 s.h.</td>
<td>ECON 04101 and ECON 04102</td>
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<td></td>
<td>This course analyzes theories, policies and practices of selected countries and methods of solving macroeconomic and microeconomic problems. This course may not be offered annually.</td>
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<tr>
<td>ECON 04345</td>
<td>Labor Economics</td>
<td>3 s.h.</td>
<td>ECON 04102</td>
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<td>This course studies the development of the American trade union movement and its impact on wage levels and income distribution. It examines the impact of trade unions on individual employers in the private and public sectors with the help of simulation of contract negotiation. This course may not be offered annually.</td>
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<tr>
<td>ECON 04351</td>
<td>Health Economics</td>
<td>3 s.h.</td>
<td>ECON 04101 and ECON 04102</td>
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<td>An economic analysis of the health care industry and the roles of markets and government are examined. Topics to include access to care, cost containment, the role of insurance, and the impact of information and technology.</td>
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<td>ECON 04360</td>
<td>Urban Economics</td>
<td>3 s.h.</td>
<td>ECON 04102</td>
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<td>This course analyzes the economic problems that are related to the urban crisis in America and examines the implications of existing public policies for the resolution of the problems. Urban poverty and discrimination, housing and transportation receive comprehensive treatment. This course may not be offered annually.</td>
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<tr>
<td>ECON 04392</td>
<td>ECONOMETRICS</td>
<td>3 s.h.</td>
<td>ECON 04292 or MATH 03125 or MATH 01130</td>
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<td>Econometrics is the set of statistical techniques used to measure and analyze economic relationships, and to test these predictions. This course will focus on statistical analysis and the interpretation of economic data. In addition, the course will utilize data analysis and statistical modeling and apply economic methods to problems in economics.</td>
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<tr>
<td>ECON 04395</td>
<td>The Economics Of Personal Financial Planning</td>
<td>3 s.h.</td>
<td>ECON 04101 and ECON 04102</td>
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<td>This course examines the process of developing and implementing long-range plans to achieve financial objectives. Studies personal and family resources, how people spend, save, protect and invest their money, concepts of budgeting, cash management, borrowing, tax management, risk management, investments, retirement planning, and estate planning receive particular attention.</td>
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<tr>
<td>ECON 04410</td>
<td>Internship In Economics</td>
<td>3 s.h.</td>
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<td>This course provides practical experience for the economics major. The student is placed in supervised settings in business, government or other organizations. Interns will develop their skills in applying various economic theories, principles and/or concepts to assigned real world problems. The faculty in the Economics Department will closely supervise, monitor, and evaluate the learning experience.</td>
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<td>ECON 04492</td>
<td>Seminar In Economics Wi</td>
<td>3 s.h.</td>
<td>COMP 01112 and ECON 04301 and ECON 04302 and ECON 04392</td>
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<td>This course develops the interrelationships of various theoretical and applied areas within the study of economics through the techniques of research design.</td>
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<td>ECON 04495</td>
<td>Independent Study-Economics</td>
<td>1 to 3 s.h.</td>
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<tr>
<td>EDPA 02320</td>
<td>Public Administration</td>
<td>3 s.h.</td>
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<td></td>
<td>Students consider public administration principles and organizations, internal governmental administrative structures, the interactions between organizations and their environments, personnel and policy procedures, administrative communication methods, and other management techniques. This course may not be offered annually.</td>
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<td>Course Code</td>
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<tr>
<td>EDPA 02410</td>
<td>Public Policy</td>
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<td>Students analyze U.S. public policy using a variety of conceptual models including cost-benefit analysis. Case studies are emphasized. This course may not be offered annually.</td>
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<tr>
<td>EDPA 02412</td>
<td>Administrative Law And The Regulatory Process</td>
<td>3 s.h.</td>
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<td>A study of the federal regulatory process and the politics of regulatory agencies in the U.S. Emphasis is upon the political economy of regulation. This course may not be offered annually.</td>
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<tr>
<td>EDPA 02490</td>
<td>Public Service Internship</td>
<td>3 to 12 s.h.</td>
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<tr>
<td>Prerequisites: EDPA 02320 or POSC 07300 or POSC 07303</td>
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<td>Students are provided with an opportunity to get first-hand experience in government administration and related political processes through work in a variety of public settings (government agencies, public officials' offices, law firms, etc.).</td>
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<tr>
<td>POSC 07100</td>
<td>Introduction To Government And Politics</td>
<td>3 s.h.</td>
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<td>Professors who teach this course will normally focus on some, but not all, of the following topics: political and governmental structures, functions, and processes; political behavior; public law and public policy; and political values or philosophies.</td>
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<td>POSC 07110</td>
<td>American Government</td>
<td>3 s.h.</td>
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<td>This course focuses on the American Federal government, emphasizing the structure, operation and processes of our political system. Coverage will include political values as they are reflected in major public policies.</td>
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<td>POSC 07200</td>
<td>Survey Of Western Political Theory</td>
<td>3 s.h.</td>
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<td>This course provides students with an understanding of Western political thought from Plato to Karl Marx. It surveys Western political theory and analyzes such major concepts as order, justice, freedom, authority, power and political obligation.</td>
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<tr>
<td>POSC 07220</td>
<td>State And Local Government</td>
<td>3 s.h.</td>
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<td>Prerequisites: POSC 07110</td>
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<td>This course studies legislatures, executives, judicial systems and bureaucrats in the working of state and local government and the influence of political parties, interest groups, and elections on government policy. It examines inter-governmental relations and the role of state and local government in the federal system. This course may not be offered annually.</td>
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<td>POSC 07300</td>
<td>Comparative Political Systems</td>
<td>3 s.h.</td>
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<td>Prerequisites: POSC 07110</td>
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<td>This course presents a comparative analysis of the fundamental law, political institutions, policies and processes and their relationship to political culture in Britain, France, the C.I.S. and a selected Third World country.</td>
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<td>POSC 07303</td>
<td>Campaigns, Political Parties And Interest Groups</td>
<td>3 s.h.</td>
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<td>Prerequisites: POSC 07110</td>
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<td>This course compares the functions of U.S. political parties, interest groups, and political movements in recruiting and nominating candidates for public office, supporting campaigns and elections, organizing and staffing government, representing and shaping public opinion, and rationalizing and mobilizing the vote. The U.S. system is compared to the systems of other countries. Special attention is given to the civil rights movement, the reform of the presidential election process, and the candidate-centered professional campaign in the decline of the influence of the political parties.</td>
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<td>POSC 07305</td>
<td>The Legislative Process</td>
<td>3 s.h.</td>
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<td>Prerequisites: POSC 07110</td>
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<td>This course examines the structure, politics and policy-making functions within the legislative process, focusing on the role of Congress and the state legislature in the U.S. political system. This course may not be offered annually.</td>
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<td>POSC 07306</td>
<td>The Presidency</td>
<td>3 s.h.</td>
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<td>Prerequisites: POSC 07110</td>
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<td>This course studies the office of the President, its history, powers and role in the American political system. The course stresses the relationship of the presidency to other branches of government and of the White House agencies to the other elements of the Executive Branch. This course may not be offered annually.</td>
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</table>
POSC 07308: Current Problems In American Politics 3 s.h.
This course deals with selected issues of topical concern in American politics. Issues may be "headlines" that are receiving current media attention (usually policy debates), or they may focus on more persistent problems of the kind that concern political scientists, e.g. the consequences of party decline, the role of media in elections, etc. This course may not be offered annually.

POSC 07310: American Constitutional Law 3 s.h.
Prerequisites: POSC 07110
An introduction to major concepts of constitutional law as reflected in landmark cases, this course considers such matters as judicial review, national supremacy, the separation of powers, constitutional federalism and the commerce clause as well as the impact of various judicial philosophies on the decisions of the Supreme Court.

POSC 07311: Women And American Politics 3 s.h.
This course examines the historical role of women in a variety of political movements, varied views of feminism and the impact of participation on the changing status of women in American society. This course may not be offered annually.

POSC 07312: Freedom Of Expression 3 s.h.
This course considers the range of first amendment issues relating to speech, the press and the right to assemble. Issues of censorship and national security, obscene speech, commercial speech, and libel, among others, will be discussed. This course may not be offered annually.

POSC 07320: International Relations 3 s.h.
Prerequisites: POSC 07110
This course studies the distribution of power among states in the international system, the effect of system change on national behavior, external and domestic sources of international influence and the relationship of capabilities and intentions in foreign policy decisions.

POSC 07321: Contemporary World Problems 3 s.h.
This course examines selected problems such as terrorism, world population and hunger, regional conflicts and arms control and disarmament.

POSC 07323: Politics Of Race, Poverty, And Welfare In The U.S. 3 s.h.
This course studies the social structure of race and poverty in the United States and explores the constituencies for anti-poverty and anti-discrimination legislation. This course may not be offered annually.

POSC 07324: Black Americans And American Politics 3 s.h.
This course examines the role of Black Americans in the political system, the forms and changing nature of their participation and a review of judicial and administrative decisions affecting the political and social status of Black Americans. This course may not be offered annually.

POSC 07330: Contemporary U.S. Foreign Policy 3 s.h.
Prerequisites: POSC 07110
This course presents historical themes and patterns of U.S. foreign policy with special focus on the post-World War II period. It considers the sources of influence on policy-making and the major issues in contemporary policy. This course may not be offered annually.

POSC 07340: Civil Rights And Civil Liberties 3 s.h.
Prerequisites: POSC 07110
This course examines major trends and court decisions which have affected civil rights and civil liberties. Topics which may be raised include religion, speech, press, privacy, voting, equal protection, and due process.

POSC 07341: Russian, East European And Eurasian Politics 3 s.h.
This course examines the politics and history of Eastern Europe and the fifteen Soviet successor states in contemporary Eurasia. Processes of political, economic and social change are studied with an eye on institutional, attitudinal, and behavioral adaptations to the new realities. This course may not be offered annually.

POSC 07345: GOVT/POLIT MID-EST 3 s.h.
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>POSC 07346</td>
<td>Politics And Society Of Great Britain</td>
<td>3 s.h.</td>
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<td>This course studies the unique aspects of a political</td>
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<td>system which has functioned without a written</td>
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<td>constitution. It emphasizes the historic development</td>
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<td>of British constitutional notions, and the</td>
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<td>relationships between the major institutions</td>
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<td>of monarchy, the parliament, and political</td>
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<td>parties. This course may not be offered annually.</td>
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<tr>
<td>POSC 07347</td>
<td>Politics Of The Middle East</td>
<td>3 s.h.</td>
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<td>Prerequisite: POSC 07110</td>
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<td>This course provides students with an introduction</td>
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<td>to the rise of states, social movements, and</td>
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<td>contentious politics in the greater Middle East</td>
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<td>region. The course begins with the decline of</td>
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<td>empires and state formation up through the 20th</td>
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<td>century, then examines political change in the</td>
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<td>region, (Islamist mobilization, revolution, civil</td>
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<td>war and democratization), and concludes with a</td>
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<td>survey of contemporary issues, such as</td>
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<td>nationalism, Muslim minority politics, women and</td>
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<td>politics, and changes in international politics</td>
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<td>since September 11, 2001. This course may not be</td>
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<td></td>
<td>offered annually.</td>
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<tr>
<td>POSC 07350</td>
<td>Introduction To Asian Political Systems</td>
<td>3 s.h.</td>
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<td>This course focuses on the political systems and</td>
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<td>processes of major Asian nations: India, Pakistan,</td>
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<td>Sri Lanka, Indonesia, Japan and China. This course</td>
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<td>may not be offered annually.</td>
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<tr>
<td>POSC 07351</td>
<td>Russian Foreign Policy</td>
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<td>Students study the historical record of Soviet foreign</td>
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<td>policy since 1917, examining the relative importance</td>
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<td>of ideology and national interest and other</td>
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<td>domestic and external influences on Soviet</td>
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<td></td>
<td>policy-making. The course also discusses policy</td>
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<td></td>
<td>process and contemporary problems of policy. This</td>
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<tr>
<td></td>
<td>course may not be offered annually.</td>
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<tr>
<td>POSC 07360</td>
<td>Methodology And Statistics In Political Science</td>
<td>3 s.h.</td>
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<tr>
<td>Prerequisites: POSC 07460 prerequisite General</td>
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<td></td>
<td>Requirements:</td>
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<tr>
<td></td>
<td>This course considers the varied ways that political</td>
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<td></td>
<td>scientists study problems, with primary attention</td>
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<td></td>
<td>to scientific method and quantitative skills.</td>
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<td>Students are expected to become adept at using and</td>
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<tr>
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<td>interpreting forms of descriptive statistics</td>
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<td></td>
<td>commonly used in the social sciences.</td>
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<tr>
<td>POSC 07370</td>
<td>Special Topics In Political Science</td>
<td>3 s.h.</td>
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<tr>
<td></td>
<td>This course is a vehicle to allow visiting scholars</td>
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<td></td>
<td>to offer courses in their specialities which are</td>
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<td></td>
<td>not part of regular course offerings. This course</td>
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<td>may not be offered annually.</td>
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<tr>
<td>POSC 07375</td>
<td>Politics And The Judicial Process</td>
<td>3 s.h.</td>
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<tr>
<td>Prerequisites: POSC 07110</td>
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<tr>
<td></td>
<td>This course describes and analyzes the American</td>
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<td>judicial process, with particular attention to the</td>
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<td>role of the judicial branch in developing public</td>
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<td>policy. Topics to be explored include jurisprudential</td>
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<td>theories of the law, the organization and staffing</td>
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<td>of courts, civil and criminal process, judicial</td>
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<td>selection methods, judicial behavior, the legal</td>
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<td>profession, law and social change and the political</td>
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<td>and social impact of court decisions.</td>
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<tr>
<td>POSC 07380</td>
<td>Politics On Film</td>
<td>3 s.h.</td>
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<td>Prerequisites: POSC 07110</td>
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<td></td>
<td>This course in American national politics and</td>
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<td>government uses film and other examples of popular</td>
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<td>culture as tests to supplement conventional</td>
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<td>readings, lectures, and assignments. Topics</td>
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<td>include political culture, political institutions,</td>
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<td>campaigns, and public policy.</td>
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<tr>
<td>POSC 07385</td>
<td>Environmental Policy</td>
<td>3 s.h.</td>
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<td>Prerequisite: POSC 07110</td>
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<td>This course will introduce students to major national</td>
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<td>debates over environmental politics and policy. It</td>
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<td>will discuss both theory and practice, emphasizing</td>
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<td>the political, organizational, scientific and</td>
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<td>economic drivers shaping environmental policy. It</td>
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<td>will also use case studies to explore the history</td>
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<td>and results of the environmental movement.</td>
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<td>POSC 07400</td>
<td>American Political Thought</td>
<td>3 s.h.</td>
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<td></td>
<td>This course studies the development of American</td>
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<td>political thought from colonial times to the present</td>
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<td>through major thinkers. Ideas are considered in</td>
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<td>relation to political events and broader historical</td>
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<td>movements to which they are connected. This course</td>
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<tr>
<td>POSC 07401</td>
<td>Contemporary Political Thought</td>
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<td>This course considers major 19th and 20th century</td>
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<td>ideologies from the perspectives of thinkers who</td>
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<td>helped shape them. It considers socialism, fascism,</td>
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<td>liberalism and conservatism through the works of</td>
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<td>writers like Marx, Mill, Ortega and Burke. The</td>
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<td>course may also consider contemporary rethinking of</td>
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<td>contract theory (e.g. Rawls, Nozick). This course</td>
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<td>may not be offered annually.</td>
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Course Descriptions

POSC 07410: Selected Problems In Constitutional Law 3 s.h.
Prerequisites: POSC 07310
This course explores specific issues in recent Supreme Court decisions, and the process through which such issues are resolved, emphasizing one or two areas of current interest. This course may not be offered annually.

POSC 07415: In-Depth Study Of The Current Supreme Court 3 s.h.
Students spend three days hearing oral arguments at the Supreme Court. Prior research on an assigned case will culminate in a paper in which the student will predict the outcome of the Court's decision.

POSC 07420: International Law 3 s.h.
This course considers the role of law among nations, the source of international law in practice and convention and the national courts, international courts and other vehicles for adjudicating and enforcing international law. This course may not be offered annually.

POSC 07421: International Organizations 3 s.h.
This course studies the League of Nations, the United Nations and other international and regional organizations in relation to such functions as peace-keeping, conflict resolution, international consensus-building, etc. This course may not be offered annually.

POSC 07441: Political Problems Of Modern Africa 3 s.h.

POSC 07489: Seminar In Political Science - Wi 3 s.h.
Prerequisites: COMP 01112 and POSC 07360
This course stresses careful reading and research in primary and secondary material related to selected problems in political science. Primary emphasis will be on writing a critical and analytical paper.

POSC 07490: Seminar In Political Science 3 s.h.
(Open only to senior political science majors) This course stresses careful reading and research in primary and secondary material related to selected problems in political science. Primary emphasis will be on writing a critical and analytical paper.

POSC 07491: Independent Study In Political Science 3 to 9 s.h.
This course focuses on individual projects under the guidance of a faculty member; it cannot be used as a substitute for a course offered by the department. This course may not be offered annually.

PSY 01105: The Psychology Of Ethnic Identity & Community In America 3 s.h.
Prerequisites: PSY 01100 or PSY 01107
This course will facilitate students' development of knowledge and appreciation of racial/ethnic identity formations and their impact on intergroup relations and orientations toward community in America. Students will engage in a variety of individual and collaborative strategies for studying their own and others' racial/ethnic identities, interracial and interethnic relations and the prospects for constructing a sense of pluralistic and egalitarian communities.

PSY 01106: Psychology Of Scientific Thinking 3 s.h.
Prerequisites: PSY 01107
Students will be introduced to the methods of science and the role that science plays in the understanding of how the world works. The development of critical thinking skills and an evidence based approach to evaluating scientific claims will be emphasized. Students will also be introduced to the psychological processes that underlie the scientific method and the persistence of belief in pseudoscientific and non-scientific claims.

PSY 01107: Essentials Of Psychology 3 s.h.
Students will be introduced to psychology, the scientific study of behavior. This course will highlight the key areas in psychology that help to explain human behavior. This course will include discussion of diverse topics such as, perception, learning, thinking, memory, motivation, emotion, stress, and health, personality, physiological processes, psychological disorders and treatment, development, intelligence, and social psychology.

PSY 01200: Psychology Of Women & Cultural Experience 3 s.h.
Prerequisites: PSY 01100 or PSY 01107
This course explores the influence of gender, race, and class in the psychological development and experience of women in cultural contexts. Although it will primarily focus on the lives of women in the United States, an attempt will be made to provide linkage to women's experiences globally. Topics covered will include the role of gender bias in the history of psychology, female personality development, women in the workplace, women's psychosexual issues, and the role of gender in health and wellness.
### PSY 01230: Psychology Of Personality 3 s.h.
**Prerequisites:** PSY 01100 or PSY 01107

Students study major theories of personality and techniques for measuring personality. Personality is that field of psychology that investigates the predispositions or inherited characteristics and the acquired or learned qualities that affect an individual.

### PSY 01235: African American Psychology 3 s.h.
**Prerequisites:** PSY 01100 or PSY 01107

This course introduces students to a critical analysis of the psychosocial development, behavior and relationships of Black people within the sociohistorical context of the United States. It facilitates students’ examination of issues relating to methodology and assumptions underlying past and current research on the psychological study of African Americans. The course also enables students to examine theory and research on the effects of significant sociocultural factors on the lives of African Americans, with particular focus on physical development, language and communication styles, models of identity and social-emotional development, intellectual and academic development, sexual behavior and attitudes, health issues, and empowerment.

### PSY 01302: Research In Perception - Wi 4 s.h.
**Prerequisites:** PSY 01104 and PSY 07210

This course provides an overview of how the study of perception integrates psychophysics, sensory and physiological psychology, and neuropsychology in an attempt to understand the principles guiding the way in which humans obtain information about the world. Topics include the scientific study of the sensory systems, classical and contemporary psychophysical methods, principles of perceptual organization, aftereffects, perceptual illusions, and the real-world implications of these phenomena. This course contains a laboratory component that emphasizes the use of scientific methodologies in Perception. Only matriculated psychology majors may register for this course.

### PSY 01305: Psychology And Law 3 s.h.
**Prerequisites:** PSY 01100 or PSY 01107

A course in the relationship of psychology and law, this course studies how the law has used psychological concepts and data. It examines legal issues of significance for psychologists and examines psychological research as it relates to the legal process.

### PSY 01310: Psychology Of Racism And Ethnocentrism: Causes, Development, Consequences, Solutions 3 s.h.
**Prerequisites:** PSY 01100 or PSY 01107

This course provides an opportunity for students to develop critical understanding of psychological perspectives regarding the root causes, complex patterns, and the individual, group, and societal consequences of racism and ethnocentrism in the United States of America. The course will draw upon comparative data regarding the psychological factors involved in historic or contemporary race and ethnic relations within selected international contexts to explore parallel and unique cross-cultural phenomena.

### PSY 01316: Behavioral Assessment And Measurement 3 s.h.
**Prerequisite(s):** PSY 01107 or Matriculation in the Post-Baccalaureate Certificate in Applied Behavior Analysis.

This course provides students with the knowledge and skills needed to conduct behavioral assessments and choose appropriate target outcomes and intervention strategies. Additionally, students will learn to objectively measure behavior, display data graphically, and experimentally evaluate the effectiveness of behavioral interventions. This course is one of the courses required for the Specialization in Behavioral Services for Children and Their Families in the psychology department.

### PSY 01326: Perception 3 s.h.
**Prerequisites:** PSY 01100 or PSY 01104 or PSY 01107

This course involves the study of sensation and perception. Topics include the scientific study of sensory systems, classical and contemporary psychophysical methods, principles of perceptual organization, aftereffects, illusions and space perception.

### PSY 01327: Cognitive Psychology 3 s.h.
**Prerequisites:** PSY 01100 or PSY 01104 or PSY 01107

This course involves the study of information processing. Its topics may include the history and methods of cognitive psychology, selection and processing of sensory information, pattern recognition, memory processes, language acquisition and cognition.
Course Descriptions

PSY 01329: Health Psychology 3 s.h.
Prerequisites: PSY 01107 or PST 01100
This course is concerned with the role of biopsychosocial factors in the promotion of health, prevention of and treatment of illness, the etiology of illness, and ways to improve the health care system. Students will learn widely studied and empirically supported theories of health behaviors in relation to behavioral risk factors. They will focus on theories, assessment and treatment of the primary behavioral problems encountered within behavioral medicine, such as sleep disorders, sexual dysfunction, high risk sexual behaviors, obesity, eating disorders, chronic pain, substance abuse/dependency, and tobacco addiction.

PSY 01419: Independent Study In Psychology .5 to 6 s.h.
Individual educational and research projects including independent study are offered. Student must have approval of faculty instructor before registering for this course. Regular meetings with faculty instructor are required.

PSY 01420: Advanced Research I-WI 3 s.h.
Prerequisites: Grade of B in PST 01106, PST 07201, PST 02257, MATH 01122, and PST 07202; COMP 01112 or HON 01112
This course is the first in a two-course sequence focused on conducting empirical research in psychology. During this course, students will begin an empirical research project, including a literature review, conceptualization of the hypothesis, design of the methodology, and exposure to ethical review board procedures. Students will write an APA-formatted research proposal.

PSY 01422: Field Experiences In Psychology 3 to 6 s.h.
Prerequisites: PSY 01104 and PSY 01100 or PST 01107
Because of the limited enrollment in this course, priority is given to psychology majors. It is suggested that the student have a minimum of 60 hours of college credit which should include at least 15 hours in psychology. Students are assigned placements in supervised settings such as community mental health centers, drug rehabilitation centers, crisis intervention facilities and schools.

PSY 01423: Seminar In Psychology: Topics 3 to 6 s.h.
Prerequisites: (PSY 01104 and PSY 01100) or PST 01107
This course enables the faculty to offer substantive courses in specialty areas which are not offered on a regular basis. Students should have substantive preparation in the specialty area of the course.

PSY 01424: Professional Issues In Applied Behavior Analysis 3 s.h.
Prerequisites: PSY 02310 and PST 03110 Corequisite: PST 02305
This course is a capstone course in Specialization for Behavioral Services for Children and their Families, providing an in-depth overview of innovative and empirically validated behavior assessment and intervention techniques aimed at promoting system-wide change. Students will be exposed to professional development as behavior analysts including ethical issues, career options and responsibilities, and development of clinical skills.

PSY 01429: History & Systems In Psychology 3 s.h.
Prerequisites: (PSY 01104 and PSY 01100) or PST 01107
This course presents the history of psychology, giving a comprehensive treatment of theories and systems in psychology. The student should have a substantial background in psychology before taking this course.

PSY 02257: Psychology As A Profession And Practice 3 s.h.
Prerequisites: PST 01.107 or both PST 01.100 and PST 01104
This course will introduce students to traditional and emerging applied areas in psychology, with the goal of increasing students' knowledge about how psychological information is used to impact peoples lives. In addition, students will learn how psychological knowledge can be applied in ways that allow us to better understand the individual and the broader social world. Finally, students will explore possible career paths in psychology and learn how to best prepare themselves for a career in psychology or related fields post graduation.

PSY 02305: Applied Behavior Analysis 3 s.h.
Prerequisites: PST 01107 or Matriculation in the Post-Baccalaureate Certificate in Applied Behavior Analysis.
This course deals with the principles, procedures and utility of behavior modification in normal and clinical settings.

PSY 02307: Research In Cognitive Psychology - Wi 4 s.h.
Prerequisites: PSY 01104 and PST 07210
This course involves the study of information processing. Its topics may include the history and methods of cognitive psychology, selection and processing of sensory information pattern recognition, memory processes, language acquisition and cognition. A laboratory component is appended to the course, but does not fulfill General Education laboratory requirements.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
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<tbody>
<tr>
<td>PSY 02308</td>
<td>Research In Learning And Behavior-Wi</td>
<td>4 s.h.</td>
<td>PSY 01104 and PST 07210</td>
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<td>This course provides an overview of theories of</td>
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<td>learning and the experimental analysis of behavior. Topics may include</td>
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<td></td>
<td>learning and the experimental analysis of</td>
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<td>classical conditioning, operant conditioning, and schedules of reinforcement.</td>
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<td>behavior. Only matriculated psychology majors</td>
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<td>This course contains a laboratory component which emphasizes the use of the</td>
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<td></td>
<td>may register for this course.</td>
<td></td>
<td>scientific method in learning and the experimental analysis of behavior.</td>
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<tr>
<td>PSY 02309</td>
<td>Research In Social Psychology - Wi</td>
<td>4 s.h.</td>
<td>PSY 01100 and PST 07210</td>
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<td>This course provides an overview of how</td>
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<td>individuals affect the thoughts and behaviors of other individuals. It</td>
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<td>individuals affect the thoughts and behaviors</td>
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<td>examines social behavior from a multicultural perspective which emphasizes</td>
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<td>of other individuals. It examines social</td>
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<td>the effects of gender, race, and ethnicity on social interaction. Topics</td>
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<td>behavior from a multicultural perspective which</td>
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<td>may include social cognition, attitude change, affiliation, conformity,</td>
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<td>emphasizes the effects of gender, race, and</td>
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<td>intergroup conflict and cooperation. This course contains a laboratory</td>
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<td>ethnicity on social interaction. Topics may</td>
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<td>component which emphasizes the use of the scientific method in social</td>
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<td>include social cognition, attitude change,</td>
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<td>psychology. Only matriculated psychology majors may register for this course.</td>
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<td>affiliation, conformity, intergroup</td>
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<td>cooperation. This course contains a laboratory</td>
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<td>scientific method in social psychology. Only</td>
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<td>matriculated psychology majors may register for</td>
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<td>PSY 03200</td>
<td>Abnormal Psychology</td>
<td>3 s.h.</td>
<td>PSY 01100 or PSY 01107</td>
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<td></td>
<td>Abnormal Psychology is a division of the</td>
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<td>science of psychology that investigates disordered behaviors, deficiencies in</td>
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<td>science of psychology that investigates</td>
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<td>behavior capacities, and the persons exhibiting them. This course of Abnormal</td>
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<td>disordered behaviors, deficiencies in</td>
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<td>Psychology is concerned with the application of the methods, concepts,</td>
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<td>behavior capacities, and the persons</td>
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<td>principles and findings of psychological research to deviant behavior. It is</td>
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<td>exhibiting them. This course of Abnormal</td>
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<td>also concerned with perception, learning, development and social factors as</td>
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<td>Psychology is concerned with the application</td>
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<td>related to disturbed behavior and experiences of individuals.</td>
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<td>of the methods, concepts, principles and</td>
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<td>findings of psychological research to deviant</td>
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<td>behavior. It is also concerned with perception,</td>
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<td>related to disturbed behavior and experiences of</td>
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<td>individuals.</td>
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<td>PSY 03205</td>
<td>Intake And Interviewing Skills In Psychology</td>
<td>3 s.h.</td>
<td>PSY 01100 or PSY 01107</td>
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<td>This course is designed to prepare</td>
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<td>undergraduates to be able to perform</td>
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<td>an initial interview or intake in an entry level,</td>
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<td>human service position. Topics include basic</td>
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<td>skill development, understanding of content and</td>
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<td>process in interviewing, family interviews, use</td>
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<td>of standard intake procedures, and ethical</td>
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<td></td>
<td>considerations in interviewing.</td>
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<tr>
<td>PSY 03205</td>
<td>Environmental Psychology</td>
<td>3 s.h.</td>
<td>PSY 01100 or PSY 01107 or PSY 01104</td>
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<td>This course involves the study of people and</td>
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<td>their physical setting. Its topics include</td>
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<td>environmental perception and cognition, social</td>
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<td>processes and the environment, individual</td>
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<td>development and the environment, contrast</td>
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<td>between natural and built environment and city</td>
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<td>and urban design.</td>
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<td>PSY 03206</td>
<td>Social Psychology</td>
<td>3 s.h.</td>
<td>PSY 01100 or PSY 01107</td>
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<td>This course examines the psychological, social</td>
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<td>and cultural factors that shape the social</td>
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<td>behavior of the individual. It</td>
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<td>investigates such topics as affiliation,</td>
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<td></td>
<td>conformity, leadership, group processes; attitude</td>
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<td>formation and change; intergroup</td>
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<td>cooperation and conflict. The primary focus is</td>
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<td>on the individual in social context.</td>
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<td>PSY 03310</td>
<td>Psychology Of Human Sexuality</td>
<td>3 s.h.</td>
<td>PSY 01100 or PSY 01104 or PSY 01107</td>
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<td>This course provides an overview of the</td>
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<td>current scientific knowledge concerning</td>
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<td>human sexuality. It examines data from</td>
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<td>national surveys and controlled laboratory</td>
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<td>PSY 03402</td>
<td>Psychology Of Conflict And Conflict Resolution</td>
<td>3 s.h.</td>
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<td>Students investigate the basis for conflict in</td>
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<td>social and personal situations. The course</td>
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<td>attempts to isolate a number of contributive</td>
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<td>variables and explores possible alternatives to</td>
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<td>destructive conflict. It employs different</td>
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<td>research approaches and attempts to help</td>
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<td>interested students examine and develop</td>
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<td>innovative approaches to use in the resolution</td>
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<td>of conflict within social relationships.</td>
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<td>PSY 03410</td>
<td>Community Psychology</td>
<td>3 s.h.</td>
<td>PSY 03206 and PSY 01100 or PST 03206 and PST 01100</td>
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<td>This course provides an overview of the field</td>
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<td>of community psychology. Its topics will include</td>
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<td>preventive approaches to mental health,</td>
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<td>crisis intervention, community-based</td>
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<td>treatment approaches, systems theory,</td>
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<td>community mental health centers,</td>
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<td>organization theory, paraprofessionals, the use</td>
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<td>of self-help groups and community psychology</td>
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<td>in the schools and criminal justice system.</td>
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<td>The course provides a conceptual framework for</td>
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<td>community psychology.</td>
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PSY 06300: Psychological Tests And Measurements 3 s.h.
This course examines the nature and use of psychological tests and the social and ethical implications of testing. It emphasizes principles of test construction: reliability, validity and item analysis. Statistics should be completed before or concurrently with this course.

PSY 07201: Research Methods In Psychology 3 s.h.
Prerequisites: (PSY 01106 AND PSY 01107)
This course addresses research design and methodologies for data collection in psychological research. Observation, correlational, and experimental techniques are studied. Also examined are ethics in research and responsible interpretation of research results.

PSY 07202: Statistics In Psychology 3 s.h.
Prerequisites: PSY 01106 AND PSY 01107 AND PSY 07201.
This course focuses on the many statistical procedures used in psychological research. Students will learn to select and calculate appropriate procedures to analyze both quantitative and qualitative data. they will gain an understanding of how to select and perform descriptive, correlational, and inferential procedures. there will also be emphasis throughout the course on learning to use statistical software

PSY 07302: Advanced Statistics in Psychology 3 s.h.
Prerequisites: Minimum grade of B in PSY 07202 Statistics in Psychology.
This course builds upon the material covered in Statistics in Psychology (PSY 07202) and focuses on the more advanced statistical procedures commonly used in psychological research. Topics will include data management, factorial ANOVAs, and multiple regression analyses. Students will learn how to conduct analyses using statistical software, interpret results appropriately, and report the results according to the guidelines of the American Psychological Association.

PSY 08215: Consumer Psychology 3 s.h.
Prerequisites: PSY 01100 or PSY 01107
This course introduces behavioral science research and methods in consumer behaviors. It emphasizes the processes of learning, perception, motivation, and social behavior and their effect on consumer attitude, buying behavior, advertising and effective mass persuasion. The course also includes product design and evaluation and consumer protection and awareness.

PSY 08220: Personnel Psychology 3 s.h.
Prerequisites: PSY 01100 or PSY 01107
This course introduces the application of psychological principals and research findings in the personnel systems of organizations. Its topics include personnel testing and selection; instrument development; job analysis and evaluation; performance appraisal; training systems, and the models for human resource utilization.

PSY 08310: Industrial/Organizational Psychology 3 s.h.
Prerequisites: PSY 01100 or PSY 01107
This course studies application of psychological theories, methods, and principles and findings to various problems of industrial, business and public organizations. It covers personnel selection, testing, and training; organizational behavior; safety, equipment and systems design, and consumer behavior.

PSY 09209: Child and Adolescent Development 3 s.h.
The content of this course covers the physical, cognitive, perceptual, linguistic, emotional, social, moral and sexual development in humans, from the womb through adolescence. The influence of biological and sociocultural mechanisms underlying development within these domains are also considered.

PSY 09210: Adolescent Development 3 s.h.
This course studies current theory and practice related to biological, cognitive, psychoanalytic, psychosocial, sexual and moral development in adolescence. Students gain experience in developing beginning levels skills in selection and use of evaluative techniques and in the use of activities appropriate to the various levels of adolescent development. This course is intended for nonmajors and will not fulfill requirements of the Psychology major. Psychology majors must take Lifespan Development (PSY 01308) in order to fulfill the requirements of the major.

PSY 09218: Lifespan Development 3 s.h.
Prerequisites: PSY 01100 or PSY 01104 or PSY 01107
This course provides an overview of human development across the lifespan, including physical, cognitive, social, and personality development. All the major lifespan developmental theories and research will be presented, with heavy emphasis on students' critical thinking about research. This course will cover both normative and atypical development across the lifespan, including the major physical, mental health, and social problems occurring during the life span.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tr>
<td>PSY 09305:</td>
<td>Developmental Psychopathology</td>
<td>3 s.h.</td>
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<td><strong>Prerequisites:</strong> PSY 01100 or PST 01107</td>
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<td>Using a developmental framework, the student will examine normal and abnormal behavior from infancy through adolescence. Students will learn about the pathways to normal and abnormal behavior, explore the factors that place children at risk for problems as well as the factors that protect children from adversity. Topics will include autism, depression, anxiety, aggression, attentional difficulties, developmental delay, and physical illness.</td>
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<td>PSY 10315:</td>
<td>Physiological Psychology</td>
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<td><strong>Prerequisites:</strong> PSY 01100 or PST 01104 or PST 01107</td>
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<td>An introductory course in physiological psychology designed to give the student an understanding of the neural processes mediating behavior. A study of advances in such areas as the neural coding of memory and learning; control of human behavior and emotions through physiological changes; the environment as it affects the nervous system; psychobiology of sex; psychosomatic illness; and instrumentation and techniques for investigating problems in physiological psychology.</td>
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<td>PSY 10380:</td>
<td>Cognitive Neuroscience</td>
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<td><strong>Prerequisite(s):</strong> B+ or higher grade in PSY 10315, or Permission of Instructor.</td>
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<td>This course examines the neurological bases of the mind and mental processes. Topics will include the historical bases of thought and mind, anatomical foundations of thought at the systems and neural levels, methods for testing mental processes, and subject areas encompassing perception, attention, memory, development, change, and disease. Students will be required to contribute to class discussions, present summaries of major theories and findings to the class, and critically assess current opinions and techniques used in the field.</td>
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<td>PSY 22121:</td>
<td>Educational Psychology</td>
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<td><strong>Prerequisites:</strong> PSY 01100 or PST 01104 or PST 01107</td>
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<td></td>
<td>This course considers the fundamental principles of learning and the implications of these principles for the understanding of human behavior. It covers empirical and theoretical issues in learning through examination of laboratory data and their extension to life situations.</td>
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<td>PSY 22320:</td>
<td>Theories Of Learning</td>
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<td>This course deals with several major learning theorists and their work. Students critically describe, explain and integrate research findings. This course is generally recommended by graduate schools.</td>
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<td>PSY 22512:</td>
<td>Educational Psychology</td>
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<td>The dynamics involved in the process of learning are emphasized. An objective of the course is a consideration of the ways psychology can be of value in facilitating the teaching-learning process. Such topics as formulating objectives, motivation and evaluation of learning are considered.</td>
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<td>PSY 22586:</td>
<td>Psychology Of Motivation And Learning</td>
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<td>An intensive study of the basic theories of learning and current research in motivation and learning is emphasized in this course. Stress is placed upon the significance of these theories and investigations for educational practices.</td>
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<tr>
<td>ADV 04310:</td>
<td>Introduction To Advertising</td>
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<td><strong>Prerequisite(s):</strong> Public Relations/Advertising Major or Advertising Minor</td>
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<td>The course provides an overview, including techniques and terminology that are useful in the professional world. Topics include history of advertising, marketing, ethics, law, consumer behavior, print and electronic media, and retail and corporate advertising. The course combines theory of advertising with practical applications.</td>
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<td>ADV 04352:</td>
<td>Advertising Strategies</td>
<td>3 s.h.</td>
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<td><strong>Prerequisites:</strong> ADV 04375 and PR 06310</td>
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<td>This course explores the methodologies and tactics involved in planning advertising campaigns. Students examine research sources, strategic planning techniques, media placement, copywriting &amp; testing. Students will review presentation techniques, theme-within-a-theme and other related strategic thinking.</td>
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<td>ADV 04355:</td>
<td>Advertising Practicum</td>
<td>1 to 3 s.h.</td>
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<td><strong>Prerequisites:</strong> 75 Credits Required</td>
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<td>Advertising practicum allows students to apply their skills and knowledge by working on campus with department faculty on a variety of technical, creative, or research-related assignments. Students can earn 1 credit for every 40 hours of work, with most practica implemented for 3 credit hours. Students keep a detailed log of working hours, prepare an extensive portfolio, write an analytical critique of the practicum and submit the work to the faculty supervisor for grading.</td>
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Course Descriptions

ADV 04360:  Integrated Marketing Communication  3 s.h.
Prerequisites: PR 06350 and ADV 04330
This course explores the expanded as well as the communication portion of the organization's business and marketing plans. Emphasis is placed on how to translate marketing strategies into a well-defined and seamless communication program directed at all of the organization's publics.

ADV 04375:  Advertising Copywriting  3 s.h.
This course introduces students to creative writing in advertising. It will explore the basic principles of writing copy and developing creative products for print and electronic vehicles.

ADV 04405:  Independent Study - Advertising  1 to 6 s.h.

ADV 04420:  Portfolio Preparation  3 s.h.
Prerequisites: ADV 04330 and PR 06310 and ADV 04375
This course will provide students practical application of creativity in advertising. It covers a range of topics including the nature of creativity and the application of creative strategy to various media. By the end of the term, students will develop and produce finished campaigns that will provide a well-defined portfolio.

ADV 04421:  Account Planning  3 s.h.
Prerequisites: ADV 04330 and PR 06310 and ADV 04375
This course will explore the role of account planning and its contribution to developing strategic advertising campaigns. Students will learn to review and interpret qualitative and quantitative research and to translate this research into valuable consumer insights.

ADV 04432:  Media Planning  3 s.h.
Prerequisite(s): Introduction to Advertising (ADV 04330).
Students study media as social and economic forces in our society; the course examines major media with emphasis on comparative value in regards to cost, audience, production problems, time factors, product stability and cost effectiveness. Students get considerable actual practice in media planning activities. A research unit is included.

ADV 04434:  Advertising Campaigns - Wi  3 s.h.
Prerequisites: ADV 04352 and ENGL 01112
This course prepares students to undertake and complete an extensive, creative, effective professional advertising campaign. The course includes instruction on how to prepare the speech which is made when the campaign is pitched to the client, extensive marketing and advertising research, final polishing of copywriting skills and a well prepared final oral presentation.

MAPR 06515:  Online Public Relations  3 s.h.
Public relations has moved to the Internet, and in the process online communication skills have become essential to online and offline public relations practice. Online public relations explores the practical tools necessary for using the internet in public relations and provides a broad overview for creating an online newsroom.

PR 01403:  Special Topics In Public Relations  1 to 3 s.h.

PR 06101:  Basic Public Relations Writing  3 s.h.
Basic Public Relations Writing introduces students to the tasks of writing and editing required in a public relations position. Students will learn to write for both print and electronic media, develop their skills in grammar, syntax and usage and learn to copy edit their own work and the work of others.

PR 06103:  Writing Basics In Public Relations And Advertising  1 s.h.
Writing Basics in PR and Advertising is a 5-week writing boot camp that helps students to better transition into more advanced forms of public relations writing. The course helps polish students' writing and provides an overview of grammar and usage rules along with sentence structure, organization, and proofreading.

PR 06105:  Advanced Public Relations Writing  3 s.h.
Prerequisites: PR 06101 with a grade of B- or better
Advanced Public Relations Writing polishes writing and editing skills students need for a professional public relations position. Students will learn how to write persuasive copy for both internal and external audiences, produce written marketing support products, and prepare speeches and advanced editorial copy for business and organizations. Students will also learn advanced copy preparation techniques.
Course Descriptions

PR 06310: Introduction To Public Relations/Advertising Research 3 s.h.
Prerequisites: 60 credits required
The course studies both qualitative and quantitative research methods necessary for success in the fields of public relations and advertising. Emphasis is placed on evaluation of secondary searches, individual and group interviews, media audience measurements, market structure, segmentation and usage studies, and tracking studies.

PR 06350: Introduction To Public Relations 3 s.h.
Prerequisite(s): Public Relations/Advertising Major
This course explores the history and role of public relations in society. Students explore mass media, persuasion, publicity, radio and television. Students examine special events, crisis management, communication techniques, research and evaluation, communication law and ethics. Basically a theory course, this introduction also applies ideas practically to real clients and organizations.

PR 06353: Case Studies In Public Relations - Wi 3 s.h.
Prerequisites: PR 06305 and PR 06310 and COMP 01112
This course reviews and predicts how organizations solve their public relations challenges. Students write case statements, position papers and solutions involving publicity demands, special events, promotions, image problems and other challenges. Students role-play key personnel, working through problems in seminar simulations. Writing, speaking, thinking and presenting ideas are emphasized.

PR 06354: Impact Of Public Relations On The News 3 s.h.
Prerequisites: PR 06301 or JRN 02310
The course is a semester-long journey into the information management world where the professions of journalism and public relations often find strong parallels but equally as often are locked in competition over how important local, national and world events and issues will be reported and explained to the public.

PR 06355: Public Relations/Advertising Law and Ethics 3 s.h.
Prerequisites: (PR 06350 and PR 06301) or (ADV 04330 and ADV 04375)
The course will give students a broad perspective into law and ethics as they relate to the public relations and advertising professions. Specifically, the course will familiarize students with the “Code of Professional Standards” of the Public Relations Society of America and with major laws governing advertising, broadcasting, publishing and speaking. The course will also focus on First Amendment Law and examine business case law that pertains to public relations and advertising. Students will develop ethical stances about communication and will improve in judging ethically unclear situations.

PR 06359: Public Relations Practicum 1 to 3 s.h.
Prerequisites: 75 credits required
Public relations practicum allows students to apply their skills and knowledge by working on campus with department faculty on a variety of technical, creative, or research-related assignments. Students can earn 1 credit for every 40 hours of work, with most practica implemented for 3 credit hours. Students can earn credit for working for PRAction, Rowan University's in-house agency for its Public Relations Student Society of America Chapter. Students keep a detailed log of working hours, prepare an extensive portfolio, write an analytical critique of the practicum and submit the work to the faculty supervisor for grading.

PR 06360: Public Relations/Advertising Internship I 3 s.h.
Prerequisites: Public Relations or Advertising major with Major GPA of 2.5 and (PR 06301 and PR 06305) or (ADV 04375 and ADV 04421) or ADV 04420
Under professional supervision in the field, students practice theories and skills learned in the classroom. Students earn 3 credits for 120 hours of work. Students keep a detailed log of working hours, prepare an extensive portfolio, write an analytical critique of the practicum, and are evaluated by their faculty supervisor.

PR 06362: Public Relations/Advertising Internship II 3 s.h.
Prerequisites: Public Relations or Advertising major with Major GPA of 2.5 and (PR 06301 and PR 06305) or (ADV 04375 and ADV 04421) or ADV 04420
Under professional supervision in the field, students practice theories and skills learned in the classroom. Students earn 3 credits for 120 hours of work. Students keep a detailed log of working hours, prepare an extensive portfolio, write an analytical critique of the practicum, and are evaluated by their faculty supervisor. Field Experience II is offered to students who successfully complete Field Experience I and who seek to get an additional 3 credits of internship experience.
PR 06364: Public Relations/Advertising Internship III 6 s.h.
Prerequisites: Public Relations or Advertising major with Major GPA of 2.5 and (PR 06301 and PR 06305) or (ADV 04375 and ADV 04420)
Under professional supervision in the field, students practice theories and skills learned in the classroom. Students earn 6 credits for 240 hours of work. Students keep a detailed log of working hours, prepare an extensive portfolio, write an analytical critique of the practicum, and are evaluated by their faculty supervisor. Field Experience III is reserved for students who wish to complete all 6 credits of their 240-hour internship with the same sponsor.

PR 06405: Independent Study 1 to 6 s.h.

PR 06454: Public Relations Planning - Wi 3 s.h.
Prerequisites: PR 06353 and COMP 01112
This course introduces students to the components of a comprehensive public relations campaign: research, audience identification, message construction, channel selection and evaluation. Working with clients, students create and write an entire program for a variety of challenges, including image change, new product or service introduction, information, recruitment, crisis management, employee relations, persuasion and others. Students practice a complete PR plan.

PR 99362: Public Opinion 3 s.h.
Prerequisites: PR 06310
This course includes the nature and role of public opinion, the dynamics of public opinion processes and the numerous factors which shape or influence opinion. Students examine the mass media, evaluating their roles as molders and reflectors of public opinion. Major topics that influence public opinion are discussed, including gratifications, agenda setting, knowledge gaps, censorships and propaganda.

RTF 01402: Special Topics 3 s.h.

RTF 03100: Radio Production 3 s.h.
The course is designed to provide students with a basic understanding of producing a news program and developing a radio documentary. Students will gain an understanding of how to produce a radio news program by working with The Rowan Report, a half-hour news show that airs on WGLS-FM, on a weekly basis during the semester. Students are expected to serve as producers and on-air talent for the show. Also, they will gain hands-on experience with Metro Source, a news-gathering system used by Rowan Radio and audio editing software.

RTF 03205: TV History And Appreciation 3 s.h.
Prerequisite(s): COMP 01111
TV History and Appreciation explores 50 years of the art and impact of one of the most persuasive, pervasive information delivery systems ever invented. By viewing and discussing a wide array of clips and full episodes of programming (many from the earliest days of the medium), students will develop an appreciation of the foundation of all entertainment and informational programming. As well, students examine how television has affected American society and how American society has affected television.

RTF 03206: TV History And Appreciation, 1960s - 1970s 3 s.h.
Prerequisites: COMP 01111 and COMP 01112 and 45 earned credit hours
Students will explore televisions formative years. The course is a sequel of sorts to the earlier course, but can be taken independently or concurrently. Students will learn about and discuss the cultural, economic and regulatory decisions that shaped the medium and analyze TV’s changing portrayal of the American family, gender roles, minority representation and other key concepts. The history of breaking news coverage, the emergence of cable, and the rise and fall of various programming genres - from live TV drama and the variety show to newsmagazines and reality TV - will be examined.

RTF 03220: The Television Industry 3 s.h.
Prerequisite(s): COMP 01111
Designed to provide students with an understanding of the contemporary American commercial television industry, this course analyzes the interrelationships among broadcast and non-broadcast delivery systems, stations, networks, programming, advertising, audiences and the federal government.

RTF 03221: The Radio Industry 3 s.h.
Prerequisite(s): COMP 01111
This course introduces students to the principles and techniques of commercial radio broadcasting. Students learn about licensing, sales, research, programming, and federal regulations. Students get hands-on experience with up-to-date broadcast equipment while learning audio console operation.
Course Descriptions

RTF 03222: Television Production I 3 s.h.
Prerequisite(s): RTF 03275
The course introduces students to the principles and techniques of TV production. Students work in production teams within a professional television studio setting. Students gain experience in all phases of production, including conception of ideas, scripting, directing, and operation of equipment to produce various types of programs. Programming includes newscasts and talk shows. Students also learn to edit 30-second commercials and PSAs.

RTF 03224: Sound Communication 3 s.h.
Prerequisites: COMP 01111 and COMP 01112 and RTF Major
This course introduces students to the production process through the medium of sound. Topics include the history, physics, and function of sound recording as it relates to radio, television, and film media. Students will be introduced to basic storytelling concepts and will write, create, and edit projects that incorporate sound as a primary communication tool.

RTF 03270: Film History And Appreciation I 3 s.h.
Prerequisite(s): COMP 01111
Students trace the development of motion pictures as an art form from the 1890s to 1941. Representative selections from the various genres are screened, then discussed in terms of art, technique, content and historical perspective, as well as directorial style. Part I is not a prerequisite for Part II; these courses may be taken in any order; students may opt for one or both courses.

RTF 03271: Film History And Appreciation II 3 s.h.
Prerequisite: COMP 01111 and COMP 01112
This course is a continuation of RTF 03.270 with emphasis on contemporary genres and implications. Students trace the modern cinema from 1941 to the present. Students may take Part II prior to Part I; although the content is chronological, Part I is not a prerequisite for Part II.

RTF 03272: Images Of Women In Film 3 s.h.
Prerequisites: COMP 01111 and COMP 01112
This course uses the medium of motion pictures to study cultural perspectives on women at various times through history and in differing cultural environments. Students discuss a wide range of film treatments to examine women's changing role, as well as social attitudes toward women as expressed by representative works of a cultural era and by writers, directors and actors.

RTF 03273: The Movie Industry 3 s.h.
Prerequisite(s): COMP 01111
This course introduces students to the language of the technical elements of the motion picture and to a method for analyzing the artwork created and the messages communicated by the motion picture. Students analyze the components of motion pictures including color, lighting, editing, scripting, directing and acting.

RTF 03275: Applied Media Aesthetics: Sight, Sound And Story 3 s.h.
Prerequisites: COMP 01111 and COMP 01112
This course offers students an introduction to the aesthetic concepts as applied directly to radio, television, and film media. Using examples from these media, students will study, discuss, and analyze design and composition elements as they apply to the production process. A basic vocabulary of aesthetic terminology will be assembled and students will be responsible for understanding and applying those terms through various written and visual assignments.

RTF 03280: African American Film History 3 s.h.
Prerequisites: COMP 01111 and COMP 01112
This course offers students an introduction to the little-known yet important area of African American Film History, beginning with the development of Race Movies by such directors as Oscar Micheaux, and continuing to the present day. Through lectures, screenings and reports students will study, discuss and analyze the historical and cultural significance of these films and their influence on society.

RTF 03294: Contemporary International Cinema 3 s.h.
Prerequisites: COMP 01111 and COMP 01112
Contemporary International Cinema is designed as a basic introduction to world cinema, defined as the film output of other nations, regions and non-Hollywood cinema. Students will examine the major filmmakers, production and distribution practices of the global filmmaking community. Students will explore definitions of national and transnational cinema, issues of representation and post-colonialism, and concepts of authorship and genre from a global perspective. Students will gain a critical awareness of the ways in which cinema shapes our attitudes or perceptions of other cultures, and an appreciation of cinematic representations that originate from within other cultures. Through readings, discussion, screenings and research, students will gain a broader perspective of the current state of film as an art form, a globalized industry and cultural products.
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<th>Course Code</th>
<th>Course Title</th>
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<th>Prerequisites</th>
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</thead>
<tbody>
<tr>
<td>RTF 03295</td>
<td>Introduction To New Media</td>
<td>3 s.h.</td>
<td>Prerequisites: COMP 01111 and COMP 01112</td>
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<td>Introduction to New Media surveys emerging digital communication and entertainment media and teaches new media from the perspective of the producer. Students will discuss the evolution, social and historical implications, and production of media forms with an emphasis on social networking, user generated and other web media.</td>
</tr>
<tr>
<td>RTF 03321</td>
<td>Television Production II</td>
<td>3 s.h.</td>
<td>Prerequisites: COMP 01111 and COMP 01112 and RTF 03224 and RTF 03225 and RTF 03220 and RTF 03222 and RTF Major</td>
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<td>This hands-on course provides experience in advanced television production. Students work in production teams which create, research, script, shoot, and edit one-minute promotional pieces and a 30-minute magazine program. All programming airs on Rowan's cable network, Channel 5. Students will shoot in the studio and in the field, learning to use digital production equipment in preparation for professional career work in television. All projects are edited on Avid editing systems.</td>
</tr>
<tr>
<td>RTF 03331</td>
<td>Radio Broadcasting II</td>
<td>3 s.h.</td>
<td>Prerequisites: RTF 03224 and RTF 03275</td>
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<td>Radio Broadcasting II is designed to develop the skills obtained in Radio I by increasing the knowledge about various audio devices. Shows developed in Radio II will be scheduled as a regular part of the WGLS-FM programming. Topics covered will further enhance the students' understanding of audio production and the associated equipment and develop announcing skills vital not only to radio, but to all forms of audio/visual presentation.</td>
</tr>
<tr>
<td>RTF 03335</td>
<td>A/V Production Systems</td>
<td>3 s.h.</td>
<td>Prerequisites: RTF 03221 or RTF 03222</td>
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<td>The course expands students' knowledge of audio and video production equipment and its specific application in production and post-production facilities. Students learn the principles of audio and video measurement, editing requirements and equipment interfacing. Students will understand future trends and the impact of A/V Technology on industry economics. Demonstrations are applied to classroom experiences. This course may not be offered annually.</td>
</tr>
<tr>
<td>RTF 03340</td>
<td>Rtf Research &amp; Criticism</td>
<td>3 s.h.</td>
<td>Prerequisites: CMS 06202 and COMP 01112 and 75 credits required</td>
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<td>This course studies the range and importance of research and criticism in the Radio, Television and Motion Picture industries. Academic models of research and criticism are investigated as are industry practices like demographics and ratings. Students inform their perspective of RTF as professionals and members of electronic media and cinema's global audience.</td>
</tr>
<tr>
<td>RTF 03350</td>
<td>Rtf Practicum</td>
<td>3 s.h.</td>
<td>Prerequisites: 75 credits required</td>
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<td>RTF Practicum gives students the opportunity to test their skills and knowledge of the field while working on campus with department faculty and professional staff on a variety of technical, creative and/or research related assignments. Students can earn 3 credit hours for 120 hours of work on Practicum-related assignments.</td>
</tr>
<tr>
<td>RTF 03351</td>
<td>Rtf Internship I</td>
<td>3 s.h.</td>
<td>Prerequisites: 75 credits required andRadio/TV/Film major</td>
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<td>Students earn 3 credit hours for 120 hours of field experience on the job in a Radio, Television or Film professional setting. The students will fulfill a wide range of duties described by the on-site supervisor and agreed to by both the student and the on-campus faculty supervisor. Students may take up to 6 credit hours of field experience.</td>
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<tr>
<td>RTF 03352</td>
<td>Rtf Internship II</td>
<td>3 s.h.</td>
<td>Prerequisites: 75 credits required andRadio/TV/Film major</td>
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<td></td>
<td>Students earn 3 credit hours for 120 hours of field experience on the job in a Radio, Television or Film professional setting. The students will fulfill a wide range of duties described by the on-site supervisor and agreed to by both the student and the on-campus faculty supervisor. Students may take up to 6 credit hours of field experience.</td>
</tr>
<tr>
<td>RTF 03353</td>
<td>Rtf Internship III</td>
<td>3 s.h.</td>
<td>Prerequisites: 75 credits required andRadio/TV/Film major</td>
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<td>Students earn 6 credit hours for 240 hours of field experience on the job in a Radio, Television or Film professional setting. The students will fulfill a wide range of duties described by the on-site supervisor and agreed to by both the student and the on-campus faculty supervisor. Students may take up to 6 credit hours of field experience.</td>
</tr>
</tbody>
</table>
RTF 03354: Rtf Internship IV  
*Prerequisites: 75 credits required and RTF major and COMP 01112 and RTF 03222 and RTF 03370*

Students earn 3 credit hours for 120 hours of internship experience on the job in a Radio, Television or Film professional setting. The students will fulfill a wide range of duties described by the on-site supervisor and agreed to by both the student and the on-campus faculty supervisor.

RTF 03370: Film Production I  
*Prerequisite(s): RTF 03275*

The course introduces students to the principles and techniques of film style production. Students work in production teams to make a series of short films designed to familiarize them with film production techniques including camera operation, shot composition, and editing. In addition students gain experience applying basic cinematic narrative concepts.

RTF 03371: Film Production II  
*Prerequisites: COMP 01111 and COMP 01112 and RTF 03224 and RTF 0375 and RTF 03370*

This is an intermediate synch-sound 16mm production course which emphasizes studio production techniques. Students work in crews on short dialogue scenes designed to familiarize them with directing, script analysis, art direction, color cinematography, lighting, and synch-sound digital editing.

RTF 03372: American Film Directors  
*Prerequisites: 45 credits required*

Through historical perspective and criticism, this course provides an in-depth study of films by American directors. This course may not be offered annually.

RTF 03373: Film Noir  
*Prerequisites: COMP 01111 and COMP 01112 and 60 earned hours*

Film Noir is designed as an advanced film history course to explore the dark cinematic style and crime genre of Film Noir. Students will examine major filmmakers, production, distribution practices and reception of film noir. Through readings, discussion, screenings and research students will gain a broader perspective of how this cinematic cycle changes over time, the production conditions in the classical Hollywood studio system, the industrial considerations and censorship constraints, and how films grew out of earlier film history and cinematic movements overseas and in the United States.

RTF 03380: Acting For The Camera  
*Prerequisites: COMP 01112 and RTF 03370 or COMP 01112 and RTF 03222*

This course is a basic introduction to acting in front of film and television cameras. Students will study acting styles, techniques, and theory. Each student is expected to act in at least three separate scenes that will be videotaped and critiqued.

RTF 03393: Film Scenario Writing - Wi  
*Prerequisites: COMP 01111 and COMP 01112*

The course covers the basic technical requirements for writing movie scripts and the problems of adapting material to screen and script analysis. By viewing contemporary movies and studying plotting, point-of-view, character creation and dialogue, students learn how a film script is put together and write an original script.

RTF 03394: New Media Production  
*Prerequisites: RTF 03295*

This is the second in a sequence of three courses in the Interactive Media specialization. Students will apply content production skills from radio, television, and film to the production of hybrid media. Students work in teams to plan, design, produce, and test multimedia products. Students are expected to demonstrate a high level of professionalism in completing all work on schedule to professional standards and in their interactions.

RTF 03395: Sound Communication II  
*Prerequisites: RTF 03224 and RTF 03275*

Sound Communication II will provide students with advanced concepts and practices of sound recording and editing, focusing on their application for the media of film and television. Students will explore historical and aesthetic practices of sound effects and music for film and television, directing those concepts towards the production of the sound design of a student film.

RTF 03420: Current Issues In Electronic Media  
*Prerequisites: RTF 03220 and COMP 01112*

This course analyzes and discusses the impact that current trends in media technology, economics, regulation, and management have on content development, distribution, acquisition and consumer use.
Course Descriptions

RTF 03433: Television Program Packaging - Wi 3 s.h.
Prerequisites: COMP 01111 and COMP 01112
This research and writing course focuses on the specialized field of TV program creation. Students study the structure and content of a wide variety of TV programs, analyzing target audiences, and examining the marketing structure of program selling and distribution. Students prepare a complete, original television program proposal as a required activity.

RTF 03434: TV Program Packaging 2 3 s.h.
Prerequisites: COMP 01111 and COMP 01112 and RTF 03220 and RTF 03433
This course builds on the writing skills learned in TV Program Packaging 1. The course is designed to provide students with an advanced opportunity to practice and deepen their episodic television script writing skills to help them prepare to embark upon a career in professional television scriptwriting. Students will gain experience working in a writer's room dynamic for a full semester, pitch a pilot idea and develop it within their group, develop scene building and dialogue writing skills, and craft a 13 episode television show arc together with each student writing 1 - 2 full scripts to build their season.

RTF 03450: Television Documentary And Field Production 3 s.h.
Prerequisites: COMP 01111 and COMP 01112 and RTF 03224 and RTF 03275 and RTF 03222 and RTF 03321 and RTF 03220 and RTF Major
This advanced production course combines extensive research and scriptwriting skills with sophisticated field production techniques. Students select subjects of local interest to feature in high-quality, 20-minute documentaries involving pre-production planning, actual videotaping and post-production editing. Field production includes use of single and multiple camera units.

RTF 03470: Advanced Film Production 3 s.h.
Prerequisites: COMP 01111 and COMP 01112 and RTF 03224 and RTF 03275 and RTF 03370 and RTF 03371
This is an advanced synch-sound 16mm production course which emphasizes professional production practices. Students participate in the planning, shooting and editing of a longer-form narrative synch-sound film project designed to familiarize them with pre-production planning, production scheduling, large crew management, and post-production supervision.

RTF 03471: Techniques Of Documentary Film Production 3 s.h.
Prerequisites: RTF 10370 OR RTF 03370 OR RTF 03220
This course introduces students to the study of documentary form and techniques of production. It provides students with an understanding of the styles and methods of the documentary, giving students a powerful tool for film expression. Students will create a researched proposal for their own documentary.

RTF 03472: New Media Production 2 3 s.h.
Prerequisites: RTF 03295 and RTF 03394
This course will build upon skills and techniques introduced in New Media Production 1. Students will produce advanced, hybrid/interactive media projects. Students work in teams to plan, design and produce multimedia projects and are expected to demonstrate a high level of professionalism in completing all work on time and to professional standards.

RTF 10523: Graduate Screenwriting 3 s.h.
Graduate Screenwriting is an intensive writing workshop where students learn the basics of dramatic writing for the screen. The first half of the course is built around screenings, lectures, discussions and exercises where students explore the fundamentals of daily writing, dramatic structure, visual writing, characterization, dialog and proper screenplay formatting. Film analysis will focus on classic and contemporary shorts and feature films. The second half of the semester focuses on the development, and re-writing of a narrative short film based on an incident from a longer feature screenplay outline.

HPE 00100: Teaching Concepts of Driver Education 3 s.h.
Prerequisite(s): (ATR 00235 or PHED 35235) and (HPE 00235 or HLTH 37325) or (ATR 00235 or PHED 35235) and (HPE 00236 or HLTH 37326)
The course is designed for individuals seeking New Jersey Driver Education teacher endorsement. The content includes learning to teach motor vehicle operation, driving environment and the student development of teaching techniques emphasizing safety, risk perception, and decision-making processes applied in a vehicle. Learning how to instruct others in performing behind-the-wheel driving will be scheduled outside of class time.

HPE 00240: Motor Development and Motor Learning 3 s.h.
This is an introductory course that includes the study of locomotor and non locomotor movement, manipulative skills, and developmental and environmental factors that affect learning in these motor skill areas. The course will focus on motor behavior changes. Students will also be introduced to motor learning theories and concepts, assessment, and development of motor skills in various settings.
Course Descriptions

HPE 00252: Foundations of Fitness 3 s.h.
This course is designed to provide students with the skills and knowledge to be able to design, implement, and assess a fitness program for K-12 students. Content will focus on health and skill related fitness and include designing fitness programs for individuals with differing needs and abilities.

HPE 00286: Teaching In Learning Communities II: Foundations of Teaching Health and Physical Education 3 s.h.
Prerequisite: C- or better in EDUC 01270
Students in this course are introduced to the profession of teaching health and physical education for pupil outcomes which address the New Jersey Core Curriculum Content Standards for Comprehensive Health and Physical Education, with specific emphasis on teaching skills, student behaviors, and the classroom environment. These three elements are discussed, analyzed and practiced through the principles of learning communities. Students explore the roles and responsibilities of teachers through the study of professional literature; class discussions and activities; simulation exercises; and direct interactions with students, teachers and administrators during on-campus and off-campus experiences. School observations are a required component of this course.

HPE 00310: Teaching Concepts of Secondary Physical Education I 3 s.h.
Prerequisite: HPE 00286
This course provides an opportunity for students to learn the characteristics of a skilled performance in a variety of activities, including target and net/wall activities. Students will be able to describe and demonstrate the application of appropriate participation in each activity, as well as effective pedagogical techniques that lead to such participation.

HPE 00316: Teaching Concepts of Dance in Physical Education 3 s.h.
Prerequisite: Acceptance into one of the following programs: Athletic Training, Health Promotion and Fitness Management, or Health and Physical Education Teacher Certification
This course introduces health and exercise science majors specializing in teacher certification to the skills, concepts and knowledge necessary for instructing development and performance sequences in various rhythmic activities (creative rhythms, routines with small hand apparatus, and novelty dances) and dance forms (folk, social, square, contra, and line). The study of selected rhythmic activities and dance forms include: terminology, relative movement patterns, techniques, skill performance, evaluation, basic musical structure, and teaching strategies.

HPE 00320: Teaching Concepts of Secondary Physical Education II 3 s.h.
Prerequisite(s): (HPE 00286 or PHED 35286)
This course provides an opportunity for students to learn the characteristics of a skilled performance in a variety of physical activities, including invasion sports. Students will be able to describe and demonstrate the application of appropriate participation in each activity, as well as effective pedagogical techniques that lead to such participation.

HPE 00325: Teaching Concepts of Health Education I 3 s.h.
Prerequisite(s): (HPE 00286 or PHED 35286)
This is the first in a series of two combined pedagogy and health education content courses which provide students with knowledge along with general scope and understanding of current health issues which occur in the human lifecycle. This course also develops an understanding of the competencies essential for planning school health education programs. Students are given learning opportunities to develop sensitivity for the importance of integrating health education in various settings and to address the New Jersey Core Curriculum Content Standards for Comprehensive Health and Physical Education (Standards 2.1 through 2.4). Actual lesson planning and teaching experiences are required. Topics which will be addressed are Alcohol, Tobacco and Other Drugs, Personal Growth and Development, Mental and Emotional Health, Aging and Death and Dying.

HPE 00326: Teaching Concepts of Health Education II 3 s.h.
Prerequisite(s): (HPE 00286 or PHED 35286)
This is the second in a series of two combined pedagogy and health education content courses which provide students with knowledge along with general scope and understanding of current health issues which occur in the human lifecycle. This course also develops an understanding of the competencies essential for planning school health education programs. Students are given learning opportunities to develop sensitivity for the importance of integrating health education in various settings and to address the New Jersey Core Curriculum Content Standards for Comprehensive Health and Physical Education (Standards 2.1 through 2.4). Actual lesson planning and teaching experiences are required. Topics which will be addressed are Family Life and Human Sexuality, Personal Health, Chronic and Infectious Diseases, Environmental Health and Consumerism.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>HPE 00328</td>
<td>Elementary Physical Education Activities</td>
<td>1 s.h.</td>
</tr>
<tr>
<td>HPE 00336</td>
<td>Teaching Concepts of Elementary Physical Education</td>
<td>3 s.h.</td>
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<td>Prerequisite(s): (HPE 00286 or PHED 35286) and HES Department Acceptance</td>
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<td>This course is an introductory survey course designed to help prepare health and exercise science teacher certification majors to teach relevant curriculum at the elementary school level. Students will be exposed to a number of important activities that comprise the focus of elementary school physical education. Methods, techniques and classroom management as they apply to teaching pertinent curriculum will be highlighted.</td>
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<tr>
<td>HPE 00368</td>
<td>Motor Learning and Human Movement</td>
<td>3 s.h.</td>
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<td>In this course students receive an introduction to major theories and principles concerning motor learning and performance of physical skills. Emphasis is placed on the preparation of instructional designs which enhance skill and knowledge acquisition of the learner.</td>
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<tr>
<td>HPE 00392</td>
<td>Field Experience in Teaching Health and Physical Education</td>
<td>1 s.h.</td>
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<td></td>
<td>Prerequisite(s): (HPE 00286 or PHED 35286) or (HPE 00310 or PHED 35310) or (HPE 00455 or HLTH 37453)</td>
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<td>This course introduces students to the nature and operation of elementary and secondary schools. Students learn to organize instructional materials into meaningful daily lessons in both health and physical education. The course emphasizes the development of teaching strategies, classroom management techniques and use of educational media. The field experience involves observation, tutoring, micro-teaching and practice in a variety of other instructional skills. Field assignments are sought that involve the pre-service teacher in a realistic mainstreamed classroom environment.</td>
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<tr>
<td>HPE 00450</td>
<td>K-12 Health and Physical Education Curriculum and Instruction</td>
<td>3 s.h.</td>
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<td>Prerequisite(s): (HPE 00325 or HLTH 37325) and (HPE 00326 or HLTH 37326) and (HPE 00310 or PHED 35310) and (HPE 00320 or PHED 35320) and (HPE 00336 or PHED 35336) and (SPED 08130) Corequisite(s): HPE 00392</td>
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<td>K-12 Physical Education Curriculum and Instruction is a critical junior level course designed to help prepare Health and Exercise Science majors to become successful physical education teachers in schools. Teacher candidates will develop expertise in curriculum construction, planning, instruction and evaluation in elementary, middle and high school. In developing this expertise, candidates will address the NJ Core Curriculum Content Standards for Comprehensive Health and Physical Education (Standards 2.1, 2.5 and 2.6).</td>
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<tr>
<td>HPE 00452</td>
<td>Teaching Concepts of Adapted Physical Education</td>
<td>3 s.h.</td>
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<td>Prerequisite(s): (HES 00270 or PHED 35270) and (HPE 00286 or PHED 35286) and (HPE 00310 or PHED 35310) and (HPE 00320 or PHED 35320) and (HPE 00336 or PHED 35336) and (SPED 08130) Corequisite(s): HPE 00392</td>
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<td>This course is designed to provide health and physical education teacher candidates with the knowledge and basic skills required to meet the professional and legal mandates pertaining to general physical education for students with unique needs, between ages 3 to 21. The course will focus on the law, placement decisions, assessment, individualized general physical education programming, service delivery, and transition planning for individuals with disabilities. It stresses professionalism in the workplace, awareness of the strengths and limitations of those with disabilities and methods for inclusion.</td>
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<tr>
<td>HPE 00453</td>
<td>School Health Program Planning</td>
<td>2 s.h.</td>
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<td>Prerequisite(s): (HPE 00325 or HLTH 37325) and (HPE 00326 or HLTH 37326)</td>
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<td>This course develops an understanding of the competencies essential in planning of health programs in schools. Students are given opportunities for integrating and correlating health in K-12 school settings. Field experiences, planning and teaching experiences are a part of this course.</td>
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<tr>
<td>HPE 00460</td>
<td>Clinical Practice in Health and Physical Education, Elementary</td>
<td>5 s.h.</td>
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<td>Prerequisite(s): (HPE 00392 or PHED 35392) and Praxis II</td>
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<td>This course allows teacher candidates to work under the guidance and direction of an experienced elementary health and physical education teacher. Teacher candidates gain experience and develop insight and skill in the teaching of secondary school health and physical education. An application for clinical practice must be submitted and approved through the Office of Field Experiences.</td>
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<tr>
<td>HPE 00461</td>
<td>Clinical Practice in Health and Physical Education, Secondary</td>
<td>5 s.h.</td>
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<td>Prerequisite(s): (HPE 00392 or PHED 35392)</td>
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<td>This course allows teacher candidates to work under the guidance and direction of an experienced secondary health and physical education teacher. Teacher candidates gain experience and develop insight and skill in the teaching of secondary school health and physical education. An application for clinical practice must be submitted and approved through the Office of Field Experiences.</td>
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</table>
This senior-level capstone course is designed to be taken concurrently with student teaching. The seminar will focus on: understanding the current issues in teaching health and physical education; evaluating the application of effective teaching; and understanding the parameters of professional and ethical behaviors in teaching.

SECD 03330: Practicum In Teaching And Learning A 1 s.h.
Practicum in Teaching and Learning A is a co-requisite with Teaching and Learning Mathematics A, Teaching and Learning English/Language Arts A, Teaching and Learning Social Studies A, or Teaching and Learning Foreign Language A, Teaching and Learning Science A. The course will consist of general opening session, a general closing session, sessions at a cooperating public middle school, and visits to governmental agencies, commercial sites, community sites, campus-based laboratories (when appropriate) and/or museums.

SECD 03332: Practicum In Teaching And Learning B 1 s.h.
Practicum in Teaching and Learning B is a co-requisite with Teaching and Learning Mathematics B, Teaching and Learning English/Language Arts B, Teaching and Learning Social Studies B, or Teaching and Learning Foreign Language B, Teaching and Learning Science. The course will consist of a general opening session, a general closing session, sessions at a cooperating public high school, and visits to governmental agencies, commercial sites, community sites, campus-based laboratories (when appropriate) and/or museums.

SECD 03435: Clinical Practice In Subject Matter Education 10 s.h.
Corequisites: SECD 03350 and SECD 03436
The clinical practice experience is a supervised, full-time activity conducted in public secondary classrooms, and it requires demonstrated mastery of subject area content, lesson planning, and multiple instructional strategies to meet varied student needs; demonstrated ability to assess learner progress and modify instruction accordingly, ability to manage all aspects of classroom activity, ability to work collaboratively with all instructional, administrative, parental, and community members of the classroom and school community, and ability to document evidence of doing all of the above. This is a full-time field-based course taken in the senior year.

SECD 03436: Subject Matter Clinical Seminar 1 s.h.
Corequisites: SECD 03350 SECD 03435
This capstone seminar is designed to provide pre-service K-12 subject matter teacher candidates with a supportive atmosphere that builds relationships with peers and mentors while offering an opportunity to synthesize the pre-service components of their academic preparation with actual experience and emerging issues in the field of education and their transition into the profession. Teacher candidates develop a holistic concept of their philosophy of teaching; gather and present evidence of their comprehensive knowledge, skills, and dispositions expected of the profession; and demonstrate knowledge of current critical and contemporary issues facing educators and those who have a stake in K-12 subject matter education. Interviewing skills will be developed during this course. A co-requisite field internship is required.

SMED 31450: Residency II: Elementary and Secondary Art 10 s.h.
Corequisites: SECD 03350 and SMED 31451
This senior level course provides the teacher education candidate with opportunities to demonstrate the professional knowledge, pedagogic skills and dispositions developed in preservice professional course work. The student teaching experience is a supervised, full-time activity conducted in public elementary, middle and secondary art classrooms. The experience requires demonstrated mastery of artistic content, lesson planning, instructional techniques in the arts, student assessment and classroom management. Admission to this course requires completion of professional education courses and near completion of academic major courses. A minimum grade point average of 3.0 in major and professional education courses is required.

SMED 31451: Clinical Practice Seminar In Art Education 1 s.h.
Corequisites: SECD 03350 and SMED 31450
This capstone seminar for art teacher candidates provides an opportunity to establish structural knowledge apriori that will enable the integration of applied art classroom experiences during the subsequent weeks of student teaching and; creates a forum for students to process new experiences in the elementary, middle and secondary schools with art professionals who share an understanding of the context in the art classroom. Interviewing skills and a professional portfolio will be developed during this course.

SMED 32411: Clinical Practice In Music 10 s.h.
Corequisites: SECD 03350 and SMED 32412
This senior level course provides the teacher education candidate with opportunities to demonstrate the professional knowledge, pedagogic skills and problem-solving ability developed in preservice, professional course work. The student teaching experience is a supervised, full-time activity conducted off-campus in a public secondary school classroom. The experience requires demonstrated proficiency in lesson planning and evaluation, instructional techniques, student assessment and classroom management. Admission to student teaching requires near completion of academic major,
minimum grade point average of 3.0 in major and recommendations by major field academic department and teacher education faculty.

SMED 32412: Clinical Practice Seminar In Music 1 s.h.
Corequisites: SECD 03350
This capstone seminar for music student teachers provides an opportunity to establish structural knowledge apriori that will enable the integration of applied music classroom experiences during the subsequent weeks of student teaching, and creates a forum for students to process their new experiences in the schools with music professionals who share the context for the music classroom.

SMED 32413: Clinical Practice: Elementary Music 5 s.h.
Prerequisites: SMED 32313 (Allows Concurrency) and smed 32329 and (SMED 32330 or SMED 32331). Corequisites: SMED 32412 and SMED 21414 and SECD 03350.
This senior level course provides the teacher education candidate with opportunities to demonstrate the professional knowledge, pedagogic skills and dispositions developed in pre-service professional course work. The student teaching experience is a supervised, full-time activity conducted in public elementary music classrooms. The experience requires demonstrated mastery of music content, lesson planning, instructional techniques, student assessment and classroom management in elementary music. Admission to this course requires completion of professional education courses and near completion of academic major courses. A minimum grade point average of 3.0 in major and professional education courses is required.

SMED 32414: Clinical Practice: Secondary Music 5 s.h.
Prerequisites: SMED 32329 AND (SMED 32330 OR SMED 32331)
This senior level course provides the teacher education candidate with opportunities to demonstrate the professional knowledge, pedagogic skills and dispositions developed in pre-service professional course work. The student teaching experience is a supervised, full-time activity conducted in public secondary music classrooms. The experience requires demonstrated mastery of music content, lesson planning, instructional techniques, student assessment and classroom management in secondary music. Admission to this course requires completion of professional education courses and near completion of academic major courses. A minimum grade point average of 3.0 in major and professional courses is required.

SMED 33330: Teaching/Learning A: Mathematics 3 s.h.
Prerequisite: C- or better in EDUC 01272 andREAD 30319 and SMED 33420 Corequisite: SPED 08316 and SECD 03330
This first in a sequence of two three-credit courses is designed for students majoring in mathematics and planning careers as K-12 mathematics teachers. Teacher candidates will learn to organize instructional materials into standards-based mathematics units and daily lessons focused on scaffolding learning experiences in number sense, operations, and algebraic thinking. In conjunction with a co-requisite practicum, this course includes both community- and public school-based experiences dealing with a range of topics necessary to building a functioning learning community, including mathematics pedagogy and praxis, learner diversity, lesson and unit planning, and national and state standards for mathematics.

SMED 33331: Teaching/Learning B: Mathematics 3 s.h.
Corequisites: SECD 03332 Prerequisites: SMED 33330
This second in a sequence of two three-credit courses is designed for students majoring in mathematics and planning careers as K-12 mathematics teachers. Teacher candidates will learn to organize instructional materials into standards-based mathematics units and daily lessons focused on scaffolding learning experiences in geometry, measurement, probability, statistics, and discrete mathematics. In conjunction with a co-requisite practicum, this course includes both community- and public school-based experiences dealing with a range of topics necessary to building a functioning learning community, including mathematics pedagogy and praxis, learner diversity, lesson and unit planning, and national and state standards for mathematics.

SMED 33420: Educational Technology 1 s.h.
This laboratory course focuses on the use of educational technology in support of student learning, and integration of technology into the K-12 curriculum. Strategies to incorporate technology and the World Wide Web into the school curriculum will be explored. Each student will develop an electronic portfolio to demonstrate their growth over time and record evidence of their teaching competencies.

SMED 34330: Teaching/Learning A: Science 3 s.h.
Prerequisite: CPath grades or better in EDUC 01270 and EDUC 01272 and SMED 33420 Corequisites: SPED 08316 and SECD 03330
This first in a sequence of two three-credit courses, in conjunction with the matching field experience/practicum, focuses on K-12 content and instructional methodology in science for the K-12 classroom with an emphasis on middle school levels. The course content revolves around the use of the American Association for the Advancement of Science (AAAS) themes in Science for All Americans as the guiding goal for K-12 science. It introduces and elaborates on the National and New Jersey Science Standards as the means to reach specific objectives for prospective science teachers and their future students. The course concentrates on the use of inquiry based models in the teaching of science as defined by both the National and New Jersey Science Standards for grades K-8.
Course Descriptions

SMED 34331: Teaching/Learning B: Science 3 s.h.
Corequisite: SECD 03332; Prerequisites: SMED 34330 Minimum Grade of C and SECD 03330 Minimum Grade of C
This second in a sequence of two three-credit courses, in conjunction with the matching field experience/practicum, focuses on K-12 content and instructional methodology in science for the K-12 classroom with an emphasis on high school levels. The course content revolves around the use of the American Association for the Advancement of Science (AAAS) themes in Science for All Americans as the guiding goal for K-12 science. It introduces and elaborates on the National and New Jersey Science Standards as the means to reach specific objectives for prospective science teachers and their future students. The course concentrates on the use of inquiry based models in the teaching of science as defined by both the National and New Jersey Science Standards for grades 9-12.

ANTH 02202: Introduction To Cultural Anthropology 3 s.h.
This course presents cultural anthropology as a coherent system of data and theory designed to explain the variety of human group behavior, giving special emphasis to the structure and function of non-western cultures.

ANTH 02203: Introduction To Archeology 3 s.h.
This course covers the rudiments of archeological field techniques, methods of analysis and dating methods.

ANTH 02210: Natives Of South America 3 s.h.
The pre-history and cultures of native South Americans are examined in this course via the archeological record and ethnographic accounts. The concepts of culture, cultural evolution, and adaptation are emphasized while undertaking a comprehensive survey of the diverse native South American societies and their environments. This course is offered annually.

ANTH 02215: Medical Anthropology 3 s.h.
This course surveys the evolutionary, ecological, cultural, and political factors affecting patterns and experiences of health, disease, and healing in past and present societies. Students will examine recent research on contemporary medical and social concerns such as HIV in Africa and medical communication issues with immigrant populations in the U.S. This course is ideal for students who plan future careers in the medical and helping professions, providing them with the fundamental skills necessary to be culturally competent health professionals.

ANTH 02221: Human Variation 3 s.h.
In this course, the genetic, immunological, anatomical and physiological variation among modern populations of humans across the globe is examined. The course will enable students to explain human biological adaptation to the biocultural environments in which they live, as well as to understand environmental influences on the human life cycle such as on fertility, growth, and longevity. No prerequisites

ANTH 02250: Introduction To Anthropological Linguistics 3 s.h.
Students in this interdisciplinary course will engage in the scientific study of language with particular reference to the relationships among the languages, thoughts, and cultures of speech communities living all over the world, including within the United States, France, India, Canada, Spain, Japan and Peru, among others. Additional course topics include the process of human language acquisition, structures of human language, bilingualism and the ways in which race, class, gender, and other social characteristics may be displayed through the use of language. This course is offered every other year, beginning in 2009.

ANTH 02270: New World Archaeology 3 s.h.
Prerequisites: ANTH 02203
This course covers the prehistoric and early historic cultural adaptations of the native peoples of the Americas. Emphases will be placed upon: current research trends and findings particularly in the last three decades; prehistoric cultural ecology; culture change and culture process; and current new and traditional controversies, from the earliest Native American hunter-gatherers to settled societies, animal and plant domestication, to the impact of colonization, and the impact of archaeological conservation. Students will research articles on discoveries and debates, prepare a research report, and apply learned archaeological methods in a simulated excavation. This course may not be offered annually.

ANTH 02280: Old World Archeology 3 s.h.
Prerequisite: "Introduction to Archaeology" (ANTH 02203)
This course will explore the ancient cultures of the Old World from an archaeological perspective. Possible topics include, but are not limited to, European Prehistory, Ancient Egypt, Archaeology of Greece and Rome, African Prehistory, Indus Valley Prehistory, and the Prehistory of China. Emphases will be placed upon: current research trends and findings particularly in the last three decades; prehistoric cultural ecology; culture change and culture process; and current new and traditional controversies, from the earliest hunter-gatherers to settled societies, animal and plant domestication, to the impact of civilizations and empires, and the impact of archaeological conservation. Students will research articles on discoveries and debates, prepare a research report, and apply learned archaeological methods in a simulated excavation. This course will be offered annually.
ANTH 02290: Museum Studies 3 s.h.  
This course provides an introduction to the history, purposes, and internal workings of museums from an anthropological perspective. Students will learn how museums that focus on natural history and cultural history related to the anthropological studies of archaeology, human evolution, and world ethnography operate in both physical museum exhibit space and virtually on the worldwide web. It will cover the relevance of anthropological training to careers in the museum field, as well as the importance of conducting anthropological investigations in the museum environment. This course will be offered annually.

ANTH 02301: Human Evolution 3 s.h.  
Prerequisites: One of the following: ANTH 02201, ANTH 02221, BIOL 02100, BIOL01.104, BIOL 01110, BIOL 01113, BIOL 01310
Students of Human Evolution will study anthropological genetics and, evolutionary theory, basics of primate and human skeletal anatomy, dating and excavation techniques and the fossil evidence of hominid evolution from 7 million years ago to the present. Recent discoveries and controversies will be discussed and evaluated. The course will be offered annually.

ANTH 02310: Indians Of North America 3 s.h.  
This is an ethnographic and archaeological survey of the native peoples of North America, emphasizing cultural diversity and adaptation. The course will cover the time span from the settling of North America to the present. It analyzes the present-day problems of reservation life, the contributions of Native Americans, and the Native American's place in society. Students will analyze issues affecting Native North Americans.

ANTH 02311: People And Cultures Of Africa 3 s.h.  
This is an ethnographic and archaeological survey of the peoples of Africa, emphasizing cultural diversity and adaptation. The course will cover the time span from the settling of Africa to the present. It analyzes the present-day problems of preservation of traditional cultures and the contributions of African peoples to world cultures. Students will analyze issues affecting African peoples. This course may not be offered annually.

ANTH 02312: Anthropological Perspectives On Physical Growth And Development. 3 s.h.  
Prerequisites: ANTH 02202 (Cultural Anthropology) ORPSY 01107 (Essentials of Psychology) ORSOC 08120 (Intro to Sociology).
This course will introduce students to anthropological perspectives on the study of the human life cycle, examining how environmental conditions as well as cultural beliefs and practices affect physical, cognitive, and social development throughout the lifespan. Students will also learn about unique traditions of societies around the world regarding pregnancy, childbirth, infancy and childhood, parenting, adolescence, adulthood, middle-age, and aging. This course is offered annually and will be of particular value to students planning to work in psychology, education, nursing, social work, or medicine.

ANTH 02315: Forensic Anthropology 4 s.h.  
Prerequisites: ANTH 02201 or BIOL 10210
Forensic Anthropology employs the methods of physical anthropology and archeology to identify human skeletal remains. Proper excavation technique for recovery of remains in order to fulfill the requirements of the legal system will be taught. Students will learn to determine age, sex, height, life history, cause of and time since death and population affinity from the human skeleton. There is a weekly Friday morning laboratory session in addition to classes. A weekend day-long excavation is required. Grading is based on homework, a case report, performance on exams and a final paper. This course may not be offered annually.

ANTH 02321: Cultural Ecology 3 s.h.  
Prerequisites: ANTH 02202
This course examines the relation of human groups to their environments as mediated by culture. It emphasizes the interaction of significant variables in the natural habitat, technology, and social institutions. This course may not be offered annually.

ANTH 02322: Sex And Sex Roles In A Cross Cultural Perspective 3 s.h.  
Prerequisites: ANTH 02202
This course examines the impact of sexuality on the structure of human cultures, and on how sexuality and gendered behavior are expressed and employed in different cultural contexts. This course may not be offered annually.

ANTH 02323: Anthropology Of Magic And Religion In Primitive, Tribal, And Peasant Cultures 3 s.h.  
This course examines the diversity of magical and religious beliefs in human cultures and explores how religious systems are interconnected with environment, economics, politics, and family structures. Course material emphasizes use of a comparative approach to explore the relationship between culture, magico-religious practices, and spirituality. The course will be offered annually.
ANTH 02326: The Maya 3 s.h.
Prerequisites: ANTH 02202 or ANTH 02310
This course traces the development of Maya culture from its earliest archaeological evidence to the eve of Old World contact, focusing on its adaptation to a variety of ecological settings, its interaction with other Mesoamerican cultures, the development and transformation of city states, Mayan cosmology and world view, and the development of an indigenous system of writing. This course may not be offered annually.

ANTH 02350: Comparative Cultures 3 s.h.
Students conduct a survey and comparative study of a variety of cultures around the world, analyzing both cultural forms and the methods used by anthropologists to study them. This course may not be offered annually.

ANTH 02371: Anthroponal Approaches To Culture Change 3 s.h.
Prerequisites: ANTH 02202 or SOC 08120
Using a sociocultural approach emphasizing both the theoretical and applied aspects (i.e. the "anthropology of development"), this course promotes awareness of the complexities involved in efforts to implement "development" and "progress," especially in the Third World. Recommended for students considering careers with multinational corporations, foreign service, U.N., etc. This course may not be offered annually.

ANTH 02420: Culture And Personality 3 s.h.
This course explores how the culture into which an individual is born influences the development of that person's personality and sense of self. Course material is grounded in a cross-cultural comparative approach to understanding perception, emotion, and behavior. Child-rearing practices, psychological functions of art and religion, and various culture's responses to deviant behaviors will also be explored. This course may not be offered annually.

ANTH 02491: Independent Study In Anthropology 3 s.h.
Students have an opportunity to pursue individual specialized topics under the guidance of a staff member. This course may not be used as a substitute for a course offered by the department. This course may not be offered annually.

ANTH 02492: Undergraduate Research Seminar In Anthropology: Special Topics 3 s.h.
Students participate in planning a research project, collecting data and preparing a report suitable for publication. Subjects of research (e.g., applied anthropology, Egyptology, theory, current issues and controversies, visual anthropology) are selected according to student interest. This course may not be offered annually.

HSRV 01100: Introduction to Human Services 3 s.h.
Prerequisite: BA in Human Services Majors
An interdisciplinary orientation to major Human Services agencies and institutions in this region, including social work, education, corrections, substance abuse, child welfare, mental health, recreation, geriatrics, etc. Participants will study the roles and functions of professionals in these types of Human Services careers.

HSRV 01351: HSRV 01351: Field Experience for Human Services I 3 or 6 s.h.
Prerequisite: HSRV 01100, HSRV 01310, and EITHER SOC 08120 or PSY 01107
This course provides students with the opportunity to be engaged in a field experience which will require them to apply the knowledge they have gained from their previous classes focused on human services course content, theory, and research methods. Students are required to take the course, followed by the Field Experience II course, over their senior year, three credit hours during the fall semester and three credit hours during the spring semester. Both courses are primarily aimed at an academic objective: applying theory to experience. This is accomplished by having each student conduct a research exercise while working at an internship within a selected agency in the community, and by having students react to fellow students' research within the classroom setting.

HSRV 01400: Senior Seminar in Human Services 3 s.h.
Prerequisite: senior standing and completion of corequisites.
HSRV 01400: Senior Seminar in Human Services - WI Senior Seminar constitutes the capstone experience for students majoring in Human Services and represents the culminating exit course for students. This course is a writing intensive experience designed to help students integrate their classroom and field experience into a coherent sense of human services as a profession as well as a sense of the student's personal commitment to the values and ethics of the profession. As a culminating experience, this course is based on a portfolio created from the experience the student has accrued during his/her participation in both the academic and experiential components of the major. Prerequisite: senior standing and completion of core requirements
Course Descriptions

HSRV 08310: Research Methods for Human Services 3 s.h.
Prerequisites: HSRV 0110, either STAT 02100 or STAT 02260 AND EITHER SOC 08120 or PST 01107
This course introduces the student to the scientific methods used in the social sciences, the relationship between theory and methodologies of data collection and analysis, the rudiments of basic types of data analysis and interpretation. Given the applied nature of the human services degree, particular emphasis is placed on qualitative research methods and analyses. This course is offered annually.

SOC 08120: Introduction To Sociology 3 s.h.
Prerequisites
This course analyzes the characteristics of social organization and focuses on the study of social relationships and interaction. It examines the social basis of behavior patterns, the nature of social problems and the possibilities for social change. (Required for Sociology majors)

SOC 08121: Introduction to Sociology for Premed Students 3 s.h.
Prerequisite(s): None
This course provides students with a general understanding of the theoretical, conceptual, and methodological approaches to studying people in groups, institutions, societies and interpersonal interaction. It examines some of the realities of everyday life and critically analyzes perceptions of these social phenomena. Special attention is given to understanding social phenomena with particular relevance to health and medicine, as well as a wide range of other social arenas.

SOC 08220: The Sociology Of The Family 3 s.h.
This course examines the relationships between the family and other societal institutions as well as the related interaction patterns within the family, both from an historical and a cross-cultural perspective. The course also includes such specific topics as gender roles, women’s movement, sexuality and social class differences.

SOC 08221: Social Problems 3 s.h.
This course examines major social problems in the society as a part of the ongoing social process, with particular reference to their economic, political and other social roots. Topics covered can include such areas as mental illness, poverty, structured inequality, various forms of addiction, war, racism and crime.

SOC 08223: The Sociology Of Social Welfare 3 s.h.
Prerequisites: SOC 08120
This course examines the socio-historical development of social welfare, focusing upon changes in the theory and practice of social welfare in American and other societies. This course may not be offered annually.

SOC 08230: The Sociology Of Minority Groups 3 s.h.
Prerequisites: SOC 08120
This course analyzes the nature of the relationships among ethnic, racial and other groupings in our society. It examines and tests sociological theories by the study of specific past and present minority group situations.

SOC 08269: Self And Society 3 s.h.
This introductory course in the study of behavior in everyday life examines the sociology of the familiar, looking at the socialization processes, the effect of social interaction and re-socialization. The course focuses on the individual as a social interacting organism.

SOC 08281: Sexuality and Society 3 s.h.
This course is an introduction to the sociological study of sexuality. Students will look at the ways that sexual desires, acts, identities, and meanings are shaped and structured by the larger social world through policies, institutions, norms, and rituals. Students will explore why discussions of sex are taboo and why sexual issues tend to be so polarizing in contemporary American society. Furthermore, students will work to develop the skills and knowledge needed to discuss sexuality as a social construct that shapes sexual ethics, human rights, and personal freedoms.

SOC 08320: Urban Sociology 3 s.h.
Prerequisites: SOC 08120
This course examines the process, conditions and problems of urbanization. It emphasizes the social phenomena of the contemporary urban scene, the problems of mass society and their possible solution, mass organization, mass communication and regional interdependence.
SOC 08322: The Sociology Of Religion 3 s.h.
Prerequisites: SOC 08120
This course studies sociological theories of the origin and nature of religion. It includes the relationship of religion to family life, sexuality, ethnic identity, economic inequality and political power. Students also study conservative and radical religious movements in contemporary society and secularization and secular substitutes for religion. This course may not be offered annually.

SOC 08323: The Sociology Of Social Work 3 s.h.
Prerequisites: SOC 08120 and SOC 08220
This course examines the socio-historical development of social work, giving attention to the processes of casework, group work and community organization as well as aspects of social work as a profession. This course may not be offered annually.

SOC 08325: Deviant Behavior And Social Control - Wi 3 s.h.
Prerequisites: Soc 08120
This course explores the major theoretical and research issues in the study of deviant behavior. Then, drawing on a wide variety of types of deviant behavior, the course studies three levels of social reality: the interpersonal, the organizational and the structural. The course seeks to place deviant behavior within the context of traditional social processes and structures. Writing Intensive (WI)

SOC 08326: The Socialization Of The Child Through Adolescence - Wi 3 s.h.
Prerequisites: SOC 08120 or SOC 08220
This course focuses upon the processes and social forces which facilitate the ways in which individuals are prepared to enter various groups within the life cycle. Writing Intensive (WI)

SOC 08327: Comparative Education In Sociological Perspective 3 s.h.
Prerequisites: SOC 08120
This course compares the educational systems of different societies and their relationships to other social institutions in their societies. Such features as the overall purposes and goals of education, its accessibility to different social strata, gender differences, services to special populations in the society, and the teaching profession are compared. In each case study studied, both unique characteristics of the educational system are highlighted as well as those similar to other societies, with the focus on social forces which influence the makeup and functioning of different educational systems.

SOC 08328: Sociology of Disasters and Crisis 3 s.h.
Prerequisite: None
This course explores disasters and emergency response via a sociological lens and examines the need to systematically understand the social impacts of such tragic events. Participants will learn how to be better prepared to function as an effective member of their community to enhance the chances of improving preparedness, mitigation, and response to possible natural or technological hazards. Furthermore, this course will include discussions of disaster types, individual and collective vulnerabilities of various populations to disasters, disaster-related organization and social policies, issues of disaster preparedness, the media and disaster response, and challenges/opportunities of disaster recovery and prevention.

SOC 08330: Social Stratification 3 s.h.
Prerequisites: SOC 08120
This course examines the major classic and modern theories of social stratification and analyzes the forms and functions of social inequality in contemporary societies. It stresses the influence of class membership on individual behavior and examines the implications of institutionalized inequalities for democratic societies.

SOC 08331: Classical Sociological Theory 3 s.h.
Prerequisites: SOC 08120
This course studies the historical and conceptual development of the major schools of thought within the "sociological tradition." It emphasizes an understanding of the nature of theory and systems of theory, the application of theory, the problems inherent in theorizing about society and social life and the relations between sociological theory and research. (Required for sociology majors)

SOC 08332: Contemporary Sociological Theory 3 s.h.
Prerequisites: SOC 08120
Contemporary Sociological Theory is one of two core courses that starts with the classical period and culminates with this course covering theory in recent times. Contemporary Sociological Theory examines the state of the field in the twentieth century, focusing on theoretical issues and frameworks that have come to define Sociology, its research and methods. It will include consideration of the Parsonian structural functionalism of the 1950s, the critique of Positivism that emerged during the 1960s, and the fragmentation of the field into the many perspectives and approaches there are today.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
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<tbody>
<tr>
<td>SOC 08333</td>
<td>Sociology Of Work</td>
<td>3 s.h.</td>
<td>SOC 08120</td>
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<td><strong>Prerequisites:</strong> SOC 08120</td>
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<td></td>
<td>This course uses sociological propositions of bureaucracy, professionalization, delegation, goal distortions and informal organization to evaluate critically various management philosophies. It examines interdependence of structure, status, leadership and motivation.</td>
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<td>SOC 08336</td>
<td>Sociology Of Education</td>
<td>3 s.h.</td>
<td>SOC 08120</td>
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<td><strong>Prerequisites:</strong> SOC 08120</td>
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<td>The purpose of this course is to study education as a social institution and its interrelationships with other social institutions. It focuses on how education is affected by social forces such as demographic changes, governmental policy, and mass media; and how education itself impacts on the rest of society, such as perpetuating social inequalities.</td>
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<td>SOC 08339</td>
<td>Sociological Practice</td>
<td>3 s.h.</td>
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<td><strong>Prerequisites:</strong> SOC 08120</td>
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<td>This course focuses on using sociological theories and concepts, research methods, and ethical decision-making processes to solve problems. Sociological practice occurs at all levels from the individual to societal. The course links the student to a variety of career pathways and occupational settings, including mental health, rehabilitation, work in prisons, and youth and family services.</td>
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<td>SOC 08351</td>
<td>Political Sociology</td>
<td>3 s.h.</td>
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<td><strong>Prerequisites:</strong> SOC 08120</td>
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<td>This course analyzes the interplay between society and politics, using both classical and contemporary perspectives. Course topics may include: power, elites, conflict, ideology, political systems, political behavior, political organization, political institutions and political processes and change.</td>
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<td>SOC 08353</td>
<td>The Sociology Of Complex Organizations</td>
<td>3 s.h.</td>
<td>SOC 08120</td>
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<td><strong>Prerequisites:</strong> SOC 08120</td>
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<td>This course discusses the major theories and research in complex and formal organizations, giving special attention to a variety of organizational types, including industrial, service and non-profit. It emphasizes examining varying organization types with respect to their size, structure, environments and their dynamics of innovation and change.</td>
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<td>SOC 08362</td>
<td>Sociology Of Disability</td>
<td>3 s.h.</td>
<td>SOC 08120</td>
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<td><strong>Prerequisite:</strong> SOC 08120</td>
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<td>The Sociology of Disability adopts a narrative approach from the perspectives of disabled persons, based on memoirs, short stories, and novels, which are applied to relevant sociological theories, concepts, and perspectives. Sociological issues examined in this course include how professionals and practitioners variously define disability, the history of how sociologists have discussed the concept, the analysis of “disabled” cultures both in the US and abroad, and the effects of the Disability Rights Movement on selfhood and collective identity. Most importantly, the course examines how persons with disabilities cope with devalued roles, manage stigma, and incorporate disability into identity.</td>
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<td>SOC 08365</td>
<td>Contemporary Jewish Life</td>
<td>3 s.h.</td>
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<td><strong>Prerequisite:</strong> SOC 08120</td>
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<td>This course focuses on contemporary Jewish life with primary focus on American Jews. Situating them in historical and transnational context, the course will explore their significance as a diaspora community, while exploring the role of collective memory, religion, and the construction of Jewish culture. Students will learn the who, what, where and when of this religious/ethnic group, its diversity, and issues relating to integration and intergroup relations with the larger society. Introduction to Sociology or Introduction to American Studies is recommended as a prerequisite, but not required.</td>
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<td>SOC 08370</td>
<td>The Sociology Of Women In Society</td>
<td>3 s.h.</td>
<td>SOC 08120 or SOC 08220</td>
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<td><strong>Prerequisites:</strong> SOC 08120 or SOC 08220</td>
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<td>This course investigates the role of women in society. Course topics include: Women and the Economy, Women and the Law, Socialization into Female Sex Roles, Women and Religion and Women in Academia.</td>
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<td>SOC 08375</td>
<td>Sociological Research Methods</td>
<td>3 s.h.</td>
<td>SOC 08120</td>
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<td><strong>Prerequisites:</strong> SOC 08120</td>
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<td>This course introduces the student to the scientific methods used in the social sciences, the relationship between sociological theory and methodologies of data collection and analysis, the rudiments of basic types of data analysis and interpretation. Students will learn to read and summarize basic scientific reports, to critically analyze and evaluate reported research findings in the social sciences, and to recognize ethical concerns associated with sociological research. (Required for Sociology majors)</td>
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SOC 08376: Social Statistics  3 s.h.
Prerequisites: SOC 08120
This course familiarizes the student with the basics in elementary statistical methods used in the social sciences and the uses and misuses of statistics for various purposes. The student will learn to calculate and understand the proper use of basic statistics commonly used in the social sciences. (Required for Sociology majors)

SOC 08391: Ethnic Minorities In China  3 s.h.
Prerequisite: SOC 08120
This is an upper level sociology course that will acquaint students with the theoretical frameworks and methodology procedures of ethnic and minority studies. It will introduce to students racial and ethnic compositions and characteristics of the population of China, the administrative arrangement of areas and regions inhabited by minority nationalities and the history and culture of these minorities. The focus of this course will be the examination of ethnic minorities from the sociological points of view that will offer students a comparative and global perspective of ethnic studies.

SOC 08399: Sociology Of The Holocaust - Wi  3 s.h.
Prerequisites: SOC 08120
This course primarily deals with structural and experiential dimensions of the genocidal process affecting the European Jews, their ethnicity, culture and religious communality after 1933. Gypsies, Jehovah’s Witnesses, prisoners of conscience, Russian prisoners of war, the Polish intelligentsia, who with the Jews, became a subject of Nazi persecution are also among those remembered. The Holocaust or shoa will provide a model for compassionate insight into the experience of other persecuted ethnic and religious minorities or any who suffer disadvantage due to long-standing discrimination, such as women and homosexuals. Special emphasis will be given to understanding the interpersonal processes which are part of survival and transcendence of situations where we find society against the self. Writing Intensive (WI)

SOC 08400: Environment, Policy And Society  3 s.h.
Prerequisites: SOC 08120
This course emphasizes the interaction between the social and ecological environments including: technological mechanisms by which societies shape their environments; cultural values that cause people to use the environment in particular ways; and policy implications that may result in social consensus or conflict concerning manipulation of the natural environment.

SOC 08401: Human Service Organizations  3 s.h.
Prerequisites: SOC 08120
This course will focus on the micro and macro aspects of human service organizations of various kinds; for example, hospitals, courts, nursing homes, public agencies, schools, and the like. These organizations will be examined in terms of their structure, delivery of services, their function of “processing” human beings, the internal and external environments in which they operate, and the policy implications for delivery of services and organizational change.

SOC 08403: Sociology Of Death, Dying, And Bereavement  3 s.h.
Prerequisite: SOC 08120
This course provides students with an in-depth examination of the social and cultural dimensions of death, dying, and bereavement within the United States. Cross-cultural, historical, and international perspectives are also introduced as various theories and methods of sociology are employed to examine such issues as the meaning of death, the process of dying, facing death across the life course, the death industry, coping with loss and grief, and the social context of death, dying and bereavement. Instruction of the course material frequently takes an applied approach when connections are made between theory and practice as they exist within various occupations and industries centered on death, dying, and/or bereavement.

SOC 08405: Applied Community Development  3 s.h.
Prerequisite(s): SOC 08120
This course is designed to demonstrate how social science theory and research can be applied to conduct collaborative work between communities and academic research by identifying: 1) social, 2) economic, 3) political and 4) physical infrastructural problems. Moreover, it is the goal of this course to work with communities by developing strategies toward the discovery of sustainable development solutions vis-à-vis community development strategies and planning.

SOC 08420: Sociology of Trauma, Illness and Mental Health  3 s.h.
Prerequisite(s): SOC 08120
This course examines sociological approaches to trauma, illness and mental health. The focus of this course will be on the history, stiology, social responses, social factors related to mental disorders and mental health treatment associated with illness and trauma. It surveys major perspectives and reviews the history of the perception of mental disorder in western society. Classification, diagnosis, therapeutic approaches and institutional responses in addition to medical, legal, and social issues related to mental health and the treatment of people with mental disorders will be addressed. While there will be attention given to specific mental disorders, the primary considerations will cover the consequences of conceptualizations and treatment of mental illness rather than the development of individual conditions we deem as mental disorders or
physical illnesses.

SOC 08422: Social Determinants of Health: Theory, Method and Intervention 3 s.h.
Prerequisite(s): None
This course views disease risk beyond disease pathology and individual factors to psychological and sociological phenomena by exploring the social and cultural determinants of health behavior with an introduction of health behavior theories and application of interventions such as behavior change models and health program development.

SOC 08425: Senior Seminar In Sociology 3 s.h.
Prerequisites: SOC 08120, SOC 08331, SOC 08375 and SOC 08376 or permission of the instructor.
This seminar is a capstone experience designed to help students integrate what they have learned as sociology majors in a liberal arts setting. Students will engage in oral discussions and presentations as well as written exercises and essays to demonstrate an understanding of the sociological perspective, theoretical approaches and methods. The substantive focus of the seminar will vary by instructor.

SOC 08426: Sociology Senior Seminar - Wi 3 s.h.
Prerequisites: SOC 08120, SOC 08331, SOC 08375 and SOC 08376 or permission of the instructor.
This Senior Seminar is a writing intensive capstone experience designed to help students integrate what they have learned as sociology majors in a liberal arts setting and to write at a publication-ready level within the field or for specific audiences in different professional climates. Students will engage in oral discussions and presentations as well as written exercises and essays, demonstrating as they do an understanding of the field, its theoretical approaches and methods. The substantive focus of the seminar will vary by instructor. Writing Intensive (WI)

SOC 08427: Senior Seminar: Sociological Imagination-Wi 3 s.h.
Prerequisites: SOC 08120, SOC 08331, SOC 08375 and SOC 08376 or permission of the instructor.
This Senior Seminar course is for the Bachelor of Arts, Liberal Studies: Humanities/Social Science sequence, an interdisciplinary program. It is the writing intensive component of the sociology sequence and is expected to make this senior seminar an especially rich capstone experience, helping students develop as scholars and professionals. The sociological imagination will be evidenced in all of a student’s work for the course and be reflected in oral discussions and presentations, as well as written exercises and essays. Writing Intensive (WI)

SOC 08429: Organizational Response to Disasters and Crisis 3 s.h.
Prerequisite(s): SOC 08120
This course will help students understand the complex social organizations and organizational responses to disasters. A secondary goal of this course is to learn to understand and utilize the vast research published in this interdisciplinary field, while maintaining a specific focus of the sociological core of the research. Students will gain a familiarity with local, state and federal disaster-related organizations and how they respond within the bureaucratic structure to facilitate social recovery in the aftermath of disasters and crisis to enhance the chances of improving disaster preparedness, disaster mitigation, and disaster response to possible natural, human-induced or technological hazards. Furthermore, this course will include discussions of disaster-related organization and social policies, issues of disaster preparedness, the media and disaster response and challenges/opportunities of disaster recovery and prevention.

SOC 08430: Case Management Intervention In Sociological Practice 3 s.h.
Prerequisites: SOC 08120 and SOC 08223
This course emphasizes effective case management practice at the micro, mezzo, and macro levels of system intervention for populations at risk; Application of systems thinking to case management issues with individuals, families, and groups; Issues of aging, family mental health, child welfare, adult services and health are interwoven into practice scenarios in an effort to explore the multiple social problems faced by groups in a social service organization on a regular basis.

SOC 08431: Social Psychology Of City Life 3 s.h.
Prerequisites: SOC 08120
This advanced course studies everyday behavior in the city. It examines the ways people experience and give meaning to urban life, using different social-psychological conceptions and methodologies.

SOC 08436: Sociology Of Medicine 3 s.h.
Prerequisites: SOC 08120
This course analyzes medicine as a major institution in American society. It covers concepts of health and illness, attributes of a profession, the hospital, national health care, ethical issues and biomedical research.
Course Descriptions

SOC 08440: Selected Topics In Sociology 3 s.h.
Prerequisites: SOC 08120
This course provides a seminar experience in areas of sociology that are not a part of the recurring course offerings. Enrollment is limited, and student participation is maximized. Consult the Master Schedule each semester for specific topics being offered. This course may not be offered annually.

SOC 08441: Soc Of Migration: Contemp Persp 3 s.h.
Prerequisites: SOC 08120 or SOC 08230
This course examines the transnational journeys of migrants and refugees to the United States and provides a sociological perspective for understanding the diverse causes, consequences and contexts of contemporary international immigration. It provides students with a good understanding of and ability to analyze the effect of contemporary migration on American society. It is of particular benefit to those who are likely to work with communities containing substantial numbers of recent immigrants.

SOC 08450: Sociology Of Ethnicity And Politics 3 s.h.
Prerequisite: SOC 08120 or SOC 08230
This course provides students with an in-depth look into the relation between ethnicity and politics. It studies ethnic politics from the point of view of its participants by exploring their ideas and actions as well as analyzing the sociological factors that make some social agents involved in ethnic politics more than others. The course analyzes a number of historical and recent cases of nationalist and ethnic politics to discern the main similarities and differences among various types of ethnic ideologies and movements.

SOC 08488: Critical Race Theory: Social Justice, Advocacy and Intervention 3 s.h.
Prerequisites: SOC 08211 or SOC 08230 or Permissions of Instructor.
Students will explore the social construction of race and the subsequent implications this phenomenon has for particular members of this society. Building upon the origins of the Critical Legal Studies Movement and Critical Raced Theory (CRT), students will examine their own dispositions for significant issues from the centrality of race to better understand the need for becoming social justice advocates while learning a variety of social justice intervention strategies.

SOC 08491: Independent Study In Sociology 1 to 4 s.h.
Prerequisites: SOC 08120
This course gives students an opportunity to pursue individual, specialized research under guidance of a staff member. This course may not be used as a substitute for any course offered by the department. Entrance is only with the permission of the instructor and the chairperson of the department. This course may not be offered annually.

SOC 08493: Seminar On Gender Roles 3 s.h.
Prerequisites: SOC 08220
Students develop and present a major seminar paper in the area of the role of men and/or women in society. The range of topics covered in any semester depends upon the interests of the enrolled students. Students will read all class papers prior to presentation.

SOC 08494: Field Experience Seminar In Sociology - Wi 3 to 6 s.h.
Prerequisites: SOC 08120
This seminar provides the opportunity for students to be engaged in a field experience which will contribute to their sociological development. Students interact with their instructor and the other students in the seminar in the development, supervision and completion of individual projects. Areas of interest may include sociological research, analysis of social agencies and the development of affirmative social action programs. Writing Intensive - WI

SOC 09323: The Sociology Of Crime And Criminal Law 3 s.h.
Prerequisites: SOC 08120
This course analyzes crime and criminal law, emphasizing the nature and extent of crime within the context of the nature and functions of criminal law. It stresses problems of sociological theory and research in the area.

SOC 09333: The Sociology Of Punishment And Correction 3 s.h.
Prerequisites: SOC 08120
This course examines historical and contemporary theories of punishment within a sociological framework. It gives a critical survey of the structure, goals and problems of the American criminal justice system.
SOC 15322: The Sociology Of Population 3 s.h.
Prerequisites: SOC 08120
This course analyzes population growth and change, especially the American population. It emphasizes urban, rural, ethnic, racial, religious and social class differences. It also examines population variables and population theories. This course may not be offered annually.

THD 07103: Voice For The Stage 3 s.h.
Prerequisites: THD 07105
This course introduces use of the vocal instrument for development of projection and stage vocal ability. Students examine the physical anatomy of breathing, resonation and articulation. The methodologies of Fitzmaurice, Linklater, Alexander, Berry, Rodenberg and other master voice teachers are used to guide students in finding the best approach to develop individual vocal effectiveness when applying their breath, voice and entire physical beings to text for staged performance.

THD 07105: Introduction To Performance 3 s.h.
This is designed as a first course in performance for majors in the Department of Theatre & Dance. It will stress basic techniques and fundamentals of movement and interpretation. Class exercises will help students to explore the dynamics of stage performance. This course lays the groundwork for advanced study. Open to Theatre Majors only.

THD 07106: Speech And Dialects 3 s.h.
This course is an intense technical study of General American (GA) speech and stage dialects. The International Phonetic Alphabet (IPA) is the primary tool used to develop an understanding of GA speech versus individual regionalisms, and staged dialects. An emphasis is placed on improving students’ ability to speak in such a way as to assist them in attaining personal and professional goals as an actor or stage performer.

THD 07107: Introduction to Design for Performance 1.5 s.h.
Introduction to Design for Performance is a required core course for all BA Theatre students that details the collaborative process of design for performance and explains how all aspects; lighting, set, costume, sound and performers in a live production come together. Students will develop a basic understanding of the vital role collaboration plays in the production of live theater.

THD 07111: Colloquium In Theatre I .5 s.h.
These courses will provide a core experience for all majors. Through an on-going series of lectures, discussions, demonstrations and seminars, students will explore various aspects of Theatre Art and evaluate career options available to the theatre graduate. A maximum of 3 s.h. credit can be earned in colloquium, but not more than .5 s.h. in any one term.

THD 07112: Colloquium In Theatre II .5 s.h.
These courses will provide a core experience for all majors. Through an on-going series of lectures, discussions, demonstrations and seminars, students will explore various aspects of Theatre Art and evaluate career options available to the theatre graduate. A maximum of 3 s.h. credit can be earned in colloquium, but not more than .5 s.h. in any one term.

THD 07113: Colloquium In Theatre III 0 s.h.
These courses will provide a core experience for all majors. Through an on-going series of lectures, discussions, demonstrations and seminars, students will explore various aspects of Theatre Art and evaluate career options available to the theatre graduate. A maximum of 3 s.h. credit can be earned in colloquium, but not more than .5 s.h. in any one term.

THD 07114: Colloquium In Theatre IV 0 s.h.
These courses will provide a core experience for all majors. Through an on-going series of lectures, discussions, demonstrations and seminars, students will explore various aspects of Theatre Art and evaluate career options available to the theatre graduate. A maximum of 3 s.h. credit can be earned in colloquium, but not more than .5 s.h. in any one term.

THD 07115: Colloquium In Theatre V 0 s.h.
These courses will provide a core experience for all majors. Through an on-going series of lectures, discussions, demonstrations and seminars, students will explore various aspects of Theatre Art and evaluate career options available to the theatre graduate. A maximum of 3 s.h. credit can be earned in colloquium, but not more than .5 s.h. in any one term.

THD 07116: Colloquium In Theatre VI 0 s.h.
These courses will provide a core experience for all majors. Through an on-going series of lectures, discussions, demonstrations and seminars, students will explore various aspects of Theatre Art and evaluate career options available to the theatre graduate. A maximum of 3 s.h. credit can be earned in colloquium, but not more than .5 s.h. in any one term.
THD 07130: The Living Theatre 3 s.h.
This course helps students develop critical appreciation of the various dramatic media (stage, films, television, radio). By introducing them to aims and techniques as well as significant products, the course gives students insight into theatrical art, thereby enriching their enjoyment and sharpening aesthetic judgment.

THD 07135: Oral Interpretation Of Literature 3 s.h.
This course studies the basic principles of vocal control applied to oral communication of various forms of literature. It emphasizes such vocal techniques as stress, pause, rate, etc. and these are coordinated with body and facial expression to achieve clarity of meaning and mood.

THD 07195: Exploring Social Issues Through Theatre 3 s.h.
The student will study theatrical styles as a response to the problems of society. Issues like sexism, racism, aging, intercultural conflicts and the AIDS crisis will be explored as they appear in theatrical forms such as the problem play, comedy and the epic theatre.

THD 07201: Introduction To Theatre And Dance 3 s.h.
Students study current and historical examples of Theatre and Dance with emphasis on the distinguishing characteristics of each form of performance and on the principles of temporal composition common to all linear or abstract performing art. The course stresses the fundamentals of interpretation and analysis essential to advanced work in performance, design and criticism.

THD 07202: SCRIPT ANALYSIS 3 s.h.
Prerequisite: THD 07,201
This course offers students a working knowledge of the structural elements of dramatic writing and explores dramatic texts as scripts for performance. Students will learn to analyze dramatic structure, character arc and motivation, atmosphere and sensory layers, and the tone, style and dialogue of selected drama. They will view these texts such as scripts for the stage from the perspective of actor, director, and designer. As a way to gain a more profound understanding of the mechanics of dramatics texts, they will also write their own short plays, in which they directly and deliberately apply the aforementioned elements of dramatic writing.

THD 07203: Costuming I 1.5 s.h.
This course will present techniques by which stage costumes are constructed. Students will also be given an outline of the development of fitted clothing. A series of costuming projects will give students a basic understanding of costume design for the theatre.

THD 07205: Costuming II 1.5 s.h.
Prerequisites: THD 07203
This is a continuation of the study begun in Costuming I.

THD 07215: Experiencing Acting 3 s.h.
This course is for non-major students interested in exploring their talents. Through the use of improvisation, theatre games and scene projects, students examine how actors strengthen and use imagination, awareness and creativity, and how they analyze, prepare and perform a role.

THD 07230: Stagecraft Fundamentals 3 s.h.
Students are introduced to the technical aspects of producing theatre and dance. Topics addressed and hands-on learning focuses on Scenic Carpentry, Stage Lighting, Production Management and Sound Engineering. Every student gains practical training in production aspects related to the Department’s mainstage season. All students will learn to safely use tools and develop skills needed to work as a carpenter, electrician or on a run crew.

THD 07231: Stagecraft II 1.5 s.h.
Stagecraft II is a continuation of the study begun in Stagecraft I. (Spring semester)

THD 07232: Stagecraft III 1.5 s.h.
Prerequisites: THD 07230 and THD 07231
These courses concentrate on developing advanced skills in the various stagecrafts including carpentry, property construction and the development of electrics, sound and elevational drawings. Students fulfill assigned responsibilities for actual theatrical productions. (Fall Semester)
### Course Descriptions

**THD 07233: Stagecraft IV**  
*Prerequisites: THD 07230 and THD 07231*  
1.5 s.h.  
This course is a continuation of the study begun in Stagecraft III. (Spring semester)

**THD 07234: Stagecraft V - Intermediate Concepts**  
*Prerequisite: THD 07233*  
1.5 s.h.  
Stagecraft V expands upon the work from Stagecraft III and IV, with an emphasis on taking on a leadership position in the production process. The course is based on developing an intermediate working knowledge in the following areas: production organization, shop tools, building processes, electric and sound systems. Students are expected to participate in a leadership role on a Department production. (Fall Semester)

**THD 07235: Acting I (Majors Only)**  
*Prerequisites: THD 07103*  
3 s.h.  
This course covers elementary actor-training, designed to aid the student actor in identifying both strengths and weaknesses. Actor training exercises are designed to awaken the student actor's sensibilities to creative expression (such as improvisations, theatre games, sensitivity exercises, characterization exercises and performance projects). Open to Theatre majors only; others by permission.

**THD 07236: Acting II**  
*Prerequisites: THD 07235*  
3 s.h.  
An intermediate level acting course, Acting II deepens and extends the basic skills acquired in Acting I. Focusing mainly on improvisation and its application to character creation and role development, the course stresses the relationship between the creativity and spontaneity inherent in improvisation and the discipline and design necessary for the creation of a role from printed scripts.

**THD 07240: Practicum - Performance Ensemble**  
0 to .5 s.h.  
Under the supervision of Theatre/Dance performance faculty students participate as performers or directorial/choreographic assistants in department productions. The learning experience and work of the learning community is credited through this course. May be repeated for credit up to an accumulation of 3 s.h. This course is graded as Pass/No Credit.

**THD 07241: Practicum - Production Ensemble**  
0 to .5 s.h.  
Under the supervision of Theatre/Dance technical and design faculty students participate in department productions in technical and design capacities. The learning experience and work of the learning community is credited through this course. May be repeated for credit up to an accumulation of 3 s.h. This course is graded as Pass/No Credit.

**THD 07245: Stage Makeup**  
2 s.h.  
This course studies the techniques and styles of makeup for the theatre, through demonstration and laboratory work. Students are required to purchase an inexpensive student makeup kit.

**THD 07250: Children'S Theatre**  
3 s.h.  
In this course, students study the techniques of producing plays with children and adult-produced plays for child audiences. It considers such topics as play and audience analysis, directing methods, technical production and techniques of working with and for children.

**THD 07270: Theatre Study Off-Campus**  
1 to 6 s.h.  
This course studies drama at important theatrical centers in the United States or abroad, supervised by faculty. It includes attendance at productions, discussions with practitioners, tours and specialized workshops, investigation of historical and cultural sites. Costs vary according to the center being studied and are borne by the student. May be repeated under a different subtitle.

**THD 07275: Children'S Theatre Workshop**  
3 s.h.  
This course concentrates on the presentation of a children's show to be mounted and acted by Rowan students for South Jersey elementary school children. The college students will be involved in all phases of the production, including a "mini-tour" of the show following the production at Rowan University. This course may be repeated with consent of instructor. This course may not be offered annually.

**THD 07300: Drawing And Rendering For The Theatre**  
*Prerequisites: THD 07232*  
3 s.h.  
This course introduces students to methods of presenting theatrical design ideas in two-dimensional formats. Students will learn such skills as perspective drawing, rendering in watercolor, gouache pencil or marker and/or using computer-aided drawing and painting. In addition, students will complete a portfolio to illustrate the skills learned.
THD 07301: African, African-American Theatre: Intercultural Definitions 3 s.h.
Explores the commonality, or difference of styles and visions, in African and African American Theatre, with works by contemporary African and African American playwrights, such as August Wilson, Wole Soyinks, Imamu Amiri Baraka, Susan Lori Parks, Efua Sutherland and Femi Osofisan. It will also examine the influences of play directors, actors and musicians (Hip-Hop, Jazz, Blues, etc.) who contribute to that aesthetic continuum. The practices, issues and achievements of these playwrights and their unique forms of theater shall be used to project a future for African American theatre in twenty-first century America. These works shall be used as signposts of stylistic and critical commentary. This is a lecture cum performance course in which students will be writing, making and performing their own Theatres of the future as final projects.

THD 07305: Drafting, CAD and Model Making for the Theatre 3 s.h.
Prerequisites: THD 07232
The course provides students with advanced opportunities to practice drafting skills in the preparation of designer's elevations and detail drawings in the production of working drawings for the scenic and electric shops. Students will use traditional drafting methods and tools as well as CAD techniques and machinery. This course may not be offered annually.

THD 07310: Foundations Of Theatrical Design 3 s.h.
Prerequisites: THD 07232
In this course, students study the elements that lay the foundation for a successful design career in the theatre. Beginning with an examination of the place of design in the theatre process, students then study the principles of visual composition and elements of design, and study playscripts in order to formulate an appropriate design. Students will also be introduced to the study of historical periods and styles of decor and get exposure to basic sketching and drafting of theatrical designs.

THD 07315: Reader'S Theatre Workshop 3 s.h.
Prerequisites: THD 07315
In this course, students study the creative and adaptive processes involved in preparing and presenting literature on stage in a reader's theatre situation. Performances of the manuscripts compiled in the course also help develop the students' own interpretive skills beyond those which they acquired in the introductory course (Oral Interpretation of Literature). This course may not be offered annually.

THD 07325: Painting Scenery For The Theatre 3 s.h.
Prerequisites: THD 07232
Successful painting for the theatre involves techniques that allow for efficient execution of visual effects that read not from up close, but from a distance. In this course, the emphasis is on obtaining such 'tricks of the trade' and presenting that acquired knowledge through the completion of related projects.

THD 07335: Advanced Acting 3 s.h.
Prerequisites: THD 07236
This course makes an intensified study of characterization, while continuing developmental work in bodily and vocal control. It covers approaches to role study as well as the techniques of period acting styles. It combines theory and practice, including class and public performance. This course may not be offered annually.

THD 07336: Stagecraft Vi - Intermediate Concepts 1.5 s.h.
Prerequisite: THD 07234
This course is a continuation of the study begun in Stagecraft V. (Spring Semester)

THD 07338: Touring The Theatre Production 3 s.h.
Students study procedures in touring theatre or dance productions off campus. Students learn sets, properties, costume design and construction, lighting and sound, staging and performance consistency and ways of adapting to a variety of facilities and audiences. Students study promotion, organization and administration of tours. Open to students selected for the cast and crew of the production. May be repeated. This course may not be offered annually.

THD 07339: History Of The Theatre To 1700 3 s.h.
This course studies the important works and writers for the stage, together with the development of theatrical modes of presentation and their influences upon the drama of each period, from the beginnings of theatre in ancient Greece to 1700. Relationships are drawn between the developing theatre and the political and social history of the times.

THD 07340: History Of The Theatre 1700 To 1956 3 s.h.
This course is a continuation of THD07.339, bringing the study of theatre and drama from 1700 to the beginning of the modern period with Ibsen, Chekhov, Strindberg and Shaw, then following with German Expressionism, the emergence of American Theatre in the 1920's, the despair of the Great Depression, and the World War II era. (THD07.339 is not a prerequisite for this course.)
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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>THD 07345:</td>
<td>Rehearsal And Performance</td>
<td>5 s.h.</td>
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<td><strong>Prerequisites:</strong> THD 07236</td>
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<td></td>
<td>This course prepares students for a role for public performance. Once cast, students will study production preparation from initial concept through the rehearsal process into performance, including the improvement of vocal and physical technique and its application to characterization. The course may be repeated one time.</td>
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<tr>
<td>THD 07350:</td>
<td>Scene Design Studio</td>
<td>3 s.h.</td>
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<td><strong>Prerequisites:</strong> THD 07231</td>
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<td></td>
<td>This course studies the relationship of the space/time arts to the nature and function of scenic design. Theory is combined and tested through practical renderings of various plans of the designer. This course may not be offered annually.</td>
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<tr>
<td>THD 07353:</td>
<td>Stage Lighting Design And Practice</td>
<td>3 s.h.</td>
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<td><strong>Prerequisites:</strong> THD 07231</td>
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<td>In this course, students become familiar with the essential elements of color theory, the physics of light, basic electricity, the characteristics of specific stage lighting instruments and dimming control equipment and procedure for designing lighting for a production. Practical experience is included through various types of design problems and work on college theatrical presentations. This course may not be offered annually.</td>
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<tr>
<td>THD 07356:</td>
<td>Costume Design</td>
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<td>This course emphasizes the design of costume for the theatre. Costume and its relation to the character and the play are examined. Through a series of costumes projects, students explore the elements of design, figure drawing and costume history. This course may not be offered annually.</td>
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<tr>
<td>THD 07360:</td>
<td>Musical Theatre</td>
<td>3 s.h.</td>
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<td>This course studies the history of musical theatre, the contributions of artists who have contributed to the mature theatre and concludes with an analysis of musical theatre elements. It covers the origins of musical theatre, contributions of major practitioners of the form, current status of musical theatre and critical evaluation. This course may not be offered annually.</td>
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<tr>
<td>THD 07363:</td>
<td>Singing For The Actor</td>
<td>3 s.h.</td>
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<td><strong>Prerequisites:</strong> MUS 04118 or MUS 97100</td>
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<td>This course is designed to introduce the student actor to the techniques of singing for musical theatre. Students will learn and apply vocal exercises and warm-ups, proper breathing, and vocal support. Students will analyze song structure, read music, and perform the song in a musical theatre context. May be repeated up to 9 semester hours.</td>
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<tr>
<td>THD 07364:</td>
<td>ACTING FOR THE MUSICAL THEATRE</td>
<td>3 s.h.</td>
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<td><strong>Prerequisite:</strong> THD 07363 Singing for the Actor OR Instructor's approval.</td>
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<td>The course is designed as a practical studio course that focuses on duet and trio scenes from the Musical Theatre archive. Students focus on song performance as well as the spoken text work common in Musical Theatre storytelling. Students will work tandem with scene partners and continue to work with a piano accompanist.</td>
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<tr>
<td>THD 07365:</td>
<td>Theatre Management</td>
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<td>This course is an introduction to the economic and administrative function of commercial, repertory, educational and community theatre in the United States. Students study the role of the producer/manager in policy making, budgeting and operations, focusing on legal regulations, personnel, facilities, financing, scheduling, public relations and promotion. Non-theatre majors should have THD07.130 or permission of the instructor. This course may not be offered annually.</td>
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<td>THD 07370:</td>
<td>Independent Study</td>
<td>1 to 6 s.h.</td>
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<td>This course allows students to pursue an independent project, as determined by student and adviser. It is open to speech majors and minors and to others in related arts by consent of the instructor.</td>
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<tr>
<td>THD 07375:</td>
<td>Theatre Workshop</td>
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<td>This workshop studies the theoretical and practical aspect of theatre arts through supervision of problems in performance, set design, construction, lighting, costuming and makeup, business management and directing. By permission of Department only. (May be repeated once; maximum of 6 hrs.)</td>
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<tr>
<td>THD 07380:</td>
<td>Technical Production And Organization</td>
<td>3 s.h.</td>
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<td><strong>Prerequisites:</strong> THD 07232 and THD 07233</td>
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<td>This course is an advanced study of Technical Production. It introduces the process, tools and skills needed to organize and run a production from the upper management level of the Technical Director. Topics covered are structural design, building procedures, the proper and safe use of building materials, personnel management and organizational skills. The class will consist of a variety of theoretical and practical projects.</td>
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Course Descriptions

THD 07390: Technical Supervision I  0.5 s.h.
**Prerequisites:** THD 07230, THD 07231, THD 07232 and THD 07233
Students learn the artistic and administrative responsibilities of technical staff supervisors on a theatre production team. Positions studied include assistant technical director, stage manager, master carpenter, master electrician, sound engineer, properties master, and wardrobe supervisor, with equal emphasis placed upon understanding a job’s responsibilities and the techniques of supervising subordinate personnel. Students will be required to function successfully in one assigned supervisory capacity for a mainstage production.

THD 07391: Technical Supervision II  0.5 s.h.
Further training and experience in supervising technical production work. Students will be working on a different production and in a different capacity than in Technical Supervision I. These two courses may be taken in either order.

THD 07405: Seminar In Theatre  3 s.h.
Restricted to Theatre and Dance majors, this course offers students a choice of specialized study of a particular interest area in theatre or dance.

THD 07410: Internship In Theatre  3 to 15 s.h.
A semester's field experience offers the advanced student opportunities to develop theatre skills in supervised on-the-job situations. Students are placed in an appropriate theatre to obtain practical training. By department permission only. Students apply to the department the beginning of the semester prior to the internship. Fall/Spring internships are 15 s.h.; Summer internships, 12 s.h.

THD 07430: Directing I  3 s.h.
**Prerequisites:** THD 07231
This course studies theories and techniques of script analysis and its translation into dramatic action and dramatic sound on the stage, including such concepts as composition, movement, pacing and the development of basic acting ability. Practical directing experience will be utilized.

THD 07431: Directing II  3 s.h.
**Prerequisites:** THD 07430
This course is a continuation of Directing I in which the skills studied in that course are deepened and extended. In addition to studying techniques of script analysis and staging in greater detail, students investigate various production styles and methodologies. A major portion of time is devoted to a workshop situation in which students stage scenes and submit them to class critique. This course may not be offered annually.

THD 07435: Creative Dramatics  3 s.h.
This course covers the philosophy underlying speech and dramatic activities for children. Methods and materials for creative drama, story telling, role playing, word games, listening and pantomime are studied and analyzed. Students participate in demonstrations in the classroom.

THD 07436: Stagecraft Vii - Advanced Concepts  1.5 s.h.
**Prerequisite:** THD 07336
Stagecraft VII continues the work in the Stagecraft Sequence, with an emphasis on the professional execution of a technical production assignment from concept through realization. (Fall Semester)

THD 07437: Stagecraft Viili - Advanced Concepts  1.5 s.h.
**Prerequisite:** THD 07436
Stagecraft VIII continues the work in the Stagecraft Sequence, with an emphasis on the professional execution of a technical production assignment from concept through realization. (Spring semester)

THD 07440: Contemporary World Theatre - Wi  3 s.h.
**Prerequisites:** COMP 01112 or ENGR 01201
Designed to examine significant developments in world theatre and drama since 1956, this course focuses on writers, actors and groups who have influenced theatre in the last half century. Starting with the angry young men and women of England in the 1950s, the course moves through the work of the absurdist, the Civil Rights Movement, Vietnam and the Age of Protest (the Rock revolution). It delves into environmental theatre, the Women’s Movement, gay and lesbian theatre, the AIDS epidemic, and considers postmodern theatre practice throughout the world.
Course Descriptions

THD 07460: Senior Project In Theatre Arts 2 s.h.
Prerequisite: for senior-level majors only.
Designed as a capstone experience for Theatre Arts. Selecting a project within a theatre specialty (Performance, Design/Technical, History/Criticism), and working with a faculty adviser, the student will conceive, research and execute a specially devised work for public showing or local publication.

THD 08126: Movement For The Actor 3 s.h.
Students study the fundamentals of movement as applied to stage movements, communication and characterization. The course covers physical discipline, relaxation, shaping, movement, exploring space, movement in ensemble, emotion and the body, gesture and communication, and physical characterization. Individual and group exercises assist students in developing a physical technique for the actor in action. This course may not be offered annually.

THD 08135: Elements Of Dance 3 s.h.
This course provides training at the elementary level of technique in ballet, jazz and modern dance. It explores movement in time, space and energy relationships, emphasizing individual and group creative experiences through improvisations.

THD 08140: Dance Improvisation I 1.5 s.h.
The course explores the creation of spontaneous movement experiences with the purpose of increasing body awareness, movement invention and movement creativity. This course is offered once annually. Effective Fall 2003.

THD 08141: Dance Improvisation II 1.5 s.h.
Prerequisites: THD 08140
The course continues and further develops skills in the creation of spontaneous movement experiences with the purpose of increasing body awareness, movement invention and movement creativity. This course is offered once annually.

THD 08142: Contact Improvisation 3 s.h.
This course provides experiences in improvisational duet dancing involving weight sharing, touch, lifting, carrying, and active use of momentum. Activities develop sensitivity to partnering and spontaneous creativity.

THD 08146: World Dance Forms 3 s.h.
This is a movement course which introduces students to a broad spectrum of dances from Asia, Europe, the Middle East, Africa, and the Americas. Emphasis is placed upon learning and performing dances from various countries throughout the world. The socio-historical context within which each dance form evolved is also examined. No previous training in dance is required.

THD 08151: Ethnic And Character Dance 3 s.h.
This course studies dance, music, customs and other cultural manifestations of special ethnic regions. It emphasizes the application of the folk art forms for theatre use. Among the dance forms studied are Scandinavian, Central European, African, Latin American, Mediterranean. Each semester focuses on two or more of these dance forms.

THD 08190: Ballroom Dance 3 s.h.
This movement course introduces the student to Ballroom Dance and its various forms: foxtrot, waltz, swing, jitterbug, disco, club, samba, merengue, rumba, cha cha, and tango. Emphasis is placed upon basic steps, body placement, style, musicality, choreography, and the fundamentals of partnering. Observing, critiquing, and researching ballroom dance are also included within the course.

THD 08202: Fundamentals Of Tap 3 s.h.
This introductory course covers the fundamentals of tap dance, an indigenous American art form with African, Irish, and English roots. Emphasis will be placed on technique, musicality, and style. The course introduces center floor exercises, traveling patterns, and a variety of steps and combinations. Opportunities will be provided to observe and perform tap dance, as well as research history.

THD 08203: Advanced Tap Dance 3 s.h.
Prerequisites: THD 08202
This course continues the study of tap on an advanced level. May be repeated for credit up to an accumulation of 9 s.h.

THD 08222: Dance For The Musical Theatre 3 s.h.
This course is an intermediate level experience of technical training in stylized jazz dances used in Broadway musical shows. Students have the opportunity to mount excerpts of dance routines from various eras and to perform them for the university community.
Course Descriptions

THD 08225: Dance Composition I 3 s.h.
Prerequisites: THD 08237
This course provides a working knowledge and understanding of the fundamental elements involved in the craft of composing a dance. It emphasizes space, time and dynamics. Short solo and group pieces are presented in an informal setting. This course may not be offered annually.

THD 08236: Fundamentals of Modern Dance 3 s.h.
Prerequisite(s): None
This course is designed for the student interested in beginning to master the discipline of modern dance technique. The course draws from the repertoires of recognized modern dance artists who have established a specific movement vocabulary. Students have an opportunity to analyze various techniques for personal development and the expansion of an articulate movement vocabulary.

THD 08237: Modern Dance I 3 s.h.
Prerequisite(s): Permission of Instructor/BA in Dance Major Only
This course is designed for experienced students with technical skills in contemporary dance at the intermediate level. It focuses on the theory and practical application of movement practice including rhythmic structures, spatial awareness and kinetics with emphasis on aesthetic qualities that lead to performance. This course is offered annually.

THD 08246: Fundamentals Of Ballet Dance 3 s.h.
Students are introduced to the vocabulary and techniques of ballet movement with emphasis on body alignment and effective methods for gaining strength and flexibility necessary for proper ballet deportment. It includes barre work, centre floor and the basic elements of classical ballet vocabulary.

THD 08247: Advanced Ballet 3 s.h.
Prerequisites: THD 08246
An advanced level of technique in ballet, this course includes barre (bar) and centre floor and continues to build on the elements of classical ballet. May be repeated for credit up to an accumulation of 9 s.h.

THD 08256: Fundamentals Of Jazz Dance 3 s.h.
An introduction to a cross-section of jazz techniques derived from pioneer jazz dancers, this course emphasizes movement styles and jazz rhythms.

THD 08257: Advanced Jazz Dance 3 s.h.
Prerequisites: THD 08256
This course is designed for students interested in mastering movement skill in jazz dance. It emphasizes theoretical and practical understanding of the jazz dance form. May be repeated for credit up to an accumulation of 9 s.h.

THD 08270: Lecture/Demonstration Production 3 s.h.
Prerequisites: THD 08237
This course offers students an opportunity to experiment with improvisation and a variety of choreographic approaches using the elements of dance. It provides students with the performing experiences necessary for choreographing and producing short dance pieces. Resultant productions are performed as lecture/demonstrations throughout public and private schools of South Jersey. This course may not be offered annually.

THD 08311: African Influences In American Dance 3 s.h.
This is a movement and theory course which surveys various dance forms indigenous to African and African-American cultures. Emphasis is placed upon the evolution and contribution of African-derived dance forms within America. The richness and complexity of African aesthetics as embodied within dance in America are highlighted. No previous dance training is required.

THD 08315: Creative Dance For Children 3 s.h.
Utilizing functional movement experiences, this course emphasizes creative expression and its relationship to the aesthetic development of the young child. Students examine and analyze pertinent research materials in addition to the laboratory experiences. This provides a basis for students to relate creative inventiveness to young children. This course may not be offered annually.

THD 08330: Dance Notation 3 s.h.
Prerequisites: THD 08236 and THD 08246
This course introduces students to a study and practice of reading and recording dance movements by means of symbols. It offers an opportunity to interpret dance notation scores of simple ballet, folk, and modern dance. This course may not be offered annually.
THD 08337:  Choreography  3 s.h.
Prerequisites: THD 08225
This course provides application of the principles of dance composition to choreographic projects by exploring, analyzing and experimenting with problems in dance performance and production. It emphasizes individual and group improvisation and the use of different styles. This course acts as a foundation for field experience. This course may not be offered annually.

THD 08346:  Ballet III  3 s.h.
Prerequisites: THD 08247
An advanced level of ballet techniques for the further development and expansion of the ballet movement vocabulary, this course includes adagio and allegro. Partnering may be included depending upon male enrollment. This course may not be offered annually.

THD 08355:  Introduction To Dance Therapy  3 s.h.
An introductory course for students who are interested in the field of dance therapy, the course demonstrates dance as a therapeutic and educational growth process that integrates the areas of cognitive, social-emotional and physical development. Part of the course is presented in a clinical setting, offering students an opportunity to apply what has been learned. This course may not be offered annually.

THD 08377:  Modern Dance II  3 s.h.
Prerequisites: THD 08237
This course continues the development of technical skills in contemporary dance at the intermediate/advanced level. It focuses on the theory and practical application of movement practice including complex movement sequences, rhythmic structures, spatial awareness and kinetics with emphasis on aesthetic qualities that lead to performance. This course is offered annually.

THD 08378:  Modern Dance III  3 s.h.
Prerequisites: THD 08377
This course is designed or students interested in mastering the discipline of modern dance technique. This course emphasizes alignment, somatic release and the application of movement concepts as applied to advanced level dance technique. This course is offered annually.

THD 08410:  ADV STYLES IN MODERN DANCE  3 s.h.
Prerequisite: THD 08378 Modern Dance III
This course is designed as the most advanced technique class offered in dance program. Students will experience advanced/professional level technique class relative to a particular style of modern dance taught by recognized professional from the field. This course will be offered annually.

THD 08436:  Dance History  3 s.h.
This course studies the vital role dance has in cultural development from prehistoric times to the contemporary period and the relation of dance to music and other art forms throughout history. It stresses individuals and events whose influences shaped the development of dance. This course may not be offered annually.

THD 08437:  DANCE THEATRE WORKSHOP  3 s.h.
Prerequisite: THD 08377 Choreography or THD 07430 Directing.
This course provides in-depth compositional theory, methods, and conceptual approaches to movement-driven theatre through collaborative project-based artistic problem solving. Dance Theatre Workshop emphasizes movement-based inquiry form, content, technique, and projection of the theatrical image. This course will be offered annually.

THD 08465:  Dynamics Of Human Movement  3 s.h.
This course offers students a working knowledge of the body from the standpoint of dynamics, spatial orientation, kinesthetic awareness, and alignment principles. It focuses on systems of movement description and analysis and introduces corrective measures to deal with movement habits and patterns that interfere with body performance. This course may not be offered annually.

COMP 01100:  Improving Personal Writing Skills  3 s.h.
This developmental writing course helps students eliminate major writing problems with essay organization, support, and mechanics. The course improves students' writing prior to enrollment in College Composition I. Students' progress is evaluated on the basis of a portfolio of their semester’s work. A writing test determines student placement.
### Writing Lab Experience

Students who have failed College Composition I or Integrated College Composition I may be referred to a 3-credit course called Writing Lab Experience. These students receive an Incomplete grade for Freshman Composition on their transcript. Students who successfully complete Writing Lab Experience are awarded a Pass for WLE, and the incomplete in the CCI or Integrated course is replaced with a grade. Writing Lab Experience credits do not count towards graduation or General Education requirements. The course is restricted to students in the First-Year Writing Program.

### Pre-College Writing

This is a preparatory, non-credit, five-week writing course that introduces students to college level writing practices. It provides a non-graded environment where students practice writing as multi-stage processes of generating, developing, and refining ideas clearly, and it focuses on instruction of grammar and mechanics within the context of students’ writing. Students are placed in this course through the Educational Opportunity Fund program based on Department of Writing Arts placement criteria. Students who are successful in this course will move on to either Foundations of College Writing (COMP 01103) or Intensive College Composition I (COMP 01105).

### Foundations For College Writing

This non-credit writing course is portfolio based and introduces students to college level writing and to composing practices that emphasize multi-stage writing through multiple modes of composition and reflection. It provides an intensive focus in grammar and mechanics within the context of students’ writing, and it guides students to produce focused and coherent writing. Students are placed in this course based on department placement criteria. Upon successful completion of this course, students move to Intensive College Composition I (COMP 01105).

### Intensive College Composition I

**Prerequisites:** Appropriate placement score or COMP 01105

This course is the four-credit equivalent of College Composition I (COMP 01111) that allows students additional time to develop the same writing competency required of College Composition I. This course introduces students to a variety of writing forms and emphasizes writing as a recursive process of exploring, researching, drafting and revising. Students produce purposeful, literate, well-developed, and informed writing that requires critical reading, thinking and writing activities. The course also emphasizes responsible evaluation and use of information. Course requirements include a portfolio comprised of works created during the semester. Students are placed in the course based on the Writing Arts Department placement criteria. Passing this course fulfills the College Composition I (COMP 01111) General Education requirement.

### College Composition I

**Prerequisites:** Appropriate placement score

This course introduces students to a variety of writing forms and emphasizes writing as a recursive process of exploring, researching, drafting and revising. Students produce purposeful, literate, well-developed, and informed writing that requires critical reading, thinking and writing activities. The course also emphasizes responsible evaluation and use of information. Course requirements include a portfolio comprised of works created during the semester. Students are placed in the course based on the Writing Arts placement criteria.

### College Composition II

**Prerequisites:** COMP 01111 or COMP 01105 or HONR 01111

This course builds on the concepts and approaches in College Composition I (COMP 01111) and/or Intensive College Composition I (COMP 01105). The course emphasizes argumentation and information literacy. It introduces students to argumentative strategies, asks them to identify and analyze forms of argumentation, and requires them to write a variety of well-researched and ethically responsible arguments. Students will work to become independent researchers who can find relevant information from a variety of sources (both academic and non-academic, traditional text and digital) and evaluate and present that information to an academic audience. Course requirements include a portfolio comprised of works created during the semester.

### English As A Second Language I

Developed for students whose native language is not English, this course places emphasis on listening and speaking while developing skills through practice of reading and writing in English. The course includes cultural topics to facilitate students’ adaptation to the American educational environment. This course may not be offered annually.

### English As A Second Language II

This is a mid-level course for students learning English as a second language. It helps students acquire increased skill in English usage, particularly written English. The course focuses on sentence structure and other grammatical concerns such as verb formation and pronoun reference. There is also some emphasis on spoken English. Students continue to discuss cultural topics while improving their ability to read and write in the target language of English.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ESL 08112</td>
<td>English As A Second Language III</td>
<td>3 s.h.</td>
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<td>This course helps non-native students succeed in college by developing increased competence in the use of English. Students read and write in English, discussing differences between native languages and English. They also discuss writing formats generally encountered in college. The course offers further examination of English syntax and stresses building an English vocabulary.</td>
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<tr>
<td>ESL 08115</td>
<td>Basics Of Academic English For Non-Native Speakers Of English</td>
<td>9 s.h.</td>
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<td>This developmental course will introduce English language learners to the academic English skills needed to succeed in college. Using an integrated skills language approach, students will improve in all language skills as students learn to write various genres of essays while also offering further examination of English syntax and vocabulary building.</td>
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<tr>
<td>ESL 08120</td>
<td>Advanced Academic English For Non-Native Speakers Of English</td>
<td>9 s.h.</td>
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<td>This course is designed to further develop academic English Skills for English language learners so that they are prepared to succeed in college. While exploring cross-cultural topics of interest, students will focus on developing a more complex understanding and use of academic writing. With the emphasis on writing skills, students will hone their library and information literacy skills needed for college.</td>
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<tr>
<td>MAWR 01555</td>
<td>Writing For Electronic Communities</td>
<td>3 s.h.</td>
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<td>This course presents the rhetorical, social, and practical dimensions of writing in electronic (cyber) contexts. Students focus both on the various roles an individual creates and maintains when writing for different cybermedia formats and the kinds of conventions, concerns and grammars that exist in discrete electronic systems like the World Wide Web, listservs, distribution lists, the Intranet, e-mail, and hypertext. Seminar presentations and a semester-long project in a concentrated area of writing for a particular electronic community demonstrate students' ability to communicate on-line.</td>
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<tr>
<td>MAWR 01558</td>
<td>Fiction Workshop</td>
<td>3 s.h.</td>
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<td>Students will complete, through the composition of a first draft and revision, works of literary fiction with emphasis upon the short story. In addition, students will read a body of published stories that illustrates such elements of fiction as setting, point of view, characterization and dialogue. Students will develop an analytical vocabulary that enables them to read, interpret, and evaluate the work of other fiction writers. A major portion of this class will be given over to workshop sessions during which students share and evaluate each other's work.</td>
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<tr>
<td>MAWR 01559</td>
<td>Core II: Research Methods For Writers</td>
<td>3 s.h.</td>
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<td><strong>Prerequisite:</strong> MAWR 01554</td>
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<td>Core II surveys non-quantitative research methods writers use. This class examines techniques of print and on-line research, interviewing, and case studies to develop the ability to weigh and assess the reliability and relevance of information. Students will learn to identify and present problems in writing using different perspectives and learn how these research styles guide a writer's interpretation of information. The course prepares students to develop their own descriptive research projects.</td>
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<tr>
<td>MAWR 01564</td>
<td>Information Architecture</td>
<td>3 s.h.</td>
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<td>Information Architecture explores the connections among web site usability, interactivity, design, and navigation principles as each relate to the written content. Students investigate how written content influences the look and user-friendliness of web sites. Specific issues addressed in the course include presenting content for audiences with disabilities or for non-English speakers; privacy and security concerns; and the rise of information anxiety in the general public.</td>
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<tr>
<td>MAWR 01566</td>
<td>Editing The Literary Journal</td>
<td>3 s.h.</td>
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<td>This course provides hands-on experience with the editorial and managerial processes involved in publishing a literary journal. Students will study successful journals and basic reference guides to determine criteria for success. Working with the instructor and various section editors, students will solicit, evaluate, and select submissions, communicate with contributors about editorial decisions, determine the layout and design of the journal, and distribute the journal. They will become knowledgeable about the funding mechanisms for literary journals, and they will work within the constraints of a budget. Because the syllabus complies with a standard publishing process for literary journals that extends throughout the academic year, contact hours are distributed over two semesters.</td>
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<tr>
<td>MAWR 01620</td>
<td>Internet And Writing Studies</td>
<td>3 s.h.</td>
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<td>This is a theory driven seminar course with a practical component wherein students will learn HTML, CSS, and how to compose web sites according to the latest theories on web design. Students will read scholarly texts that introduce them to the evolution of written communication and writing technologies, Internet studies, and hypertext theory. Students will use these texts and theories to both analyze and compose various web sites, including an online portfolio of work they would like to showcase for future employers or graduate schools.</td>
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MAWR 01622: Publishing For Creative Writers 3 s.h.
In this course, students aspiring to become published authors will explore many facets of literary publishing, from submitting work to agents and editors to editing a manuscript in production and marketing a completed book. Students will examine the many complex processes by which a literary manuscript (novel, story collection, memoir, etc.) becomes a book. Students will learn how to submit creative work to literary magazines, to agents, and to publishers. They will submit at least one completed work (an essay, a story, or a poem) to an appropriate journal or magazine. They will write a query letter and a synopsis for one of their own book-length projects and develop a marketing plan for the projected work. They will learn the most common reasons that writing is rejected and how to avoid them. They will learn about the varied roles of agents and editors from the editorial process through the design, production and promotion of the book. They will learn about the importance of applying for grants and fellowships, of submitting to literary competitions, and of "networking" in the development of a writing career. Students with completed or nearly completed books may use their own manuscripts for all of the above assignments.

MAWR 02505: Poetry Workshop 3 s.h.
This class will provide a forum for students to explore the strategies poets use in creative expression. The students will develop an analytical vocabulary that allows them to read, interpret, and evaluate the work of other poets. A major portion of the class will be given over to workshop sessions, where students can share and evaluate each other's work. Students will also become familiar with a body of published poetry that illustrates techniques of expression, especially those that can be applied, not only to poetry, but to other genres of creative writing.

MAWR 02515: Creative Nonfiction Workshop 3 s.h.
Teaching students the form, structure and techniques of creative nonfiction, this workshop-style course addresses the issues of style, point of view, narrative and dramatic coherence as it applies to personal essay, the treatment of memory data, the use of detail in scene-setting and the connection between fictional and poetic strategies in nonfiction writing. In addition to their own work, students read and analyze contemporary creative nonfiction and classics in the genre; these texts serve as models for students to help them locate themselves within the large framework of creative nonfiction. Students will write several major pieces of varying lengths and types.

MAWR 02520: Writing The Novel 3 s.h.
Writing the Novel teaches students the structure, technique, and apparatus of the literary novel, and provides feedback and guidance through extensive instructor critique and workshop-style evaluation. It is recommended that students enrolling in this course have some prior practice in literary novel-writing or at least a strong background in reading the literary novel. Students are required to submit four consecutive novel chapters with synopsis by the end of the course.

MAWR 02523: Writing The Memoir 3 s.h.
Students receive in-depth instruction in writing the memoir, one of the most engaging and popular literary forms today. Students will read widely from selected memoirs, write three short memoirs that may stand alone or be interrelated, and experience the workshop method of critiquing manuscripts. Students will focus on characterization, conflict, point-of-view, and other literary elements traditionally associated with the narrative form as they develop their memoirs.

WA 01200: Introduction To Writing Arts 3 s.h.
Prerequisites: COMP 01111 and COMP 01112
Introduction to Writing Arts familiarizes students with the disciplinary underpinnings of Writing Arts, providing a background in the history of writing, current writing theories, writing as technology, and the writing professions. The course covers these issues within the context of the Writing Arts major, enabling students to situate themselves in a community of writers and language professionals and preparing them for upper-level coursework.

WA 01201: How Writers Read 3 s.h.
Prerequisites: COMP 01112
This sophomore-level course introduces students to theoretical methods of reading complex and sophisticated texts. Students will study theories of reading and writing that concern structure, register, genre, intertextuality, and rhetorical concerns. The course presents these theories and correlative methods through readings, and students then practice applying these methods during class discussions and in writing using a series of self-selected texts as the objects of study.

WA 01300: The Writer's Mind - Wi 3 s.h.
Prerequisites: COMP 01112 and 45 credits required
The Writer's Mind increases students' understanding of themselves as writers by learning craft-specific approaches to writing, and by developing critical awareness of their own and others' writing. Working in different genres of writing, students will gain experience in effective revision strategies, in analyzing audience, and in visual aspects of the printed or electronic page.
WA 01301: Writing, Research & Technology 3 s.h.
Prerequisites: WA 07200 with concurrent enrollment allowed, COMP 01112, and 60 credits required.
This course presents the rhetorical, social, and practical dimensions of writing and researching in networked contexts. Students focus both on the roles an individual creates and maintains when writing for different cybermedia formats and the kinds of conventions that exist in systems like the World Wide Web, listservs, e-mail, and hypertext. A web-based research project in a concentrated area of writing for a particular electronic community demonstrates students’ ability to communicate online.

WA 01302: Introduction To Technical Writing 3 s.h.
This course introduces students to both the field of technical writing and the uses of technical writing within a variety of professions. Students will learn how technical writers use document design strategies based on rhetorical principles to respond to communication challenges. Through practice with a variety of genres, students will gain experience with audience analysis, communication ethics, research, collaboration, professional style, and editing. The course culminates in a writing project based on a professional, academic, or community issue of the student’s choosing. Students are encouraged, and will be assisted, in designing projects that reflect their professional interests.

WA 01304: Writing With Style-Wi 3 s.h.
Prerequisites: COMP 01112 AND WA 07290
Addressing craft and ethical concerns, this course introduces students to creative nonfiction. In the study of this “fourth genre” of creative writing, focus is on those elements, e.g., imagery, characterization, diction, that make nonfiction creative. Students will write in a number of subgenres, such as memoir, literary journalism, and the personal essay, and will be exposed to a variety of narrative structures. They will also read and analyze representative professional writing to provide contexts for their own work, which will be critiqued by both the instructor and their peers. Special attention will be paid to the evolution of the student writer’s personal voice.

WA 01311: Research Practicum In Writing Arts I 1 s.h.
Prerequisite: Completion of 75 hours, Approval of Writing Arts Dept. Advisor, minimum 2.5 GPA
Students apply the theories and methodology learned in Writing Arts courses to a research mentorship with a member of the department faculty. Students keep a detailed log of working hours, prepare a portfolio representative of their practicum experience, write an analytical critique of the practicum, and are evaluated by their faculty mentor as well as the practicum supervisor. May be taken concurrently with WA 01312 and/or WA 01313.

WA 01312: Research Practicum In Writing Arts II 1 to 3 s.h.
Prerequisite: Completion of 75 hours, Approval of Writing Arts Dept. Advisor and minimum 2.5 GPA
Students apply the theories and methodology learned in Writing Arts courses to a research mentorship with a member of the department faculty. Students keep a detailed log of working hours, prepare a portfolio representative of their practicum experience, write an analytical critique of the practicum, and are evaluated by their faculty mentor as well as the practicum supervisor. May be taken concurrently with WA 01311 and/or WA 01313.

WA 01313: Research Practicum In Writing Arts III 1 s.h.
Prerequisite: Completion of 75 hours, Approval of Writing Arts Department Advisor and Minimum 2.5 GPA
Students apply the theories and methodology learned in Writing Arts courses to a research mentorship with a member of the department faculty. Students keep a detailed log of working hours, prepare a portfolio representative of their practicum experience, write an analytical critique of the practicum, and are evaluated by their faculty mentor as well as the practicum supervisor. May be taken concurrently with WA 01311 and/or WA 01312.

WA 01315: Writing With Technologies 3 s.h.
Prerequisite: COMP 01112 and 60 earned credits.
Writing with Technologies provides students with a theoretical basis for understanding the ways technologies - past, present, and future - shape the collaborative construction of meaning inside and outside the classroom. Students are encouraged to expand their repertoire of technologies and conduct research on contemporary writing practices to increase critical awareness of the affordances and constraints writing technologies make available to them as future educators.

WA 01320: Internship I In Writing Arts 3 to 6 s.h.
Prerequisite: 75 credits required and Writing Arts major with 2.5 Major GPA
Under professional supervision in the field, students practice theories and skills learned in the classroom. Students keep a detailed log of working hours, prepare an extensive portfolio, write an analytical critique of the practicum, and are evaluated by their faculty supervisor.
### Course Descriptions

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<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
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<tr>
<td>WA 01321</td>
<td>Internship II In Writing Arts</td>
<td>3 s.h.</td>
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<tr>
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<td><strong>Prerequisite:</strong> 75 credits required and Writing Arts major with 2.5 Major GPA</td>
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<tr>
<td></td>
<td>Under professional supervision in the field, students practice theories and skills learned in the classroom. Students keep a detailed log of working hours, prepare an extensive portfolio, write an analytical critique of the practicum, and are evaluated by their faculty supervisor.</td>
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<tr>
<td>WA 01358</td>
<td>Writing and Craft for Elementary Students</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td>This course teaches early childhood and elementary education majors how to apply a writing workshop approach emphasizing craft to increase young writers' abilities.</td>
<td></td>
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<tr>
<td>WA 01370</td>
<td>Professions In Writing Arts: Post-Graduate Options</td>
<td>1 s.h.</td>
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<tr>
<td></td>
<td><strong>Prerequisites:</strong> WA 07200 and 30 earned hours</td>
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<td></td>
<td>Professions in Writing Arts: Post-Graduate Options introduces students to the various and wide-ranging opportunities available to writing arts students by exploring career, graduate school and other professional options in the field of writing. Class topics may include statements of purpose and letters of application; internships, field experience, and volunteerism; and publishing opportunities. Professionalism and entrepreneurial approaches to job seeking are also emphasized. Discussions and workshops are supplemented by guest speakers and readings.</td>
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<tr>
<td>WA 01400</td>
<td>Writing For The Workplace-Wi</td>
<td>3 s.h.</td>
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<tr>
<td></td>
<td><strong>Prerequisites:</strong> 75 credits required</td>
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<td>Writing for the Workplace gives students practice in the writing activities common to most careers. Assignments include resumes and cover letters, field and progress reports, abstracts of professional articles, and proposals. Students can also expect to deliver one or two brief oral presentations. The course is restricted to juniors and seniors.</td>
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<tr>
<td>WA 01401</td>
<td>The Writer'S Mind</td>
<td>3 s.h.</td>
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<td></td>
<td><strong>Prerequisites:</strong> COMP 01112 and 45 credits required</td>
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<td></td>
<td>The Writer's Mind increases students' understanding of themselves as writers by learning craft-specific approaches to writing, and by developing critical awareness of their own and others' writing. Working in different genres of writing, students will gain experience in effective revision strategies, in analyzing audience, and in visual aspects of the printed or electronic page.</td>
<td></td>
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<tr>
<td>WA 01405</td>
<td>Senior Seminar: Evaluating Writing</td>
<td>3 s.h.</td>
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<tr>
<td></td>
<td><strong>Prerequisites:</strong> COMP 01112 and WA 07200 and 90 credits required</td>
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<td></td>
<td>This course examines issues and methods of assessing writing. Students will explore a wide variety of tools used to evaluate writing, such as portfolio and holistic assessment, and they will discuss the validity and reliability of many assessment models.</td>
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<tr>
<td>WA 01408</td>
<td>Writing As Managers</td>
<td>3 s.h.</td>
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<tr>
<td></td>
<td><strong>Prerequisites:</strong> COMP 01112 and 45 credits required</td>
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<td></td>
<td>This course provides Management students with extensive practice in preparing the written materials required by common management activities. Assignments include preparing the written materials required for OSHA compliance, in disciplinary situations, in alleged sexual harassment situations, and customer service. Other specific topical assignments will be developed to respond to changes in the education needed by Management students.</td>
<td></td>
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<tr>
<td>WA 01409</td>
<td>Tutoring Writing</td>
<td>3 s.h.</td>
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<tr>
<td></td>
<td>This course provides students theory and practice in tutoring writing at all educational levels. It covers the writing process, the particulars of the tutorial relationship and issues of working with writers from a variety of backgrounds and abilities. It is recommended for students who are presently engaged in the tutoring of writing and those who may teach writing in one-on-one or small-group settings in the future.</td>
<td></td>
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<tr>
<td>WA 01410</td>
<td>Independent Study In Writing Arts Program</td>
<td>3 to 6 s.h.</td>
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<td></td>
<td>This course provides students with an opportunity to work independently on specialized topics under the guidance of a faculty member. Generally, this course can not be substituted for any course offered by a department in the College of Communication. Permissions are needed from the Department Chair and the Dean.</td>
<td></td>
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<tr>
<td>WA 01415</td>
<td>Situating Writing</td>
<td>3 s.h.</td>
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<td></td>
<td><strong>Prerequisite:</strong> COMP 01112 and 75 earned credits</td>
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<td></td>
<td>Situating Writing provides students with the theoretical and practical tools they need to work with young writers by introducing methods of teaching and evaluating writing that are explicitly writer-centered. Students will develop their own understandings of the process while learning how to respond to writing in ways that are situation-specific. Students will also improve their own writing by collaborating with other writers, giving and receiving feedback on work in progress, and using a range of technologies that facilitate feedback and revision.</td>
<td></td>
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</tbody>
</table>
Course Descriptions

WA 01450: Writing Arts Portfolio Seminar 1 s.h.
Prerequisites: WA 01300 and WA 01301 and WA 01405
Seniors majoring in Writing Arts will have an opportunity to reflect on the work undertaken as part of the writing arts major. The course asks students to construct and submit a portfolio consisting of work products both from those courses included in the core and from a selection of courses in the required elective clusters. A written reflection on the intellectual and learning experience derived from these courses as evidenced by the items included comprises the written requirement for this course.

WA 07290: Creative Writing I 3 s.h.
Prerequisite: COMP 01111 or COMP 01105
This course concentrates on developing students' skills in writing various kinds of poems and in developing fiction techniques. In addition to exploring different poetic forms, students learn how to create characters, establish conflict, and develop a plot while writing a short story. Students examine the work of professional poets and fiction writers.

WA 07291: Creative Writing II 3 s.h.
Prerequisite: WA 07290 or CRWR 07290
Building upon the foundations learned in Creative Writing I, students in Creative Writing II will engage in more specific practice in the conventions of short story writing, creative nonfiction and poetry. Students will have directed assignments encouraging experimentation in multiple genres but will prepare a final portfolio that may give more emphasis to a genre of their choice. Special emphasis will be placed on reading examples of these conventions and learning how writers graft or borrow techniques (dialogue, dramatic monologue, voice, description) from one genre to apply it in another.

WA 07309: Writing Children's Stories 3 s.h.
Prerequisite: 30 credits required
This course focuses on fiction written for juveniles and young adults. Students examine the rich variety of literature published for young people. They do exercises, write complete stories, critique each other's writing in workshops and meet with the teacher for individual conferences on their work. They also learn how to submit manuscripts to magazine and book publishers.

WA 07391: Writing Fiction 3 s.h.
Prerequisites: WA 07290 or WA 07291 or CRWR 07290 or CRWR 07291
This class will provide a forum for students to explore the strategies fiction writers use in creative expression, especially in writing the short story. Students will develop an analytical vocabulary that allows them to read, interpret, and evaluate the work of other fiction writers. A major portion of the class will be given over to workshop sessions, where students can share and evaluate each other's work. Students will also become familiar with a body of published short stories that illustrate techniques of expression such as setting, point of view, characterization, dialogue, and other elements of fiction.

WA 07392: Fundamentals Of Playwriting 3 s.h.
Prerequisites: WA 07291 or CRWR 07291 or Permission of Instructor
This course covers the methods of developing and writing a play. During the course, students analyze plays, and outline and work on the draft of a full-length play. This course may not be offered annually.

WA 07395: Writing Poetry 3 s.h.
Prerequisite: WA 07290 or CRWR 07290
This class will provide a forum for students to explore the strategies poets use in creative expression. The students will develop an analytical vocabulary that allows them to read, interpret, and evaluate the work of other poets. A major portion of the class will be given over to workshop sessions, where students can share and evaluate each other's work. Students will also become familiar with a body of published poetry that illustrates techniques of expression such as imagery, metaphor, voice, tone, the music and strategy of the line, and other elements of poetry.

WA 07410: Tutoring Writing 3 s.h.
This course provides students theory and practice in tutoring writing at all educational levels. It covers the writing process, the particulars of the tutorial relationship and issues of working with writers from a variety of backgrounds and abilities. It is recommended for students who are presently engaged in the tutoring of writing and those who may teach writing in one-on-one or small-group settings in the future.
Organization of the University

Board of Trustees
Rowan University operates under the laws of the State of New Jersey. The Board of Trustees of Rowan University is vested by law with the general supervision of the University within general policies and guidelines pursuant to N.J.S.A. 18A:64 et. seq. Some of the responsibilities of the Trustees are to appoint the University president, to approve the educational curriculum and student services program, and to determine policies for the organization, administration, and development of the University.

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Mt. Laurel, NJ
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Princeton, NJ
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Cherry Hill, NJ
West Milford, NJ
Glassboro, NJ

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Richard Jones, Vice President for Student Life and Dean of Students
Shreekanth Mandayam, Vice President for Research
Sally McCall, Dean of Student Retention
Rory McElwee, Associate Vice President for Planning & Construction
Joe Monahan, Associate Vice President for Information Resources & Technology
Dan Petrin, Associate Vice President for Human Resources
Eileen Scott, Associate Provost for Global Learning & Partnerships
Horacio Sosa, Vice President for University Advancement
R. J. Tallarida, Associate Provost for Library Information Services
Scott Muir, Associate Provost for Fiscal & Administrative Affairs
Darren Nicholson, Interim Dean, College of Communication & Creative Arts
Sanford Tweedie, Dean, College of Education
Monika Williams Shealey, Dean, Henry M. Rowan College of Engineering
Anthony Lowman, Dean, College of Humanities & Social Sciences
Nawal Ammar, Dean, College of Performing Arts
John Pastin,
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Sue Lehrman
Dean, Rohrer College of Business

Karen Magee Sauer
Dean, College of Science & Mathematics

Kenneth Lacovara
Founding Dean, School of Earth and Environment

Paul Katz
Founding Dean, Cooper Medical School of Rowan University

Thomas A. Cavalieri
Dean, Rowan University School of Medicine
Executive Administration

Zabinski, John  Senior Vice President for University Advancement/Executive Director, Rowan University Foundation

Allen, Wesley D.  Associate Director of Corporate and Foundation Relations
    B.A., J.D., The College of William & Mary; M.A., Harvard Graduate School of Education

Amico, Peter L  Deputy Emergency Management Coordinator
    AA Gloucester County College; BA Rowan University

Ammar, Nawal  Dean
    B.Sc., M.Sc. University of Salford, Greater Manchester University; Ph.D. University of Florida

Angelastro, John F.  Director of Information Security
    A.S. - Camden County College; B.S. - Glassboro State (Rowan); Villanova University - MBA

Arnold, Lorin  Dean, College of Communication and Creative Arts
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Au, Valerie  Director of Advancement Services
    B.A., University of Hong Kong; M.A.M.C., University of Florida

Avery, Carol  Managing Administrative Assistant, Office of the Vice President for Student Life/Dean of Students
    N/A

Baglio, John  Bursar
    B.S., Rider University

Barkhamer, Kimberly  Business and Development Manager, Cooper Medical School
    B.F.A., Rutgers University

Basantis, Melanie  Director of Outreach, Henry M Rowan College of Engineering
    B.S., B.A., Penn State University; M.B.A., Widener University

Bausch, Suzanne  Associate Dean for Research and Graduate Affairs, College of Science and Mathematics
    B.A., Metropolitan State College; Ph.D., University of Washington

Bell, Jennifer, L.  Director, University Web Services
    B.F.A., Moore College of Art & Design; M.S., Full Sail University

Betts, Albert  Director of Admissions
    B.A., M.A., Indiana University of Pennsylvania, Ed.D., Rowan University

Blank, Kenneth J.  Senior Vice President for Health Sciences
    Ph.D. - Albert Einstein College of Medicine of Yeshiva University; BA-NYU

Braeunig, Raymond  Chief Compliance and Privacy Officer
    N/A

Brasteter, Christine  Senior Director of Contracts/ Procurement
    B.S., Michigan State University; J.D., Widener University

Brody, Tamara N.  Managing Administrative Assistant, Office of the Vice President for Health Sciences

Butler, Roger L.  Associate Dean, College of Humanities and Social Sciences
    B.A., Washington and Lee University; M.A., George Mason University, M.A. George Washington University; Ph. D., Princeton University

Cardona, Jose  Vice President for University Relations
    B.A., M.A., Ed. D., Rowan University

Chin, Steven H.  Vice Dean, Henry M Rowan College of Engineering
    B.S., Rutgers University; M.S., The Johns Hopkins University; Ph.D., Rutgers University

Ciocco, Michael D.  Director of Online Services, College of Graduate and Continuing Education
    B.S., M.S., Rowan University

Cloyd, Melanie K.  Associate Director of Organizational Development and Training
    MA Villanova University; B.A. Rutgers University
<table>
<thead>
<tr>
<th>Name</th>
<th>Title/Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collins, Dennis P.</td>
<td>Director of Facilities, Cooper Medical School</td>
</tr>
<tr>
<td>Conners, Deanne</td>
<td>Managing Administrative Assistant, Cooper Medical School</td>
</tr>
<tr>
<td>Connor, Joanne M.</td>
<td>Chief of Staff and Liaison to the Board of Trustees</td>
</tr>
<tr>
<td>Czech, Julia</td>
<td>Stewardship and Donor Relations Officer</td>
</tr>
<tr>
<td>Daquila, August J.</td>
<td>Manager of Financial Reporting and Analysis</td>
</tr>
<tr>
<td>Davis, John A.</td>
<td>Managing Assistant Director, Custodial Services</td>
</tr>
<tr>
<td>Dayton, Catherine B.</td>
<td>Director of Admissions, Cooper Medical School</td>
</tr>
<tr>
<td>De, Arijit</td>
<td>Campus Planning</td>
</tr>
<tr>
<td>De, Arijit</td>
<td>Senior Director of Campus Planning</td>
</tr>
<tr>
<td>DeVechis, Theresa A.</td>
<td>Managing Administrative Assistant, Office of the President</td>
</tr>
<tr>
<td>Deehan, Christine</td>
<td>Director of University Events</td>
</tr>
<tr>
<td>Delgado, Joseph</td>
<td>Senior Development Director, Rohrer College of Business</td>
</tr>
<tr>
<td>Dersch, Melissa G</td>
<td>Development Director</td>
</tr>
<tr>
<td>DiSante, Cherish</td>
<td>Assistant Director, Henry M Rowan College of Engineering</td>
</tr>
<tr>
<td>Duffy, Andrew</td>
<td>Associate Director of Employer Relations</td>
</tr>
<tr>
<td>D'Angelo, Christopher</td>
<td>Director of Alumni Engagement</td>
</tr>
<tr>
<td>English, Redmond S.</td>
<td>Campus Database Administrator, Enterprise Information Systems</td>
</tr>
<tr>
<td>Farney, Steven C.</td>
<td>Director of Operations, Strategic Enrollment Management - Director of Operations</td>
</tr>
<tr>
<td>Farrell, Deanne</td>
<td>Director of Corporate and Foundation Relations</td>
</tr>
<tr>
<td>Ferraina, Diane</td>
<td>Managing Administrative Assistant, Office of the Provost</td>
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<tr>
<td>Ferrarie, Joseph A.</td>
<td>Manager of Information Technology Services, Cooper Medical School</td>
</tr>
<tr>
<td>Ferraro, Gloria J.</td>
<td>Managing Administrative Assistant, Office of Vice President for Government Relations/General Counsel</td>
</tr>
<tr>
<td>Fields, Jeffrey M.</td>
<td>Associate Director of Admissions and Enrollment Services, College of Graduate and Continuing Education</td>
</tr>
<tr>
<td>Fischer, Sean</td>
<td>Associate Dean for External Affairs, Henry M Rowan College of Engineering</td>
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<tr>
<td>Name</td>
<td>Position</td>
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<tr>
<td>Fleming, Stephen</td>
<td>Assistant Dean</td>
</tr>
<tr>
<td>Forman, Gail L.</td>
<td>Senior Director of Development</td>
</tr>
<tr>
<td>Frierson, Muriel</td>
<td>University Registrar</td>
</tr>
<tr>
<td>Gandy, Kyle A.</td>
<td>Director of Energy Management/University Engineer</td>
</tr>
<tr>
<td>Gaymon, James</td>
<td>Assistant Vice President for Student Diversity</td>
</tr>
<tr>
<td>Gilmore, Dan Lewis</td>
<td>Director of Athletics</td>
</tr>
<tr>
<td>Giunta, Karen</td>
<td>Academic Affairs Fiscal Manager</td>
</tr>
<tr>
<td>Glass, John B</td>
<td>Director of Environmental Health and Work Safety</td>
</tr>
<tr>
<td>Gollihur, Rebecca Jo</td>
<td>Assistant Dean Academic Services, College of Graduate and Continuing Education</td>
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<tr>
<td>Gordy, Pamela</td>
<td>Interim Associate Director of Financial Aid</td>
</tr>
<tr>
<td>Guiteau, Gardy</td>
<td>Director of Social Justice, Inclusion and Conflict Resolution</td>
</tr>
<tr>
<td>Guiteau, Gardy J.</td>
<td>Assistant Director of Mentoring and Academic Enrichment</td>
</tr>
<tr>
<td>Gustin, Joan K.</td>
<td>Managing Administrative Assistant, Office of Research</td>
</tr>
<tr>
<td>Haines, Laurie</td>
<td>Certification Specialist, College of Education</td>
</tr>
<tr>
<td>Hand, John J.</td>
<td>Vice President for Strategic Enrollment Management</td>
</tr>
<tr>
<td>Harvey, Roberta</td>
<td>Vice President for Academic Affairs</td>
</tr>
<tr>
<td>Hasit, Cindi</td>
<td>Assistant Dean for Faculty and Student Assessment and Development</td>
</tr>
<tr>
<td>Haynes, Julie</td>
<td>Associate Dean, College of Communication and Creative Arts</td>
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<tr>
<td>Henderson, James</td>
<td>Director of Enterprise Information Services</td>
</tr>
<tr>
<td>Hentschke, Lynne</td>
<td>Managing Administrative Assistant, Academic Affairs Office</td>
</tr>
<tr>
<td>Hewitt, Michele</td>
<td>Budget and Finance Manager, College of Science and Mathematics</td>
</tr>
<tr>
<td>Houshmand, Ali</td>
<td>President</td>
</tr>
<tr>
<td>Janney, Scott</td>
<td>Assistant Vice President for Development (Individual Giving)</td>
</tr>
<tr>
<td>Johnson, Suhail</td>
<td>Director of Residential Learning</td>
</tr>
<tr>
<td>Jones, Derek L.</td>
<td>Interim Station Manager, WGLS</td>
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</tbody>
</table>
Executive Administration

Jones, Richard  
Vice President for Student Life/Dean of Students  
B.A., University of North Florida; M.S., Mississippi State University

Jordan, James C.  
Director of the MBA Program, Rohrer College of Business  
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Mandayam, Shreekanth A.  
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Markowitz, Lawrence  
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Marshall Amie  
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B.A., Chestnut Hill College

Marshall, Lori  
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Martin, Heather  
Managing Administrative Assistant, University Advancement  
N/A

Martin, Walton K.  
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B.A., Villanova University; M.B.A., Eastern University

McCaffery, Jacqueline  
Director English Language Programs  
B.A., Ithaca College; M.S.Ed., Temple University; CELTA Teaching Certificate, Cambridge University
<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Education</th>
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<tbody>
<tr>
<td>McCall, Maria</td>
<td>Associate Director of Accounting Services</td>
<td>BS - St. Joseph’s Univ.</td>
</tr>
<tr>
<td>McCall, Sally</td>
<td>Director of Budget</td>
<td>B.S., Drexel University</td>
</tr>
<tr>
<td>McCloy, Mary E.</td>
<td>Managing Administrative Assistant, Office of the Vice President for Finance</td>
<td></td>
</tr>
<tr>
<td>McElwee, Rory O.</td>
<td>Associate Vice President for Student Retention, Division of Strategic Enrollment Management</td>
<td>B.A., Drew University; Ph.D., Cornell University</td>
</tr>
<tr>
<td>McFarland, Daniel J.</td>
<td>Associate Dean, Rohrer College of Business</td>
<td>Ph.D. - Drexel University, Philadelphia, PA; M.B.A. - Drexel University, Philadelphia, PA; B.S/B.S. - Drexel University, Philadelphia, PA;</td>
</tr>
<tr>
<td>McGeehan, John</td>
<td>Associate Dean for Student Affairs and Admissions, Cooper Medical School</td>
<td>MD</td>
</tr>
<tr>
<td>McKinney, Kellie</td>
<td>Director of Housing Administrative Services and Assignments</td>
<td>B.S., Kutztown University.; M.A., Indiana University of Pennsylvania</td>
</tr>
<tr>
<td>McLeer, Amy</td>
<td>Development Director, Program and Business Development, CMSRU</td>
<td>M.A., Rutgers, The State University of New Jersey; B.A., Chestnut Hill College</td>
</tr>
<tr>
<td>McPherson, Penny</td>
<td>Assistant Vice President for Student Enrichment, Division of Student Life</td>
<td>B.A., M.A., Rowan University</td>
</tr>
<tr>
<td>Miller, Barbara J</td>
<td>Director of Library Services, Cooper Medical School</td>
<td></td>
</tr>
<tr>
<td>Milligan, Carolyn</td>
<td>Director of Payroll</td>
<td>B.S., Rutgers University</td>
</tr>
<tr>
<td>Mitchell-Williams, Jocelyn Ann</td>
<td>Associate Dean for Multicultural and Community Affairs, Cooper Medical School</td>
<td>(B.S.), Rutgers University; (Ph.D.) Rutgers University; (M.D.), Robert Wood Johnson Medical School, University of Medicine and Dentistry of New Jersey (now Rutgers University)</td>
</tr>
<tr>
<td>Monahan, Joseph D.</td>
<td>Assistant Vice President of Campus Planning and Construction</td>
<td>Bachelor of Engineering – Widener; Certificate for Business Essentials- University of Penn, Wharton School.</td>
</tr>
<tr>
<td>Moore, Donald E.</td>
<td>Senior Vice President for Facilities, Planning and Operations</td>
<td></td>
</tr>
<tr>
<td>Mordosky, Anthony</td>
<td>Associate Vice President for Information Resources/Chief Technology Officer</td>
<td>B.S., Kutztown State University; B.S., Millersville State College; M.B.A., Temple University</td>
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<td>Morrow, Eileen</td>
<td>Director of Campus Services</td>
<td>B.A., Wilkes College; M.A., Bucknell University; CSP</td>
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<td>Muir, Scott</td>
<td>Associate Provost for Library Information Services</td>
<td>BS, Tennessee Technological University; Tennessee, MA of Librarianship, Emory Univ. Georgia; MS Eastern Michigan University, MI</td>
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<tr>
<td>Mulligan, Joseph</td>
<td>Assistant Vice President for Civic Involvement, Division of Student Life</td>
<td>B.A., M.A., West Chester University</td>
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<td>Murphy, Susan</td>
<td>Director of Advancement Communications</td>
<td>B.A., The College of New Jersey; M.A., Rowan University</td>
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<tr>
<td>Newell, James</td>
<td>Provost/Senior Vice President for Academic Affairs</td>
<td>B.S., Carnegie-Mellon University; M.S., Penn State University; Ph.D., Clemson University</td>
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<td>Nicholson, Darren</td>
<td>Provost Fellow</td>
<td>B.A., Ph.D., Washington State University</td>
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<td>Noon, Christine</td>
<td>Director of Card Services</td>
<td>A.S., Middlesex Community College, B.A., M.A., Rowan University</td>
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<tr>
<td>Nurkowski, Lucia</td>
<td>Associate Director of Admissions</td>
<td>B.A., M.Ed., Boston University; Ed.D., Widener University</td>
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<tr>
<td>O’Loughlin, Charles Michael</td>
<td>Director State College Risk Management</td>
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</table>
Executive Administration

Oxholm, III, Carl "Tobey"  
Executive Vice President  
Amherst College, B.A summa cum laude, 1975; Harvard University, J.D cum laude, 1979; Harvard University, Kennedy School of Government, Master of Public Policy (MPP) 1979

Pastin, John R.  
Dean, College of Performing Arts  
B.S. University of the State of New York; M.M. Northwestern University, D.M.A. University of Maryland

Perez-Colon, Maria  
Program Advisor, Henry M Rowan College of Engineering  
B.A., M.A., Trenton State College (College of New Jersey)

Peterson, Julie  
Director of Student Enrichment and Family Connections  
B.A., M.A., Rowan University

Petrella, Brittany L  
Development Director  
B.A., Rowan University

Petrin, Dan  
Associate Vice President for Information Resources and Technology

Piddington, Sarah E.  
Director of Sponsored Programs and Technology Transfer  
B.S./M.B.A. - Rowan University

Pinder, Anne  
Assistant Director Enterprise Information Systems  
B.S., Rowan University; M.A., Stevens Institute of Technology

Pinocci, Tina  
Associate Vice President for Campus Recreation and Student Activities, Division of Student Life  
B.S., M.Ed., Frostburg State College

Previti, Diane  
Associate Registrar

Puliti, Michele Ann  
Managing Administrative Assistant, Dean's Office, Cooper Medical School  
B.S., M.B.A., Temple University

Reboli, Annette  
Vice Dean, Cooper Medical School  
M.D. from Georgetown University school of medicine

Regan-Butts, Elizabeth D.  
Asst. VP for Marketing and Recruitment, Division of Global Learning and Partnerships  
B.S., Rowan University; M.B.A., Temple University

Reigel, Daniel P  
Associate Director of Admissions  
B.A., M.A., Rowan University

Ricchezza, Lorraine  
Assistant Vice President Academic and Student Affairs/Rowan Global  
B.S., LaSalle University; M.Ed., Widener University; Ed.D. Rowan University

Ring, Jackie  
Assistant Vice President for Institutional Effectiveness, Research and Planning  
B.A., LaSalle University; M.A., Rider University

Rolon, Annabel  
Managing Administrative Assistant, Camden Campus  
N.A.

Rowan, James, J. Jr.  
Chief Internal Auditor  
CPA License: State of New Jersey; MBA: St. John’s University, NY; BS: Gannon University, Erie, PA

Rozanski, Kathy  
Director of Distinguished Events and Special Projects  
B.A., Glassboro State College (Rowan)

Ruhenstein, David  
Associate Vice President for Student Wellness, Division of Student Life  
B.A., Drake University; M.S.W., Loyola University of Chicago; Psy.D., Illinois School of Professional Psychology in Chicago

Saadeddine, Rihab  
Assistant Dean for Assessment and Technology, College of Education  
B.S. Lebanese University, M.A., Ed.D. Rowan University

Sanders, Gloria M.  
Business Operations Manager, College of Performing Arts  
BS/MS University of Florida

Scott, Eileen  
Associate Vice President Human Resources  
B.S., Rowan University

Scully, Joseph F., Jr.  
Senior Vice President for Finance/CFO  
B.S., M.B.A., LaSalle University, CPA
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<td>A.A., Keystone College; B.S.A.G., West Virginia University; M.L.A., University of Virginia</td>
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<td>Assistant Dean for Research and Graduate Education</td>
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<td>Senior Director of Orientation and Student Leadership Programs</td>
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<td>Marketing/Business Development Manager, Institutional Effectiveness/Research and Planning</td>
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<td>Van Brunt, Margaret</td>
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<td>Vanston, Patricia Davis</td>
<td>Associate Dean for Program and Business Development, Cooper Medical School</td>
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<td>B.S. –University of Scranton; M.S. –Drexel University</td>
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<td>Varela, Tomas</td>
<td>Advisor, Office of Health Professions</td>
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<td>B.S., Temple University; MPH, The George Washington University</td>
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<td>Veacock, Peggy</td>
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<td>Velez-Yelin, Johanna</td>
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<td>B.A., Inter-American Univ., San Juan, Puerto Rico; M.A., Glassboro State College (Rowan); Ed.D., Widener University</td>
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<td>Vernon-Dotson, Lisa</td>
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<td>B.S. University of Akron; M.A., Hampton University; Ph.D., The College of William and Mary</td>
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<td>Waddington, James</td>
<td>Director of University Housing Systems and Logistics</td>
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<td>Wallace, Warren</td>
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<td>Weil, Valerie P.</td>
<td>Associate Dean for Finance, Administration, and Operations, Cooper Medical School</td>
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<td>Weinstein, Steven David</td>
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<td>Williams Shealey, Monika</td>
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<td>B.S., University of South Florida M.S., University of South Florida Ed.S, University of Miami Ph.D., University of Central Florida</td>
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<td>Willse, Christine</td>
<td>Interim Associate Director of Financial Aid</td>
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<td>Woodruff, John</td>
<td>Director of Academic Success Center</td>
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<td>Woodside, Scott</td>
<td>Director for Student Health Services</td>
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<td>BSN, Villanova University; MSN &amp; MBA, LaSalle University</td>
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<td>Yurak, Tricia J.</td>
<td>Associate Dean for Academic Affairs, College of Science and Mathematics</td>
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<td>B.S., Northern Kentucky University; M.S., Ohio University; Ph.D., Ohio University</td>
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<td>Zabinski, John J.</td>
<td>Senior Vice President for University Advancement/Executive Director, Rowan University Foundation</td>
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<td>Zazzali, Robert</td>
<td>Senior Vice President for Community and Economic Development</td>
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<td>diNovi, Kristen</td>
<td>Assistant Dean, College of Humanities and Social Sciences</td>
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General Information

Campus Buildings

301 High Street
The three story building is home to the Rowan University Art Gallery and is home to several academic offices and classrooms.

6 High Street
The former bank building is now home to the administrative offices of the College of Communication and Creative Arts.

Barnes & Nobles at Rowan University
Located on Rowan Boulevard, this now serves as the University Bookstore.

Bole Annex
Opened in the spring of 1970, Bole Annex houses the Department of Public Safety.

Bole Hall
Robert D. Bole Hall is the administrative center of the University. It contains the offices of the President, Provost, University finances, and The Office of General Counsel. It is named after former Dean Robert Bole.

Bozorth Hall
Named for a former registrar, Loriot Bozorth, the building was originally opened in 1954 as the campus demonstration elementary school. Today, Bozorth houses the College of Communication offices, Rowan Radio, Rowan TV, a distance learning classroom, film-editing facilities, a computer-equipped journalism newsroom, an advertising/PR client suite, a layout room and a computer-equipped writing laboratory.

Bunce Hall
The first building on campus, Edgar J. Bunce Hall was opened in 1923 and is named for a former president of the University. It is home to the departments of English, Foreign Languages and Literatures, Philosophy and Religion, and Theatre and Dance. This building also features classroom space and Tohill Auditorium.

Camden Academic Building
In 2009, the University purchased the former bank and its annex in an effort to provide the space needed for Rowan’s Camden operations. Rowan has had a presence in Camden since 1969. Today, the Camden Campus building is located at the corner of Cooper Street and Broadway. The bank is across the street.

Campbell Library
Opened in 1995, the Keith and Shirley Campbell Library features 118,000-square feet of research, study, archive and office space. It provides connectivity to the campus network, enabling access to many databases and online resources. The Library was named the Keith and Shirley Campbell Library in recognition of the Campbells’ generous gift of an endowment for the facility in 2000. The Departments of Sociology and Anthropology and the Department of Law and Justice are housed on the 5th floor.

Carriage House
Built in 1849 to service the Hollybush Mansion, this building now houses University Publications.

Cassady Maintenance Building
Opened in 1971, the Otto P. Cassady Maintenance Building, named for a former engineer in charge of maintenance, is the main office complex for maintenance operations.

Chamberlain Student Center
The Student Center opened in 1974 and serves as a campus focal point where students, faculty, staff and community members congregate for a wide range of events, services and functions. It houses offices for student organizations and publications as well as several administrative offices. The following facilities are located in the three-level center: the information desk, I.D. room, mailroom, an ATM machine, Eynon Ballroom, meeting and conference rooms and eating areas, including the dining hall, a food court, snack bar, outdoor dining terrace, Profs Place and the Owl’s Nest Restaurant.
Cooper Medical School of Rowan University
The six story building, located in Camden, is home to Rowan's M.D. granting medical School.

Edgewood Park Apartments
This four-building complex houses 24 apartments. Four students live in each apartment, which contains two bedrooms, a living room, dining room, kitchen and bathroom.

Enterprise Center
Located on Rowan Boulevard, the Enterprise Center opened in 2013 and is home to the College of Graduate and Continuing Education.

Esby Gym
The Roland A. Esbjornsen Hall houses the gymnasium, swimming pool, classrooms and the Health and Exercise Science faculty offices. The building is named after a former chairman of the Health and Exercise Science Department.

Evergreen Hall
Evergreen houses 204 students. The building is three stories tall and is separated into two wings. Rooms are arranged in suites. Each suite contains two double bedrooms and a bath.

Hawthorn Hall
Formerly a student residence facility, Hawthorn Hall is one of the homes of the College of Communication.

Hering Central Heating and Cooling Plant
The J. Leonard Hering Heating Plant, named for a former superintendent of maintenance, houses the centralized heating and cogeneration equipment.

Herman D. James Hall
James Hall, opened January 2006, is home to the College of Education. The three-story, 135,000-sq. foot building features academic distance-learning facilities, an early childhood development center and an assortment of labs and outreach centers as well as classroom space.

Hollybush Mansion
Built in 1849, the building was the site of the historic summit meeting between President Lyndon B. Johnson and Soviet Premier Alexei B. Kosygin in 1967. The building now serves as a museum and meeting center.

Laurel and Oak Halls
Laurel and Oak are the University's first residence halls. Today, each building houses 45 students.

Linden Hall
Formerly a student residence facility, Linden Hall houses a variety of administrative offices.

Memorial Hall
Opened in 1956, the building serves as the center for information (computer) resources, housing the campus help desk, Web Services and the Duplicating Center. A dance studio is also in the building.

Mimosa Hall
Mimosa accommodates 305 students. Rooms are arranged by suites, and each suite contains two to three double bedrooms and a bath.

Mullica Hall
Mullica accommodates 103 students. Rooms are arranged by suites, and each suite contains two double bedrooms and a bath.

Robinson Hall
Named after Thomas E. Robinson, a former Rowan University president, this is one of the largest classroom buildings on campus. It is home to several departments of the College of Liberal Arts & Sciences. The core of the building consists of classrooms and seminar rooms.

Rowan Boulevard Apartments
Rowan Boulevard Apartments, is made up of two, four-story buildings that house 884 students in 28 one-bedroom efficiency units and 214 four-bedroom suites. The suites include two bathrooms, a kitchen, breakfast nook and living room area. The complex also contains exercise and weight rooms, meeting rooms, laundry facilities and a Public Safety satellite office.
Rowan Hall
Opened in January 1998, Henry M. Rowan Hall is the home of the College of Engineering. The 95,000-sq. foot building features three floors of offices, classrooms, labs and the 115-seat Betty Rowan Auditorium.

Sangree Greenhouse
Built in 1923, the John Sangree Greenhouse is one of the oldest structures on campus. A preservation and renovation project was completed on this facility in 1998.

Savitz Hall
Originally the University library, this building was completely renovated to house all of the student service functions, including the offices of the vice president for Student Affairs, Dean of Students, Career and Academic Planning, Developmental Education, Tutoring, Basic Skills/Testing, Admissions, Counseling, EOF/MAP, Registrar, Financial Aid, Revenue and Collections, Residential Learning & University Housing, Multicultural/International Affairs, Specialized Services, the Center for Service Learning and Volunteerism, the Honors Program and Women's Studies. The building is named after Jerohn Savitz, the University's first president.

Science Hall
Dedicated in 2003, the facility features the 102-seat Edelman Planetarium, a rooftop observatory with 16-inch telescope, a rooftop greenhouse, 27 teaching laboratories and 22 research labs. Its 150,000 square feet of space is spread over three floors. Housed here are offices for the departments of Biology, Chemistry and Biochemistry, and Physics and Astronomy.

Shpeen Hall
Alvin Shpeen Hall is located one block off of the east corner of campus, on Academy Street. The University purchased the former elementary school building from Glassboro and refurbished it to house offices. Today, Shpeen Hall is home to the R. Grace Bagg Alumni Center and the Rowan Foundation. Alvin Shpeen was a mayor of Glassboro. It is home to University Advancement, including Alumni Relations.

South Jersey Technology Park at Rowan University
The Samuel H. Jones Innovation Center is a 45,000 square-foot facility located at the South Jersey Technology Park on Rowan’s West campus that provides engineering laboratory, web-laboratory and technology company incubation all within a single facility. In partnership with Rowan’s College of Business, the Technology Park offers collaboration and consulting services, product feasibility, development and commercialization services, training seminars and continuing education courses in entrepreneurship for new and established businesses.

Stratford Campus
Home to Rowan’s D.O. granting medical school.

Student Recreation Center
"Opened in 1993, the Student Recreation Center is a comprehensive recreation sports facility. The three-story, 76,000-square-foot building houses an eight-lane swimming pool, a three-lane indoor running track, a three-court multi-sport gym, five racquetball courts, an aerobics room, fitness and free-weight rooms, a conference room and complete locker/shower room facilities. Administrative offices coordinate various programs, including informal sports, intramural sports and fitness activities for students, faculty and staff."

Team House
Opened in 1971, the Team House contains locker rooms; training facilities; and intercollegiate athletics, coaching and staff offices. It was renovated and expanded in 2013.

The North Halls: Chestnut, Magnolia and Willow Halls
These buildings house 750 students. Students live in suites and share restroom facilities.

Townhouses
Opened in 2004, the on-campus, 113-unit townhouse complex along Route 322 features four- and six-bedroom configurations convenient to classes and other activities. The complex was built adjacent to a new parking garage and 5,000-square-foot community center with laundry facilities, a game room and meeting space.

Triad Apartments
Triad features 81 apartments which are carpeted, air-cooled and furnished. A variety of apartment types are available to accommodate 288 students in a co-ed living environment.
**Wellness Center**
Seymour Winans Hall is named for a former faculty member. It is now home to Counseling & Psychological Services and the Wellness Center, formerly the Student Health Center.

**Westby Hall**
Completed in 1967, the Cleve O. Westby Hall Arts Building, named in honor of the former director of county and state college construction, contains art studios for ceramics, sculpture, jewelry/metal, painting, printmaking and photography, computer labs, classrooms, a lecture hall for 110 students, exhibition galleries, and faculty offices.

**Whitney Center**
Located on Rowan Boulevard, the Whitney Center (opened 2012) features stores on the 1st floor and student housing on top. It is also home to the Thomas Bantivoglia Honors Program and student apartments.

**Wilson Hall**
Harold Wilson Hall, named after a former faculty member, opened in 1972 and is primarily home to the performing arts. The building contains two large rehearsal rooms, Boyd Recital Hall, practice rooms, classrooms, two student lounges, a music library, faculty offices, the concert box office and W. Clarke Pfleeger Hall—a 1,000 seat auditorium. The dean of the College of Fine & Performing Arts, and Music Department are also located in the building.
## General Information

### Administrative Offices Telephone Numbers

<table>
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<th>Department</th>
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<td>Office of Career Advancement (OCA)</td>
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<td>Office of Social Justice, Inclusion and Conflict Resolution</td>
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<td>Public Safety (emergency)</td>
<td>256.4911</td>
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<td>Public Safety (non-emergency)</td>
<td>256.4922</td>
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<td>Recreation Center (Main Office)</td>
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<td>Registrar</td>
<td>256.4350</td>
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<td>Residential Learning &amp; University Housing</td>
<td>256.4266</td>
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<td>Rowan Global Student Services</td>
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<td>School of Health Professions</td>
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<td>Student Activities</td>
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<td>Student Center</td>
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<td>SVP Finance &amp; CFO</td>
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<td>Testing Center</td>
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<td>Tutoring Center</td>
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<td>Veteran's Affairs</td>
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<td>Volunteerism, Community Engagement &amp; Commuter Services</td>
<td>256.4595</td>
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<td>VP University Advancement</td>
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<td>VP University Relations</td>
<td>256.4236</td>
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<tr>
<td>Wellness Center <strong>Main Number</strong> (formerly Student Health Center)</td>
<td>256.4333</td>
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<tr>
<td>Wellness Center (formerly Counseling and Psychological Service Center)</td>
<td>256.4333</td>
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</table>
Directions to Campus

Directions to Campuses
For GPS, use the street address for each of our campuses as indicated below

Main Campus - Glassboro
201 Mullica Hill Road, Glassboro, NJ 08028

Cooper Medical School of Rowan University (CMSRU)
401 South Broadway, Camden, NJ 08103

Rowan University @ Camden - Bank Building
129 North Broadway, Camden, NJ 08102

Rowan University School of Osteopathic Medicine (SOM)
One Medical Center Drive, Stratford, NJ 08084

West Campus - Tech Park
107 Gilbreth Parkway, Mullica Hill, NJ 08062
The Emeriti

Adams, Ethel M. (1968-1984)  Professor
Psychology
B.A., Eastern Michigan University; M.A., University of Michigan; Ed.D., University of Pennsylvania

Addison, Carolyn (1967-1991)  Professor
Health and Physical Education
B.S., James Madison University; M.A. New York University; Ed.D., Temple University

Alvino, Esther (1966-1987)  Assistant Professor
Elementary Education
B.A., M.A., Glassboro State College

Ambacher, Jr., Richard J. (1967-2000)  Professor
Communication Studies
B.A., Glassboro State College; M.F.A., Tale University

Amer, Khaled 1983-2014  Assistant Professor
Mathematics
B.S., Cairo Univ.; M.S.C., Concordia Univ.; M.S., Ph.D., University of Waterloo

Amme, Linda (1968-1990)  Assistant Professor
Special Education Services and Instruction
B.A., M.A., Glassboro State College

Andersen, Donald (1970-1998)  Assistant Professor
Special Education Services and Instruction
B.A., M.Ed., Rutgers University

Applebaum, David 1973-2011  Professor
Department of History
B.A., Brooklyn College; M.A., Ph.D., University of Wisconsin-Madison

Avril, Edwin (1959-1982)  Professor
Music
B.A., San Francisco State College; M.A., Ed.D., Teachers College, Columbia University

Bartelt, Pearl W. (1972-1999)  Professor
Sociology and Dean
B.S., M.A., Ph.D., Ohio State University

Behm, Edward 1971-2002  Assistant Professor
Department of Geography and Environment
B.A., M.A., Bowling Green State University

Bender, Aaron (1964-1991)  Professor
Department of History
B.A., Brooklyn College; M.A., Ph.D., New York University

Benevento, Jacqueline D. (1993-2010)  Assistant Professor
Department of Teacher Education
B.A., Montclair State; M.A., Middlebury College; Ed.D., Temple University

Berhe Hahte-Georgis 1988-2013  Professor
Department of Marketing and Business Information Systems
B.B.A., Haile Selassie University; M.S., Loyola University; D.B.A., Louisiana Tech University

Beverly, Leah (1958-1984)  Professor
Health and Physical Education
B.S., Southwestern Louisiana College; M.A., N.Y.U.; Ed.D., University of So. Mississippi

Bianchi, John (1967-1990)  Coordinator of Research
Education
B.S., Villanova Univ.; M.Ed., Rutgers Univ.; Ed.D., Temple University
The Emeriti

Biological Sciences  
B.S., LaSalle College; M.S. Villanova University

Blough, Robert (1963-1995)  
Elementary Education  
B.S., Juniata College; M.Ed., Temple University; Ed.D., University of Pennsylvania

Bolay, Brenda (1968-1997)  
Health and Exercise Science  
B.A., University of Michigan; M.S., University of Pennsylvania; Ed.D., Temple University

Borgen, Evelyn (1965-1991)  
Elementary and Early Childhood Education  
B.S., Monmouth College; M.A., Glassboro State College; Ed.D., Fairleigh Dickinson Univ.

Borowec, Alexander (1956-1988)  
Physical Sciences  
B.S., Trenton State College; M.S., University of Pennsylvania; Ed.D., Temple University

Brent, George (1971-2003)  
Elementary/Early Childhood Education  
B.A., Ed.M., Boston University; Ed.D., University of Massachusetts

Breslin, Frederick (1960-1991)  
Psychology  
B.A., Queens College; M.A., Ph.D., New York University

Brinker, Beula (1960-1984)  
Elementary Education  
B.S., Glassboro State College; M.A., New York University

Britton, Pearl E. (1968-1977)  
Health and Physical Education  
B.S., Cortland State College; M.Ed., Ed.D., University of Buffalo

Brooks, Ellain (1965-1983)  
Math and Computer Science  
B.S., North Carolina State; M.A., Columbia University

Brown, Estelle (1962-1992)  
Reading and Speech Correction  
B.S., M.A., Glassboro State College; Ed.D., Temple University

Bruce E. Caswell 1989  
Department of Political Science and Economics  
B.A., University of Chicago; M.C.P., University of Pennsylvania; Ph.D., Rutgers University

Butcher, Ronald (1991-2009)  
Education Institute  
B.S., Western Michigan University; M.A., Eastern Michigan University; Ph.D., University of Michigan

Buzash, Gabriel (1964-1981)  
Elementary Education  
B.S., Slipper Rock State College; M.S., Westminster College; Ed.D. Penn State University

Byrer, Josep (1968-1995)  
Technology  
B.S., M.S., Indiana State University

Cahill, Janet (1979-2013)  
Psychology  
B.S., State University of New York at Oneonta; Ph.D., Temple University

Calliari, Carl (1968-2004)  
Education  
B.A., M.A., Glassboro State College; Ed.D., Temple University
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<th>Name</th>
<th>Years Active</th>
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<th>Departments/Fields</th>
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<tr>
<td>Cammarota, Marie</td>
<td>1988-2008</td>
<td>Associate Professor</td>
<td>Special Education Services/Instruction, B.A., M.A., Glassboro State College; Ed.D., Nova Southeastern University</td>
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<tr>
<td>Capasso, Ronald</td>
<td>1996-2002</td>
<td>Associate Professor</td>
<td>B.A., M.A., Montclair State College; Ed.D., Columbia University</td>
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<tr>
<td>Cell, Howard R.</td>
<td>1967-2000</td>
<td>Professor</td>
<td>Philosophy and Religion, B.S., University of Wisconsin; M.A., San Jose University; Ph.D., Temple University</td>
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<tr>
<td>Chang, Julia</td>
<td>1996</td>
<td>Associate Professor</td>
<td>Department of Writing Arts, B.A., Stonehill College; M.S.J., Columbia University; M.A., Temple University</td>
</tr>
<tr>
<td>Chard, Daniel</td>
<td>1968-2016</td>
<td>Professor</td>
<td>Department of Art, B.F.A., Univ. of South Dakota; M.A., Northern State College; Ed.D., Columbia University</td>
</tr>
<tr>
<td>Chaskes, Jay</td>
<td>1969</td>
<td>Professor</td>
<td>Department of Sociology and Anthropology, B.A., University of Toledo; M.A., Ph.D., Temple University</td>
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<tr>
<td>Cimprich, Jack R.</td>
<td>1973-1998</td>
<td>Associate Professor</td>
<td>Computer Science, B.A., Boston College; M.S., University of Pennsylvania</td>
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<tr>
<td>Cinaglia, Marianne B.</td>
<td>1994-2007</td>
<td>Assistant Professor</td>
<td>Secondary Education, B.S., Drexel University; M.A., Ph.D., University of Delaware</td>
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<tr>
<td>Clapp, Robert A.</td>
<td>1969-2000</td>
<td>Assistant Professor</td>
<td>Theatre and Dance, B.A., Pennsylvania State University; M.A., Syracuse University</td>
</tr>
<tr>
<td>Clark, Carol</td>
<td>1977-2010</td>
<td>Librarian</td>
<td>Library, B.A., Regis College; M.S.L.S., Syracuse University; M.Ed., University of Lowell</td>
</tr>
<tr>
<td>Cohen, Stanley</td>
<td>1961-1984</td>
<td>Professor</td>
<td>Educational Administration, B.S., Rutgers University; M.Ed., Ed.D., Temple University</td>
</tr>
<tr>
<td>Collins, John</td>
<td>1961-1994</td>
<td>Professor</td>
<td>Communications, B.S., West Chester State College; M.A., Penn State University; Ed.D., Temple University</td>
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<tr>
<td>Combs, Ethel</td>
<td>1967-1995</td>
<td>Associate Professor</td>
<td>Reading and Speech Correction, B.A., Douglas College; M.A., Glassboro State College; Ph.D., Temple University</td>
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<td>Covi, Adelyne</td>
<td>1964-1984</td>
<td>Assistant Professor</td>
<td>Elementary Education, B.S., Washington University; M.A., Glassboro State College</td>
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<tr>
<td>Craver, Rhys</td>
<td>1963-1994</td>
<td>Associate Professor</td>
<td>Chemistry and Physics, B.S., Millersville State College; M.S., University of Delaware; Ph.D., Walden University</td>
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</table>
Delaney, Lawrence (1964-1988)  
Physical Sciences  
B.S., Trenton State College; M.S., Ed.D., University of Pennsylvania

Detrick, Fred (1964-1987)  
Foundations of Education  
B.A., M.S., Rutgers University

DiObilda, Nicholas 1972-2012  
Reading  
B.S., West Chester University; M.Ed., Univ. of Delaware; Ph.D., Ohio State University

Dinsmore, Lee (1971-2002)  
Chemistry and Physics  
B.S., M.A., Glassboro State College

Donaghay, Robert (1963-1992)  
Academic Advising  
B.S., University of Minnesota; Ph.D., University of Texas

Donahue, Charles T. (1960-2000)  
Department of English  
B.A., Texas A & M University; M.A., University of Texas; Ph.D., Temple University

Donald Stoll 1992-2011  
Department of Writing Arts  
P.A. Valpariso Univ.; M.F.A., U of Texas at Austin; Ph.D. Indiana University.

Doskow, Minna (1986-2002)  
English and Dean  
B.S., M.S., City College of N.Y.; M.A., University of Connecticut; Ph.D., University of Maryland

B.S., Duquesne; M.S., Glassboro State College; Ph.D., University of Toledo

Psychology  
B.S., Kent State Univ.; M.A., New York Univ.; Ed.D., University of Maryland

Dugan, Ruth (1964-1981)  
Psychology  
B.A., Washington Square College; M.A., Ph.D., New York University

Elliott, Gene V. (1963-1998)  
Psychology  
B.S., M.A., Michigan State University; Ph.D., University of Maryland
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<th>Name</th>
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<th>Title/Position</th>
<th>Degrees/Institutions</th>
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<tr>
<td>Emerson, Robert</td>
<td>1966-1992</td>
<td>Assistant Professor and Assistant Director</td>
<td>B.E., United Wesleyan College; M.A., Glassboro State College</td>
</tr>
<tr>
<td>Engebretson, Herschel</td>
<td>1969-1988</td>
<td>Assistant Professor</td>
<td>B.A., Taylor University; M.A., University of Pennsylvania</td>
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<tr>
<td>Enslin, William L.</td>
<td>1974-2000</td>
<td>Associate Professor</td>
<td>B.E., University of Pennsylvania; Ed.D., Rutgers University</td>
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<tr>
<td>Fanslau, Martha C.</td>
<td>1971-1980</td>
<td>Librarian and Instructor</td>
<td>B.A., University of Pennsylvania; M.A., Glassboro State College</td>
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<tr>
<td>Farnelli, Donald</td>
<td>1968-2016</td>
<td>Professor</td>
<td>B.S., Glassboro State College; M.Ed., Temple University; Ph.D., Union Graduate School</td>
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<td>Foster, Bruce</td>
<td>1970-2005</td>
<td>Professor</td>
<td>B.A., Trenton State College; M.S.Ed., Bucknell Univ.; Ed.D., Florida State University</td>
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<td>Fox, John</td>
<td>1964-1990</td>
<td>Assistant Professor</td>
<td>B.A.P.E., M.S.P.E., West Virginia University</td>
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<td>Frankl, Razelle</td>
<td>1983-2000</td>
<td>Professor</td>
<td>B.A., Temple University; M.B.A., Drexel University; M.A., Ph.D., Bryn Mawr College</td>
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<td>Friebis, George</td>
<td>1969-1993</td>
<td>Director</td>
<td>B.S., M.Ed., Temple University; M.A., Glassboro State College; Ed.D., Nova University</td>
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<td>Frisone, John</td>
<td>1973-2002</td>
<td>Associate Professor</td>
<td>B.A., Queens College; Ph.D., City University of New York</td>
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<td>Fulginiti, Anthony</td>
<td>1976-2009</td>
<td>Professor</td>
<td>B.A., Laurel Hill College; M.A., Villanova University; M.A., Glassboro State College; APR Fellow PRSA</td>
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<td>Gaer, Eleanor</td>
<td>1972-2014</td>
<td>Associate Professor</td>
<td>B.S., University of Wisconsin at Milwaukee; M.S., University of Wisconsin at Madison; Ph.D., University of Illinois; J.D., Rutgers-Camden</td>
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<td>Gallinelli, John</td>
<td>1969-2009</td>
<td>Professor</td>
<td>B.Ed., Keene State College; Ph.D., University of Maryland</td>
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<td>Garrabrant, William</td>
<td>1973-2003</td>
<td>Head of Circulation</td>
<td>Interlibrary Loan and Science Librarian</td>
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<td>Garrahan, John</td>
<td>1965-1982</td>
<td>Associate Professor</td>
<td>B.A., City College of New York; M.S., Ed.D., University of Pennsylvania</td>
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<td>Gates, Rodney E.</td>
<td>1968-2000</td>
<td>Assistant Professor</td>
<td>B.S., Univ. of Maryland; M.A., Glassboro State College</td>
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ROWAN UNIVERSITY UNDERGRADUATE CATALOG 2016-2017
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<tr>
<td>Gaynor, William</td>
<td>1965-1987</td>
<td>Assistant Professor and Librarian</td>
<td>Library</td>
<td>B.A., Georgetown University; M.A., Fairfield University; M.S., Villanova University</td>
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<tr>
<td>Gephardt, Donald L.</td>
<td>1990-2009</td>
<td>Professor</td>
<td>Music</td>
<td>B.M.E., Drake University; B.S., M.S., The Juilliard School; Ed.D., Washington University</td>
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<tr>
<td>Gillespie, John</td>
<td>1972-1992</td>
<td>Associate Professor</td>
<td>Communications</td>
<td>B.S., M.A., Glassboro State College</td>
</tr>
<tr>
<td>Glassberg, Rose</td>
<td>1964-1991</td>
<td>Professor</td>
<td>Secondary Education and Educational Foundations</td>
<td>B.S., West Chester State College; M.A., Middlebury College; Ph.D., Temple University</td>
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<tr>
<td>Goldberg, Leon</td>
<td>1968-1988</td>
<td>Associate Professor</td>
<td>Physical Science</td>
<td>B.S., City College of New York; M.S., New York University</td>
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<tr>
<td>Goodfellow, Frank</td>
<td>1965-1999</td>
<td>Associate Professor</td>
<td>Secondary Education</td>
<td>B.A., College of Wooster; M.S.L.S., Drexel Institute of Technology</td>
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<tr>
<td>Graneto, Philipp</td>
<td>1970-2011</td>
<td>Professor</td>
<td>Theatre and Dance</td>
<td>B.A Catholic University; MFA Carnegie Mellon</td>
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<td>Green, Charles H.</td>
<td>1962-1993</td>
<td>Professor</td>
<td>Life Sciences</td>
<td>B.S., Penn State University; M.S., University of Delaware; Ph.D., Purdue University</td>
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<tr>
<td>Greenspan, Bertram</td>
<td>1961-2012</td>
<td>Professor</td>
<td>Music</td>
<td>B.M., American Conservatory of Music; M.M., D.M., Indiana University</td>
</tr>
<tr>
<td>Grupenhoff, Richard</td>
<td>1981-2009</td>
<td>Professor</td>
<td>Radio, Television, and Film</td>
<td>B.A., Xavier University; M.A., Purdue University; Ph.D., Ohio State University</td>
</tr>
<tr>
<td>Guerard, Michael P.</td>
<td>1971-1995</td>
<td>Associate Professor</td>
<td>Technology</td>
<td>B.S., M.Ed., Ph.D., Texas A &amp; M University</td>
</tr>
<tr>
<td>Gundaker, Isabelle</td>
<td>1983-2003</td>
<td>Instructor</td>
<td>Composition and Rhetoric</td>
<td>B.A., Chestnut Hill College; M.A., Rutgers</td>
</tr>
<tr>
<td>Gust, Lawrence</td>
<td>1966-1993</td>
<td>Assistant Professor</td>
<td>Elementary Education</td>
<td>M.A.A., M.Ed., Temple University</td>
</tr>
<tr>
<td>Haba, James</td>
<td>1972-2003</td>
<td>Associate Professor</td>
<td>Department of English</td>
<td>B.A., Reed College; Ph.D., Cornell University</td>
</tr>
<tr>
<td>Hamlet, Carolyn</td>
<td>1984-2012</td>
<td>Assistant Professor</td>
<td>Special Education Services and Instruction</td>
<td>B.S., University of Tennessee; M.Ed., Memphis State University; Ph.D., Temple University</td>
</tr>
<tr>
<td>Hartley, Stephen</td>
<td>2000-2015</td>
<td>Associate Professor</td>
<td>Computer Science</td>
<td>B.A., Washington College, M.S., Ph.D. University of Virginia</td>
</tr>
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<td>Name</td>
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<td>Department/Program</td>
<td>Education</td>
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<td>Healy, Bartholomew</td>
<td>1985-2013</td>
<td>Theatre and Dance</td>
<td>B.A. College of the Holy Cross; M.F.A New York University</td>
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<tr>
<td>Hewsen, Robert H.</td>
<td>1967-1999</td>
<td>Department of History</td>
<td>B.A., University of Maryland; M.S., Catholic University; Ph.D., Georgetown University</td>
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<td>Hitchner, Benjamin G.</td>
<td>1964-1998</td>
<td>Economics and Political Science</td>
<td>B.S., Temple University; M.S., University of Pennsylvania</td>
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<tr>
<td>Howe, Clarence (Larry)</td>
<td>1970-2014</td>
<td>Mathematics</td>
<td>B.A., University of Delaware; ABD University of Delaware</td>
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<td>Husain, Syed</td>
<td>1960-1994</td>
<td>Biological Sciences</td>
<td>I.Sc., City Science College, Hyderabad; B.Sc., College of Agriculture, Osmania University, Hyderabad, India; M.S., Oklahoma State University; Ph.D., Cornell University</td>
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<tr>
<td>Itzkowitz, Martin</td>
<td>1989-2016</td>
<td>Department of Writing Arts</td>
<td>B.A., Brooklyn College; M.A., Ph.D., New York University</td>
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<td>Jaeger, Peter</td>
<td>1966-1981</td>
<td>Communications</td>
<td>B.A., Mexico City College; M.Ed., University of Houston</td>
<td></td>
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<tr>
<td>Janice Rowan</td>
<td>1976-2011</td>
<td>Department of Writing Arts</td>
<td>P.A Rutgers Univ. M.A. University of Michigan</td>
<td></td>
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<td>Jeffrey, Linda</td>
<td>1973-2002</td>
<td>Psychology</td>
<td>B.A., University of Nebraska; M.A., Teacher's College Columbia University; M.A., University of Chicago; Ph.D., Rutgers University</td>
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<td>Johnson, Theodore B.</td>
<td>1990-1999</td>
<td>Educational Leadership</td>
<td>B.S., M.A., Temple University; Ed.D., Rutgers University</td>
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<td>Johnson, Christine</td>
<td>1989-2002</td>
<td></td>
<td>B.A., M.A., University of Wisconsin; Ed.D., Rutgers University</td>
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<tr>
<td>Jones, John</td>
<td>1968-1990</td>
<td>Department of Foreign Languages and Literatures</td>
<td>B.A., M.A., University of Alabama; Diplome, Institut de Touraine, Tours, France</td>
<td></td>
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<tr>
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Education  
B.S., West Chester State College; M.A., Villanova University; Ed.D., Widener University | Associate Dean                  |
| Kaleta, Kenneth       | (1989-2016)  
Department of Radio, Television and Film  
B.A., M.A., Villanova University; Ph.D., New York University | Professor                        |
Secondary Education and Foundations  
B.S., M.Ed., Ed.D., Temple University | Professor                        |
| Kardas, William       | (1968-2000)  
Library  
B.S., M.L.S., Villanova University | Head Reference Librarian         |
| Keller, Horace        | (1960-1986)  
Psychology  
B.S., West Chester University; M.Ed., Ed.D., Temple University | Professor                        |
Theatre and Dance  
B.A., Elmhurst College; M.A., Ph.D., State University of Iowa | Professor                        |
Health and Exercise Science  
B.S., Ursinus College, M.Ed., Temple University | Assistant Professor              |
| Kirner, Clara         | (1971-1994)  
Library  
B.A., Rutgers University; M.A., Drexel University | Librarian                        |
| Klanderman, John      | (1986-2005)  
Special Education  
B.A., Calvin College; M.A., Ph.D., Michigan State University | Professor                        |
| Kress, Lee            | (1973-2011)  
Department of History  
B.A., Johns Hopkins University, M.A., Ph.D., Columbia University | Associate Professor              |
Communication Studies  
B.A., Montclair State College; M.A., Temple University, Ph.D., Indiana University | Professor                        |
| Leder, George         | (1972-2000)  
B.S., Brooklyn College; Ph.D., Rutgers University | Assistant Professor              |
| Lee, Elaine           | (1967-1994)  
Elementary/Early Childhood Education  
B.S., M.A., Trenton State College; Ed.D., Temple University | Associate Professor              |
| Lemaire, Denyse       | (1998-2014)  
Department of Geography and Environment  
M.A., Ph.D., Universite Libre de Bruxelles | Professor                        |
| Leshay, Steven V.     | (1978-1999)  
Marketing  
B.A., Lenoir Rhyne College; M.A., Glassboro State College; Ph.D., Temple University | Associate Professor              |
| Libro, Antoinette     | (1968-2002)  
Communication  
B.A., Glassboro State College; Ph.D., New York University | Dean and Professor               |
| Lint, Jerry N.        | (1964-1998)  
Department of Geography and Environment  
B.S., Clarion State College; M.Ed., Pennsylvania State University | Assistant Professor              |
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<tr>
<th>Name</th>
<th>Department/Role</th>
<th>Education</th>
<th>Affiliation</th>
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<tr>
<td>Markowitz, Diane 1993-2011</td>
<td>Associate Professor</td>
<td>Department of Sociology and Anthropology</td>
<td>B.A., Tufts University, D.M.D., Tufts University School of Dental Medicine, Ph.D., University of Pennsylvania</td>
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<tr>
<td>Martin, Doris (1976-1987)</td>
<td>Assistant Professor</td>
<td>Home Economics</td>
<td>B.S., Penn State University, M.S., Cornell University, Ed.D., Temple University</td>
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<td>Martínez-Yanes, Francisco (1966-2008)</td>
<td>Professor</td>
<td>Department of Foreign Languages and Literatures</td>
<td>M.A., University of Rome, Italy, Diplôme, Alliance Française, Paris, France, Ph.D., University of Pennsylvania</td>
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<td>McConnell, Helen (1965-1995)</td>
<td>Professor</td>
<td>Home Economics</td>
<td>B.S., State University College, Oneonta, NY; M.A., Columbia University, Ph.D., Michigan State University</td>
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<tr>
<td>McHenry, Sandra L. 1993-2000</td>
<td>Associate Professor</td>
<td>R.N., Helene Fuld School of Nursing, B.A., Rowan College of NJ; M.S., University of Delaware; D.N.Sc., Widener University</td>
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<td>McLean, Desmond (1966-2002)</td>
<td>Associate Professor</td>
<td>Art</td>
<td>B.A., Newark State College, M.A., Hunter College</td>
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<td>McMeniman, Linda 1986-2000</td>
<td>Associate Professor</td>
<td>B.A., New York University, M.A., Ph.D., University of Berkeley</td>
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<td>Meagher, Richard (1969-2008)</td>
<td>Professor</td>
<td>Biological Sciences</td>
<td>B.S., M.S., Fairleigh Dickinson University, Ph.D., St. Bonaventure University</td>
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<td>Mercier, J. Denis (1967-2002)</td>
<td>Professor</td>
<td>Communication</td>
<td>B.A., Marian College, M.A., Niagara University, Ph.D., University of Pennsylvania</td>
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<td>Meyers, Dorothy (1967-1985)</td>
<td>Assistant Professor and Librarian</td>
<td>Library</td>
<td>B.A., State University of Iowa, M.L.S., Rutgers University</td>
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<td>Mical, Agnes (1968-1996)</td>
<td>Assistant Professor</td>
<td>Health and Exercise Science</td>
<td>B.S., M.S., West Chester University</td>
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### The Emeriti

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<td>Michaelson, James</td>
<td>Assistant Professor</td>
<td>Secondary Education and Education Foundations</td>
<td>B.S., M.A., Temple University</td>
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<td>Micklus, Samuel C.</td>
<td>Professor</td>
<td>Technology</td>
<td>B.S., Philadelphia College of Art; M.A., Trenton State College; Ed.D., New York University</td>
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<td>Miller, Allen</td>
<td>Chief Engineer, WGLS, College of Communication</td>
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<td>Micklus, Samuel C.</td>
<td>Professor</td>
<td>Mathematics</td>
<td>B.S., M.A., University of Texas</td>
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<td>Monahan, Thomas</td>
<td>Professor</td>
<td>Educational Leadership</td>
<td>B.A., LeMoyne College; Ed.M., Ed.D., Rutgers University</td>
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<td>Monroe, Gerald</td>
<td>Associate Professor</td>
<td>Art</td>
<td>B.S., M.A., Ed.D., New York University</td>
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<td>Moore, Elizabeth</td>
<td>Professor</td>
<td>Biological Sciences</td>
<td>B.Sc., Rollins College; M.S., Ph.D., Cornell University</td>
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<td>Moore, Oscar</td>
<td>Assistant Professor</td>
<td>Health and Exercise Science</td>
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<td>Monahan, Thomas</td>
<td>Professor</td>
<td>Psychology</td>
<td>B.S., Geneseo State College; M.A., Ph.D., Ohio State University</td>
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<td>Monahan, Thomas</td>
<td>Professor</td>
<td>Psychology</td>
<td>B.S., Geneseo State College; M.A., Ph.D., Ohio State University</td>
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<td>Moss, Janet</td>
<td>Associate Professor</td>
<td>Education</td>
<td>B.S., Northwestern University, Ed.M. Harvard University, Ed.D., University of California at Los Angeles</td>
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<td>Mosto, Patricia</td>
<td>Professor</td>
<td>Biological Sciences</td>
<td>National Teacher Certification, Teachers College Nº; Licenciada in Biology (M.S.), University of Buenos Aires; M.A. equivalent, University of Texas at Austin; M.S., Drexel University, Ph.D., University of Buenos Aires</td>
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<td>Mosto, Patricia</td>
<td>Professor</td>
<td>Biological Sciences</td>
<td>National Teacher Certification, Teachers College Nº; Licenciada in Biology (M.S.), University of Buenos Aires; M.A. equivalent, University of Texas at Austin; M.S., Drexel University, Ph.D., University of Buenos Aires</td>
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<td>Moyer, Mel</td>
<td>Associate Professor</td>
<td>Psychology</td>
<td>B.A., Glassboro State College; M.Ed., Temple University, Ed.D., Rutgers University</td>
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<td>Morris, John</td>
<td>Professor</td>
<td>Department of Sociology</td>
<td>B.S., Drexel University; M.A., Ph.D., Fordham University</td>
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<td>Morashima, Kumiko</td>
<td>Associate Professor</td>
<td>Art</td>
<td>B.F.A., Women's College of Fine Arts, Japan; M.F.A., Indiana University</td>
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<td>Myers, John</td>
<td>Professor</td>
<td>Department of Sociology</td>
<td>B.S., Drexel University; M.A., Ph.D., Fordham University</td>
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<td>Neff, George</td>
<td>Professor</td>
<td>Art</td>
<td>B.S., Kutztown University; M.A., Columbia University, Ed.D., Pennsylvania State University</td>
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<tr>
<td>Newland, Robert</td>
<td>Professor Emerti</td>
<td>Department of Chemistry &amp; Biochemistry</td>
<td>B.A., Kalamazoo College; Ph.D., Wayne State University</td>
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<tr>
<td>Nichols, Lola</td>
<td>Assistant Professor</td>
<td>Elementary Education</td>
<td>B.S., Trenton State College; M.A., Columbia University; M.A., Glassboro State College</td>
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The Emeriti

Ognibene, Gerald (1972-2008)  
Special Education  
B.A., Niagara University; M.S., Canisius College; Ph.D., Ohio State University

Okorodudu, Corann (1968-2011)  
Psychology  
B.A., Cuttinton College, Liberia; M.Ed., Ph.D., Harvard University

Oliver, Harold 1979-2011  
Music  
B.M., Peabody Conservatory; M.M., Yale Univ.; Ph.D., Princeton University

Orlando, Frank J. (1972-2008)  
Foundations of Education  
B.S., M.S., SUNY-Buffalo; Ed.D., West Virginia University

Pagell, Francesca Louise (1998-2012)  
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B.A., Immaculata College; M.A., Villanova University

Perry, Wilhelmina E. (1968-1997)  
Sociology  
B.A., Tilotson College; M.A., Howard University; Ph.D., University of Texas

Pickett, Ethel (1968-1987)  
Home Economics  
B.S., University of Delaware; M.Ed., University of Maryland

Pike, Frank (1964-1987)  
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Pittard, Norma (1968-1987)  
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Pritchard, Robert 1971-2011  
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Putman, Mary Lee 1971-2011  
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Rashiduzzaman, Mohammad (1973-2013)  
Economics and Political Science  
M.A. and B.A. (Hons) University of Dhaka, (Bangladesh); Post-doctoral (senior) fellowship, Columbia University, New York; Ph.D, University of Durham, England

Reeves, Edwin C. (1968-1996)  
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Resnik, Benjamin (1965-1991)  
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Department of Marketing and Business Information Systems  
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Department of History  
B.M., M.M., Yale University; M.A., Ph.D., University of Pennsylvania.

Robinette, Joseph (1981-2005)  
Theatre and Dance  
B.A., Carson-Newman College; M.A., Ph.D., Southern Illinois University

Robinson, Randall 1965-2000  
B.S., Ohio State University; M.S., University of Pennsylvania; Ed.D., Temple University

Rosenberg, Jerome J. (1973-2008)  
Special Education  
B.A., Orwego State Teachers College; M.A., Columbia University; Ed.D., Temple University; Ph.D., Heed University, West

Health and Exercise Science  
B.S., The King's College; M.S., West Chester State College

Sakiey, Elizabeth (1974-2000)  
Reading  
B.S., Eastern Michigan University; M.Ed., Ed.D., Rutgers University

Schreiber, Elliott (1967-1995)  
Psychology  
B.A., Upsala College; M.A., Bradley University; Ed.D., West Virginia University

Schultz, Charles 1972-2000  
B.S., University of Michigan; M.S., Ohio State University; Ph.D., University of Michigan

Schwarz, Charles (1967-1999)  
Mathematics  
B.A., St. John's University; M.S., Fordham University; M.S., Adelphi University; Ed.D., Rutgers University

Scott, Joanne (1980-2000)  
Biological Sciences  
B.S., M.S., Bucknell University; M.A., Leibgh University; Ph.D., University of Texas, Medical Branch at Galveston

Scott, Richard 1972  
Department of Geography and Environment  
B.A., University of Cincinnati; M.A., Ph.D., Syracuse University

Serfustini, Leonard 1971-1986  
Department of Health and Physical Education  
B.Ed., M.Ed., University of Buffalo; Ed.D., State University of New York

Shawver, Murl C. (1958-1974)  
Life Sciences  
B.S., Central Missouri State College; M.Ed., University of Missouri; Ed.D., Columbia University

Shontz, Marilyn L. (1999-2009)  
Special Education Services and Instruction  
A.B., Heidelberg College (Ohio); M.S. in L.S., Case Western Reserve University; Ph.D., Florida State University

Shrader, Edith (1959-1968)  
Early Childhood Education  
B.S., M.S., Glassboro State College

Simpson, Eugene (1975-2000)  
Music  
B.M., Howard University; B.M., M.M., Yale University; Ed.D., Columbia University
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<th>Department</th>
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<td>Sizemore, Warner</td>
<td>Assistant Professor</td>
<td>Philosophy and Religion</td>
<td>B.A., East Tennessee State; M.A., Bob Jones University; M.A., Temple University; B.D., Lincoln University Theological Seminary</td>
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<td>Smith, Steward</td>
<td>Assistant Professor</td>
<td>Elementary Education</td>
<td>B.A., Rutgers University; M.Ed., Temple University</td>
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<td>Sorrentino, Carmela</td>
<td>Assistant Professor</td>
<td>Teacher Education (Early Childhood, Elementary Education, Subject Matter)</td>
<td>B.S., West Chester State College; M.Ed., Temple University</td>
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<td>Spear, Miriam</td>
<td>Assistant Professor</td>
<td>Secondary Education</td>
<td>B.A., M.S., Glassboro State College</td>
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<td>Stanley, Daniel</td>
<td>Professor</td>
<td>Health and Physical Education</td>
<td>B.Ed., University of Buffalo; M.Ed., State University of New York; Ed.D., Temple University</td>
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<td>Stansfield, Charles</td>
<td>Professor</td>
<td>Department of Geography and Environment</td>
<td>B.S., West Chester University; M.S., Pennsylvania State University; Ph.D., University of Pittsburgh</td>
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<td>Stevens, Kathleen</td>
<td>Associate Professor</td>
<td>Communication</td>
<td>B.A., Georgian Court College; M.A., Glassboro State College (Rowan)</td>
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<td>Stone, Don C.</td>
<td>Associate Professor</td>
<td>Computer Science</td>
<td>E. Eng. Phys., Cornell University; M.S.E., Ph.D., University of Pennsylvania</td>
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<td>Sullivan, Jane E.</td>
<td>Professor</td>
<td>Reading</td>
<td>B.S., Seton Hall University; M.S., Ed.D., State University of New York, Albany</td>
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<tr>
<td>Taney, Mary C.</td>
<td>Professor</td>
<td>Department of History</td>
<td>B.A., College of Saint Teresa; M.A., Ph.D., Catholic University; Litt.D., Universita Cattolica del Sacro Cuore, Milan, Italy</td>
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<td>Tannenbaum, Margaret</td>
<td>Professor</td>
<td>Secondary Education</td>
<td>B.A., Bryan College; M.Ed., Ed.D., Temple University</td>
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<td>Tannenbaum, Theodore</td>
<td>Professor</td>
<td>Sociology</td>
<td>B.A., M.A., Brooklyn College; Ph.D., Purdue University</td>
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<tr>
<td>Taylor, Albert</td>
<td>Professor</td>
<td>Foundations of Education</td>
<td>B.S., Trenton State College; M.Ed., Ed.D., Rutgers University</td>
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<tr>
<td>Tener, Morton</td>
<td>Professor</td>
<td>Secondary Education</td>
<td>B.S., Rider College; M.S., University of Pennsylvania; M.S., Ed.D., Temple University</td>
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<tr>
<td>Thomas J. Gallia</td>
<td>Vice President Emeritus/Senior Advisor to the President</td>
<td>Secondary Education</td>
<td>B.A., M.A., M.A., Glassboro State College; Ed.D., Rutgers University</td>
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<td>Thyhsten, John</td>
<td>Professor</td>
<td>Music</td>
<td>B.M., M.M., Eastman School of Music</td>
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The Emeriti

Tishler, Joseph (1964-2000)  
Art  

Tomei, Mario (1964-1995)  
Educational Administration  
B.A., Montclair State College; M.S., University of Pennsylvania; Ed.D., Temple University

College of Engineering  
B.S.E.E., M.S., Ph.D., Iowa State University

Travis, William (1971-2007)  
Art  
B.F.A., Philadelphia College of Art; M.F.A., Tyler School of Art

Tsuji, Thomas (1969-1995)  
Technology  
B.S., M.S., Stoudt State College; Ph.D., Michigan State University

Vivarelli, Thomas (1967-2004)  
Special Education  
B.A., Trenton State College; M.A., Glassboro State College

Public Relations and Advertising  
B.A., Temple University; M.A., William Paterson College; Ph.D., Antioch University; APR

Health and Physical Education  
B.S., M.A., Rutgers University

Wade, Thomas 1976-2009  
Music  
B.M., Oberlin College; M.M., University of Connecticut

Physical Sciences  
B.A., State Univ. of New York at Binghamton; M.S., State Univ. of New York at Oneonta; Ph.D., University of South Carolina

Washington, Judy (1971-2009)  
Teacher Education (Early Childhood, Elementary Education, Subject Matter)  
B.A., Brooklyn College; M.Ed., Ed.D., Temple University

Wasserman, Burton (1960-2003)  
Art  
B.A., Brooklyn College; M.A., Ed.D., Columbia University

Weatherford, Bernadynne (1987-2012)  
Economics and Political Science  
B.A., M.A., Texas Tech University; Ph.D., University of New Mexico

Weiss, Leigh 1968-2011  
Computer Science  
B.S., M.S., Buffalo State University

Welsh, Charles (1973-1992)  
Marketing  
B.S., Villanova University; M.B.A., Ph.D., University of Pennsylvania

Westcott, Patrick (2003-2013)  
Department of Teacher Education (Early Childhood, Elementary Education, Subject Matter)  
B.A. University of Minnesota; M.A., University of Connecticut; M.A., Fairleigh Dickinson University; Ed.D., Teachers College Columbia University

Whitcraft, John (1969-1987)  
Philosophy and Religion  
B.A., Asbury College; M.A., Temple University; B.D., Asbury Seminary; S.T.M., Boston University
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<td>White, Edward H.</td>
<td>Professor</td>
<td>Educational Leadership</td>
<td>B.A., Keene State College; M.S., Indiana State University; Ph.D., University of Maryland</td>
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<td>Williams, Leonard J.</td>
<td>Associate Professor</td>
<td>Psychology</td>
<td>B.A., University of Delaware; M.A., McMaster University, Hamilton, Ont.; Ph.D., University of South Carolina</td>
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<td>Winand, Lois</td>
<td>Assistant Professor</td>
<td>Home Economics</td>
<td>B.S., M.S., Drexel University; Ed.D., Pennsylvania State University</td>
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<td>Wolfe, Edward</td>
<td>Professor</td>
<td>Department of English</td>
<td>B.A., M.A., Ph.D., University of Pennsylvania</td>
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<td>Woods, Wellington</td>
<td>Associate Professor</td>
<td>Chemistry and Physics</td>
<td>B.S., Glassboro State College; M.Ed., Rutgers University; Ph.D., Walden University</td>
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<td>Wriggins, Thomas</td>
<td>Assistant Professor and Director of Support Services</td>
<td>Education</td>
<td>B.A., Glassboro State College; M.Ed., Temple University</td>
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<td>Young, Walter Byron</td>
<td>Professor</td>
<td>Art</td>
<td>B.A., M.A., Glassboro State College; Ed.D., Pennsylvania State University</td>
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<td>Young, Flora D.</td>
<td></td>
<td>Department of Sociology and Anthropology</td>
<td>B.A., M.A., Howard University, Ed.D. University of Pennsylvania</td>
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<td>Zahn, Richard</td>
<td>Professor</td>
<td>Foundations of Education</td>
<td>B.S., West Chester State College; M.Ed., Ed.D., Temple University</td>
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<td>Zalusky, Donald</td>
<td>Associate Professor</td>
<td>Physical Sciences</td>
<td>B.S., M.A., University of Missouri; Ph.D., University of Delaware</td>
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<td>Zimmerman, Donald</td>
<td>Professor</td>
<td>Elementary and Early Childhood Education</td>
<td>B.S., M.A., State University of New York, Buffalo; Ed.D., Temple University</td>
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<td>Zimolzak, Chester</td>
<td>Associate Professor</td>
<td>Department of Geography and Environment</td>
<td>B.A., Pennsylvania State University; M.A., University of Wisconsin</td>
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The Emeriti
Accreditations

Middle States Commission on Higher Education
AACSB International - The Association to Advance Collegiate Schools of Business
ABET - Computing Accreditation Commission
ABET - Engineering Accreditation Commission
American Association of Colleges of Nursing - Commission on Collegiate Nursing Education
American Chemical Society
American Osteopathic Association - Commission on Osteopathic College Accreditation
American Osteopathic Association - Council on Osteopathic Postdoctoral Training Institutions
Certification in Education for Public Relations - Public Relations Society of America
Commission for Accreditation of Athletic Training Education
Council for Accreditation of Counseling and Related Educational Programs
Liaison Committee on Medical Education (provisional)
National Association of School Psychologists
National Association of Schools of Art and Design
National Association of Schools of Music
National Association of Schools of Theatre
National Council for Accreditation of Teacher Education
National Wellness Institute

Memberships
American Council on Education
American Association of State Colleges and Universities
American Association for Adult Continuing Education
American Association for Engineering Education
American Association of Colleges for Teacher Education
Association of American Colleges & Universities
Association of Governing Boards of Universities & Colleges
AACSB: The International Association for Management Education
BioNJ
Council of Graduate Schools
National Association of Schools
New Jersey College and University Coalition
New Jersey Council of Education
New Jersey Association of Colleges and Universities
Teacher Education Council of State Colleges and Universities
The College Board
Middle States Association of Colleges & Schools Inc.
New Jersey Association of Colleges for Teacher Education

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