Rowan University

Graduate & Continuing Education Catalog 2013 – 2014

includes accelerated, online and off-site undergraduate programs and all graduate and post-baccalaureate programs

Rowan University
201 Mullica Hill Road
Glassboro, NJ 08028
This catalog is also available online at rowan.edu/catalogs

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Introduction

Rowan University In Brief

Type
Comprehensive, coeducational, non-sectarian, state-supported, public research, founded in 1923

Colleges
Business, Communication & Creative Arts, Education, Engineering, Graduate & Continuing Education, Humanities & Social Sciences, Performing Arts, and Science & Mathematics. Schools: Cooper Medical School of Rowan University, Graduate School of Biomedical Sciences, School of Biomedical Sciences and School of Osteopathic Medicine.

Degrees
Bachelor of Arts, Bachelor of Fine Arts, Bachelor of Music, Bachelor of Science, 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 and Stratford, N.J.

Size
Approximately 10,750 undergraduate students and 1,383 graduate students on the main campus in Glassboro and branch campus in Camden; approximately 645 graduate students at the School of Osteopathic Medicine and 195 students at the Graduate School of Biomedical Sciences on the branch campus in Stratford; approximately 663 full-time equivalent (FTE) faculty.

Average Costs (2013-2014)

Tuition & Fees	Room & Board*	Total
In State		
$12,380	$10,972	$23,352
Out of State		
$20,186	$10,972	$31,158

Tuition and fees for the College of Graduate & Continuing Education (CGCE) vary with the nature of the program, location, and mode of delivery. CGCE costs can be found at either of these websites: www.rowan.edu/bursar or www.rowan.edu/cgce/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 land tract 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 building 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, the 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 is home to more than 1,300 students and a Barnes & Noble collegiate superstore.

A Broader Mission

During this period, 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—was developed 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.

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 of 2012.

As provost, he established the College of Graduate and Continuing Education and started Rowan's online education program. 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—Colleges of Business, Communication & Creative Arts, Education, Engineering, Humanities & Social Sciences, Performing Arts, Science & Mathematics and the School of Biomedical Sciences and Cooper Medical School of Rowan University.

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 a College of Health Sciences 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—Glassboro, Camden and Stratford, N.J.

Recognized Nationally

Rowan has attracted the attention of national organizations that evaluate colleges and universities. *U.S. News & World Report* ranks Rowan University 19th of Northern Regional Universities and third among the public institutions in the category. The College of Engineering is ranked 32nd nationally among master's level programs and the Chemical Engineering program is ranked third.

The Princeton Review included Rowan in its latest edition "The Best Northeastern Colleges" and included the Rohrer College of Business in its edition of the "Best 296 Business Schools" from among more than 1,800 business schools.

The University has received 13 awards for green initiatives since 2007. Most recently, the U.S. EPA named the University a "Top Green Power Purchaser" in its athletic conference and The Princeton Review listed it in its "Guide to 322 Green Colleges."

Numerous Opportunities

Today, Rowan's nearly 14,000 students can select from 57 bachelor's, 46 master's, and four doctoral degree programs in colleges and schools across four campuses. The University is one of only 56 institutions in the country with accredited programs in business, education, engineering and medicine.

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.

Undergraduate Programs

Undergraduate studies at Rowan University are housed in seven colleges: Business, Communication and Creative Arts, Education, Engineering, Performing Arts, Humanities & Social Sciences, and Science & Mathematics. 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.

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. Those students who do not complete an approved transfer program or who transfer from other accredited institutions will have their previous work evaluated on a course-by-course basis and will be required to correct any deficiencies that exist in the requirements of their major.

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 Center for Academic Advising & Exploration (CAAdE).

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 When no departmental policy exists, the student must complete at least two-thirds (2/3) of the required course work at Rowan University.

Exploratory Studies

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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 Center for Academic Advising and Exploration, and support from the Office of Academic Transition Programs, Rowan Seminar, Residential Learning and many other offices on campus. First-year students in the Exploratory Studies 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/academic_affairs or email exploratorystudies@rowan.edu

Rowan Seminar

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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 of thousands of students 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 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.

Freshmen 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. Rowan students have their first three semesters to complete their Rowan Seminar requirement.

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

General Education at Rowan University

Students need to understand that a well-rounded education is a goal in itself and that 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.) However, these are just minimums as different degree programs vary significantly 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.

Requirements of Bachelor of Arts, Bachelor of Science, and Specialized Programs by General Education, Free Electives, and Major Requirements

The minimum requirements for the Bachelor of Arts degree, the Bachelor of Science degree, and Specialized Programs such as the Bachelor of Fine Arts degree are shown below. For the Bachelor of Arts degree, it is necessary to complete a minimum of 51 semester hours of courses in General Education in order to achieve the minimum 120 hours required for the degree. In specialized programs, the courses required in the major may far exceed 60 semester hours of credit and there may be 0 hours of Free Electives required.

General Education Credit Hour Distribution (Minimum-Maximum) by Degree Program

	Bachelor of Arts	*Bachelor of Science*	*Specialized Programs*
Major Requirements	30-39	60-64	60+
Free Electives	21-30	6-18	0 +
General Education Minimun Semester Hours	51-60	42-54	42
Minimum Semester Hours for Degree	120-122	120-122	120 +

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 Integrated 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 (CLEP).
5. The Computer Competency requirement has been suspended.
6. 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, up to a maximum of 60-64 semester hours 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 College of Graduate & Continuing Education (CGCE). For a list of available programs and related details, please visit www.rowan.edu/cgce/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 CGCE Admissions Office cgceadmissions@rowan.edu or www.rowan.edu/cgce

The Rowan Experience

Rowan Experience Requirements 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 College of Graduate & Continuing Education (CGCE) and housed across the ten academic colleges: Business, Communication and Creative Arts, Cooper Medical School, Education, Engineering, Humanities & Social Sciences, Performing Arts, School of Biomedical Sciences, School of Osteopathic Medicine, and Science & Mathematics.

The role of the College of Graduate & Continuing Education 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 Dean and professional staff of CGCE, 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 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
- 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 CGCE, please visit www.rowancgce.com/programs

One of the major goals of CGCE 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 CGCE 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 the CGCE Admissions Office (cgceadmissions@rowan.edu or www.rowan.edu/cgce)

International Center

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The International Center actively supports international initiatives at Rowan University. The Center is committed to: providing support services to students, faculty and professionals engaged in international education and research; coordinating and presenting internationally focused programs to the Rowan community; building partnerships with foreign institutions to provide global learning experiences. The Center is responsible for the support of International Students and Scholars at Rowan and remains available to support international students through walk-in advising, academic and cultural workshops, enrichment activities, and social programming. Our diverse international student population also serves as an important peer network for their fellow students and contributes to our mission of sustaining an environment that fosters personal growth, cultural understanding, and academic success. The staff of the IC understands the unique needs of

international students and is committed to providing excellent service throughout their time at Rowan University. As part of its Study Abroad program, the Center offers Rowan students the opportunity to study in such areas and countries as Australia, Africa, Asia, Europe, and Central and South America. Students work with academic advisors in their major to select a course of study that enables them to complete one semester, one year, a summer session, or a faculty-led program abroad. All credits count toward a Rowan degree, and all scholarships and financial aid are applicable.

For more information visit the International Center's website at: http://www.rowan.edu/internationalcenter .

Academic Calendar 2013-2014

Fall Semester 2013

Convocation	Sunday, September 1
Semester Classes Begin	Tuesday, September 3
Labor Day (no classes)	Monday, September 2
1st Quarter Concludes	Monday, October 21
Election Day (no classes)	Tuesday, November 5
Thanksgiving Recess (no classes)	Thursday-Friday, November 28-29
2nd Quarter Concludes	Thursday, December 12
Finals Week	Friday-Thursday, December 13-19
Fall Semester Concludes	Thursday, December 19

Spring Semester 2014

Spring Semester Begins	Tuesday, January 21
3rd Quarter Concludes	Monday, March 10
Spring Break (No Classes)	Monday-Friday, March 17-21
Good Friday (No Classes)	Friday, April 18
4th Quarter Concludes	Monday, May 5
Finals Week	Tuesday-Saturday, May 6-10
Semester Concludes	Saturday, May 10
Commencement - Graduate	Thursday, May 15
Commencement - Undergraduate	Friday, May 16

Summer Sessions 2014

Memorial Day (no Classes)	Monday, May 26
Fourth of July (no Classes)	Friday, July 4
Summer Sessions are Subject to Change	

NOTE:

The Rowan University-wide Academic Calendar shows the official calendar for Rowan holidays, breaks, and the start and end dates of the traditional semesters. CGCE students or any other Rowan students in Summer courses, online, off-site, hybrid and/or accelerated courses and programs may follow different calendars. Basic CGCE Extension calendar types are available to view at: www.rowan.edu/cgce/schedules

However, the best way to be certain of the start and end dates for your CGCE non-traditional course is to consult Rowan's Section Tally at: www.rowan.edu/section_talley

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).
- The Graduate & Continuing Education (CGCE) 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.

About the College of Graduate & Continuing Education (CGCE)

CGCE in Brief

Horacio Sosa, Dean
Herman D. James Hall
856.256.5121
sosa@rowan.edu
Main phone: 856.256.4129
cgce@rowan.edu

The College of Graduate & Continuing Education (CGCE) is Rowan University's vehicle to reach out and serve 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 college 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 other seven academic colleges, CGCE currently offers over 40 master's level programs (including specializations), approximately 25 graduate-level certificate programs, 12 post-baccalaureate programs or endorsements, 2 doctoral/specialist programs, and 4 undergraduate degree completion programs as well as 5 dual Bachelor/Master degrees (4+1).

Given CGCE'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 main 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.

CGCE Admissions & Enrollment Services

CGCE ADMISSIONS
Jeffrey Fields
Director of CGCE Admissions & Enrollment Services
Herman D. James Hall
856.256.5131
fieldsj@rowan.edu
Main phone: 856.256.5145
cgceadmissions@rowan.edu

CGCE Admissions coordinates all admissions and admissions-related activities for CGCE academic programs.

Admission to Rowan University as an undergraduate, post-baccalaureate, or graduate-level student is competitive. All applicants are admitted according to the standards and requirements established by Rowan's academic departments/programs. Each component of the application is carefully reviewed and taken into consideration for each candidate. Additional policies and information about CGCE Admissions and applying can be found at www.rowancgce.com/admissions .

Eligibility for Admissions

Admission requirements for each academic program offered through CGCE at Rowan University can be found at www.rowancgce.com/programs .

- Undergraduate admission: CGCE offers non-traditional degree-completion (transfer) programs for undergraduate students. Any applicant who has completed 24 or more college credits at another institution is considered a transfer student. Students seeking a second bachelor's degree are also considered transfer students, whether they graduated from Rowan or from another institution. Most undergraduate-level programs at Rowan require a minimum GPA for admission. However, meeting that minimum does not guarantee admission due to competition for available openings. Admission decisions for applicants who've attended college more than five years ago are based on motivation, life experiences, career advancement, and college transcripts.

- Post-baccalaureate and graduate admission: To be admitted to a post-baccalaureate or graduate-level program at Rowan University, an applicant must have earned a baccalaureate degree from a regionally-accredited college or university in the United States or its equivalent from a foreign institution of higher education. Faculty-admission committees for post-baccalaureate and graduate-level programs use different evaluation criteria, according to the requirements of the profession and the number of applicants applying to the program.

Applying to CGCE

To apply to one of Rowan's CGCE programs (undergraduate, post-baccalaureate, or graduate-level) please visit www.rowancgce.com/programs and click on your program of interest for information and links to application materials and application deadlines. Both paper and online applications are available. The online application requires credit card payment of the application fee at the time of submission. Other types of fee payment such as personal check or money order require using the paper application.

Honors Admission for Rowan Graduates

Rowan undergraduate students who have graduated within the last three years, or Rowan seniors in their final semester, are exempt from paying an application fee and from taking standardized tests (except where it is necessary to meet standards recommended by accrediting bodies, certification agencies, statutory regulations, and/or professional societies) *if* they have achieved a cumulative GPA of 3.8 or greater in their undergraduate coursework and meet all other admission requirements.

Non-U.S. Transcript/Academic Credentials Requirements

Any CGCE applicant (regardless of U.S. citizenship) who attended a non-U.S. institution for more than one term and/or who earned a Bachelor's degree (or its equivalent) and/or Master's degree (or its equivalent) from a non-U.S. institution or where English was not the official language of instruction is required to submit to CGCE official English translations (if transcript is not in English) *and* a course-by-course transcript evaluation to determine equivalency. Acceptable evaluation agencies* are:

- World Education Services (WES) (www.wes.org)
- Educational Credentials Evaluators (ECE) (www.ece.org)
- Josef Silny (www.jsilny.com)

**Note: Rowan has no affiliation with these companies, and we may accept an evaluation from another company under special circumstances; however, the above agencies are proven to provide fast and accurate services to students and their evaluations are trusted by colleges throughout the U.S.*

English-language Proficiency Requirements for Non-native Speakers

Those for whom English is not their first or native language, *and* who did not graduate with a Bachelor's degree (or equivalent) from a college/university where the official language of instruction was English, are required to submit official copies of successful scores from one of the two English-language proficiency exams listed below. (This requirement is waived *only* if the applicant has successfully earned at least 24 academic credits within the past five years from an accredited U.S. institution. Other ESL programs do not qualify.)

- TOEFL (Test of English as a Foreign Language) (www.toefl.org). Minimum required scores are: 550 or higher - paper test; 79 or higher - internet test; 213 or higher - computerized test
- IELTS (International English Language Testing System) (www.ielts.org). Minimum required score is 6.0.

Additional Requirements for International Applicants

- At Rowan University, non-U.S. citizens requiring the F-1 or J-1 visa must complete two separate processes to be admitted to the University and to be considered for the Rowan-sponsored I-20 necessary to obtain the proper visa.
- The first process is the academic admissions process. All applicants must submit complete application packets including all required materials for their particular program of interest by the appropriate deadline to CGCE Admissions and be evaluated for admission and matriculation into a full-time academic program.
- The second process is the financial review, which is coordinated independently by the International Center (IC) at Rowan University. Applicants must complete all of the steps outlined by the IC in order to demonstrate that they have the financial resources necessary to support themselves for the duration of their studies at Rowan. Without complete information and appropriate certification, Rowan's International Center cannot issue the I-20 necessary to obtain an F-1 or J-1 visa. For a full list of financial review requirements and instructions please visit www.rowan.edu/internationalstudents .

General Information about Standardized Tests

- *Tests scores must be no older than five years* and must be official reports submitted to CGCE directly from the testing agency. Applicants must designate Rowan University as a recipient of their test scores or scores will not be released. (Only the most recent exam results are used for admission purposes.) Rowan's code for most standardized tests is 2515 except for the ACT (not required of graduate students) which is 2560, and the IELTS and GMAT, which both include instructions for proper score submission at the time of testing.

- While CGCE Admissions handles all admission for CGCE students, some testing agencies may only provide an address for "The Graduate School." If that is the only option available, select it, but include a note on the application indicating that test scores were sent to that address.

Changing Academic Program after Matriculation

- Matriculated students who have already begun a program, may decide that a different Rowan program better suits their needs. If that is the case, a Change of Program (COP) Form (available for download at www.rowancgce.com/forms) must be completed and submitted to CGCE Admissions. Depending upon the admission requirements of the new program, additional materials may need to be submitted. Any questions about the COP process should be directed to cgceadmissions@rowan.edu.

CGCE ENROLLMENT SERVICES

Jeffrey Fields
Director of CGCE Admissions & Enrollment Services
Herman D. James Hall
856.256.5131
fieldsj@rowan.edu
Main phone: 856.256.5435
cgceenrollment@rowan.edu

CGCE Enrollment Services assists admitted CGCE students with initial matriculation and all registration and administrative needs throughout their program.

CGCE Advising

All CGCE students are given two advising resources: CGCE Enrollment Services to assist with all CGCE-student matriculation and registration issues throughout the program, and an Academic Advisor to assist with any academic issues throughout the program. Any questions concerning certification and/or program requirements, departmental policies, awarded credit, or any non-CGCE course selection/registration should be directed to the Academic Advisor.

Transfer Credit Processing

Questions regarding transfer credit should be discussed with CGCE Enrollment Services (856.256.5435) during the admission/matriculation process. Applicants seeking to transfer credits must submit a Transfer Credit Evaluation Form (available for download at www.rowancgce.com/forms) and all required supporting materials (official transcripts, syllabi, course descriptions) at the time of application.

Most graduate programs at Rowan University allow incoming matriculated students to transfer up to 12 graduate-level credits provided that a grade of B or better was earned, the courses and credits are deemed equivalent to required courses and credits in the program, and the coursework was taken within the past 10 years. For the transfer credit policy for a particular graduate program, please contact the program's Academic Advisor (which may be found at www.rowancgce.com/advising)

Registration

For matriculated CGCE students, registration plans vary according to program. Information regarding how and when to register will be included in the matriculation confirmation email sent to new students upon receipt of a completed and signed Matriculation Signature Page. Any registration-related questions should be directed to CGCE Enrollment Services at cgceenrollment@rowan.edu.

Non-matriculated students

(Not admitted to a degree or certification programs)

- Undergraduate courses: Non-matriculated students with a high school diploma or its equivalent may register for undergraduate courses for which they are otherwise eligible. Non-matriculated undergraduate students are not permitted to register for more than 11.5 credits in any term or accumulate more than a total of 24 undergraduate credits prior to formal acceptance into an undergraduate program. To inquire about registering for coursework as a non-matriculated undergraduate student, please visit www.rowan.edu/registrar .
- Post-baccalaureate courses: Non-matriculated undergraduate students who have already earned a Bachelor's degree are not permitted to accumulate more than a total of 6 undergraduate-level credits prior to formal acceptance into a post-baccalaureate program. To inquire about registering for coursework as a non-matriculated post-baccalaureate student, please email cgceenrollment@rowan.edu.
- Graduate courses: Non-matriculated students with a Bachelor's degree or its equivalent may register for graduate courses for which they are otherwise eligible. Non-matriculated graduate students are not permitted to accumulate more than a total of 9 graduate credits prior to formal acceptance into a graduate program. To inquire about registering for coursework as a non-matriculated graduate student, please email cgceenrollment@rowan.edu.

Courses taken as a non-matriculated student are not guaranteed to count toward a future Rowan program. Not all courses are open for registration to non-matriculated students. Please click on the course registration number (CRN) in the Rowan Section Tally (www. banner.rowan.edu/Section_Tally) to view any pre-requisites or restrictions assigned to that course.

Non-matriculated students pay for their coursework according to the tuition rate assigned to the course level for each course for which they register. (For tuition rates, consult www.rowan.edu/bursar).

4+1 Matriculation and Registration Processing

In partnership with the academic departments, CGCE Enrollment coordinates the 4+1 (dual degree) process at Rowan University. While admission to the 4+1 is managed by the individual academic departments, once admitted, CGCE Enrollment works with the 4+1 Advisor and the student throughout the program to ensure that the student's paper and electronic record is updated as needed to enable proper transfer of coursework and proper registration up through final program completion. Detailed information about 4+1 policy and process is available in the 4+1 Information Sheet (www.rowancgce.com/forms).

Important Information for CGCE Students

- In order to be successful in CGCE programs, all students are required to be proficient in basic computing skills, at ease with both daily email usage and word-processing, and prepared to access online content on a regular basis.
- Applicants for online programs or programs with web/online components are required to be able to meet the technology requirements outlined at www.rowanonline.com/current_students/technology).
- Applicants for online programs or programs with web/online components are required to be able to meet the technology requirements outlined under "Technology Requirements" at students.rowanu.com.
- Additional policies and information about CGCE Enrollment Services can be found at www.rowancgce.com/current_students).

CGCE Academic Services

CGCE ACADEMIC SERVICES
Rebecca Gollihur, Assistant Dean
Herman D. James Hall
856.256.5124
gollihur@rowan.edu
Main phone: 856.256.5133
cgceacademicservices@rowan.edu

The Office of Academic Services at the College of Graduate & Continuing Education (CGCE) oversees policy, courses, and programs for the credit-bearing division of CGCE, as well as the summer semester for Rowan. CGCE Academic Services also coordinates the CGCE Catalog as well as specialized projects for the Dean and certain student services and programs for CGCE students.

CGCE/Rowan Policies

CGCE Academic Services works with the Provost's Office, the Dean of CGCE, and the Graduate Advisory Council to ensure that Rowan/CGCE policy is communicated and applied fairly and consistently to all CGCE students. Every student pursuing studies at Rowan University is subject to the university's policies and procedures as outlined in the official Rowan Student Handbook available online at www.rowan.edu/studentaffairs/communitystandards/handbook.html . If ever a Rowan policy or process should differ for a CGCE/CGCE Extension student, the Handbook will direct the student to www.rowan.edu/cgce/policies. Any questions about Rowan/CGCE policy may be addressed to CGCE Academic Services.

Program and Course Implementation and Maintenance

CGCE Academic Services works with the Dean, the academic department, and other appropriate campus offices to properly implement all new academic programs offered through CGCE at Rowan. Depending upon the academic level and mode of delivery for the program in question, CGCE Academic Services will also create and administer master schedules and official Program Overviews. Once an academic program is established through CGCE, Academic Services will continue to update and maintain program information as needed and will also manage all course set up and logistics for any CGCE Extension programs (those offered online, hybrid, off-site and/or an accelerated mode of delivery).

Rowan Summer Semester

CGCE Academic Services works with all of the academic departments as well as the Registrar's Office to administer the official Rowan Summer Semester. Details about the summer semester for students may be found at: www.rowan.edu/summer .

Academic Progress Process Review for Post-bac and Graduate Students

CGCE Academic Services coordinates the official Satisfactory Academic Progress review process for all post-bac and graduate-level students at Rowan University. Reviews take place after each semester (excluding Summer and Intersession) and during this time, student records are reviewed to ensure students are meeting satisfactory academic progress standards

(as outlined by current Rowan policy). CGCE Academic Services also coordinates all administrative responsibilities pertaining to the academic progress process review, including the placement of any necessary holds/notes, communication with students and Academic Advisors, as well as reviewing any requested appeals.

CGCE Liaison to Student Groups

CGCE Academic Services serves as the administrative liaison for CGCE students groups (including but not limited to the Graduate Student Organization and the graduate honors society, Alpha Epsilon Lambda).

CGCE Scholarships

CGCE Academic Services coordinates and oversees scholarships offered by CGCE to CGCE students.

Senior Privilege

CGCE Academic Services coordinates the Senior Privilege process at Rowan that allows qualified students to enroll in up to six credits of graduate-level courses prior to completion of the Bachelor's degree and while paying the undergraduate tuition rate. Seniors (students with 90+ earned hours) at Rowan University who have at least a 3.000 cumulative undergraduate GPA may request permission to register for one graduate level course per semester through the Senior Privilege process by submitting the proper forms (available at www.rowan.edu/cgce/forms) to CGCE Academic Services before the close of registration for the term in question. For more details about this policy and process please consult: www.rowancgce.com/policies .

Tuition and Fees

Tuition and fees* for the College of Graduate & Continuing Education (CGCE) vary with the nature of the program, location, and mode of delivery. CGCE costs (tuition and fees) can be found at either of these websites: www.rowan.edu/bursar or www.rowan.edu/cgce/tuition .

*subject to annual change and fees do not include the cost of textbooks and personal expenses.

Outstanding Financial Obligations

The University may deny a student graduation, readmission, registration, or 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 nonpayment 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 collection manager, Business Office, Savitz Hall or Dean of Students, 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 collection manager, the business office, or the Dean of Students in Savitz Hall.

Additional Information for CGCE Students

Listed below are some of the key offices/resources about which CGCE students should be aware.

Financial Aid, Registrar, and Bursar

OFFICE OF FINANCIAL AID
Luis Tavarez, Director
Savitz Hall
856.256.4276
tavarez@rowan.edu
Main phone: 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

Students seeking assistance must file the **Free Application for Federal Student Aid** (FAFSA). The FAFSA is used to determine eligibility for assistance from the federal and New Jersey state financial aid programs. The FAFSA is available on the web at wwww.fafsa.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.

Federal Return of Title IV Funds Policy

Students who receive federal financial aid - including loans - and withdraw or drop out of all of their classes on or before completing 60% of the semester will have their financial aid awards prorated. For more information, visit the financial aid office or our web site: www.rowan.edu/financialaid/application/withdrawal or www.rowan.edu/financialaid/withdrawal.html

OFFICE OF THE REGISTRAR

Muriel Frierson, Registrar
Savitz Hall
856.256.4367
frierson@rowan.edu
Main phone: 856.256.4350
registrar@rowan.edu

As a member of the Division of Academic Affairs, the Office of the Registrar performs the essential roles of supporting, facilitating, and promoting the academic mission of Rowan University by providing information about and services related to academic programs and degree requirements, registration and enrollment verification, course scheduling and maintenance, and maintenance of permanent academic records for students, faculty, staff and external constituencies in timely, accurate, confidential and supportive manner in accordance with University policy, state and federal law. The Office is charged with ensuring adherence to academic policy, preserving academic integrity, safeguarding the security of academic records, and providing accessible service to our constituents by effectively and graciously dispensing, sharing, and applying knowledge.

The Registrar's Office seeks to:

- Create and maintain accurate student academic records in compliance with applicable policies, laws and regulations.
- Ensure continuously satisfactory service through good management practices and responsible stewardship and utilization of resources.
- Establish daily business practices which reflect the most advanced technological methods available to improve customer service.
- Make student data available in easily accessible formats to departments for administrative purposes and research.
- Interpret University and governmental policies to faculty, staff, students, parents and the general public.
- Assess the effectiveness of services provided to ensure equitable and ethical treatment of all customers.

OFFICE OF THE BURSAR

John Baglio, Administrative Analyst
Savitz Hall
856.256.4165
baglio@rowan.edu
Main phone: 856.256.4150
bursar@rowan.edu

The Bursar's Office manages these major University functions:

- **Cashiering** - posting payments, providing customer payment information, account inquiries
- **Billing and Collections** - send bills & reminder notices, delinquent student accounts, collection agency management
- **Student Aid Disbursement** - apply financial assistance from all sources to student accounts; disburse excess aid to students
- **RowanCard** - daily management of boro bucks, processing of meal plans

Frequently Asked Questions

- For answers to frequently asked questions about graduate study please visit: www.rowan.edu/cgce/faqs .

Division of Student Life

- Detailed information about the offices and services within the Division of Student Life at Rowan University are available in the Rowan Student Handbook (www.rowan.edu/studentaffairs/handbook .)

Richard L. Jones
Vice President for Student Life 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 (Basic Skills Testing/Tutoring, Disability Resources and Veterans Affairs) Career Management Center (CMC), Counseling and Psychological Services, Dean of Students, Dining Services, EOF/MAP, Community Standards and Commuter Services, Multicultural Affairs, Recreation Center, Residential Learning and University Housing, Service Learning, Volunteerism & Community Engagement, 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 of Academic Success Center and Disability Resources
Savitz Hall, 3rd floor
856.256.4234
woodruff@rowan.edu
Main phone: 856.256.4259
successcenter@rowan.edu

ROWAN UNIVERSITY CAMDEN CAMPUS
Donavan D. McCargo, Ed.D.
Director of Student Services & EOF
Rowan University (Camden Campus)
856.361.2900
mccargo@rowan.edu
Main phone: 856.361.2900
Camden@rowan.edu

CAREER MANAGEMENT CENTER (CMC)
Lizziel Sullivan-Williams
Director of Career Management Center
Savitz Hall
856.256.4456
sullivanl@rowan.edu
Main phone: 856.256.4456
careers@rowan.edu

COUNSELING AND PSYCHOLOGICAL SERVICES CENTER
David F. Rubenstein, Ph.D.
Senior Director for Student Wellness and Director;
Counseling and Psychological Services
Savitz Hall, 3rd floor
856.256.4222 for questions or to schedule an appointment
www.rowan.edu/counseling

HEALTH CENTER
Scott Woodside, BSN
Director, Student Health Services
Linden Hall-1st floor
856.256.4333 for questions or to schedule an appointment
Fax 856.256.4427
www.rowan.edu/health

HEALTHY CAMPUS INITIATIVES
Allie Pearce, MA
Savitz Hall
856-256-5715
www.rowan.edu/hci

COMMUNITY STANDARDS AND COMMUTER SERVICES
Joseph Mulligan
Associate Dean for Civic Involvement
Chamberlain Student Center
856.256.4242
mulligan@rowan.edu

MULTICULTURAL AFFAIRS
John T. Mills
Assistant Director of Multicultural Affairs
Student Center, Room 214
856.256.4448
millsj@rowan.edu

RECREATION CENTER
Tina Pinocci
Assistant Vice President, Campus Recreation and Student Activities
856.256.4900
pinocci@rowan.edu

SERVICE LEARNING, VOLUNTEERISM & COMMUNITY ENGAGEMENT
Andrew Perrone, Assistant Director
Chamberlain Student Center, Room 208
856.256.4597
perrone@rowan.edu

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

STUDENT CENTER
Tina Pinocci
Assistant Vice President
Campus Recreation and Student Activities Chamberlain Student Center
856.256.4604
pinocci@rowan.edu

Division of Academic Affairs
James Newell
Provost
856.256.4108
newell@rowan.edu

Roberta Harvey
Associate Provost for Academic Affairs
856.256.4011
harvey@rowan.edu

Rowan University is an institution of higher learning in which priority is given to the intellectual development of its students. Intellectual development is held to be important for its own sake, essential as part of preparation for future careers and significant for the personal growth of students. Further, the University is committed to an academic tradition that encourages research and provides public service as a function of its social responsibility. All academic programs offered at Rowan University have broad perspectives affecting the mind, body and spirit of its students. Intellectual pursuits often are matched by experiential enrichment field experience, work study and personal involvement. Students at Rowan University are expected to master bodies of knowledge. This mastery is typically accomplished by means of subject-matter specialization in combination with a required general education program strongly based in the liberal arts and sciences. Academic excellence is core to all programs at Rowan University. Our faculty has the requisite expertise to assure the currency and high quality of the curriculum. The academic administrators and professional staff are selected according to their experience and expertise in curriculum, policy, and leadership. Support staff is essential to a well-functioning division that aims to promote student learning. Academic programs at Rowan University are reviewed, enhanced and/or modified regularly by the faculty to assure excellence and currency. Student learning outcomes assessment provide information to make changes where needed in the curriculum or to assure the excellence of programs. We seek accreditation or external review for academic programs to demonstrate quality. The academic program is divided into three main offerings: those courses which constitute the major program of study, general education courses which assure breadth and depth of the liberally educated mind, and free electives which provide students opportunities to explore various intellectual areas of curiosity. 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, Library Services, technology delivery and planning and the Rowan University Camden Campus. The Deans of the Colleges of Business, Communication, Education, Engineering, Fine & Performing Arts, Liberal Arts & Sciences, Professional & Continuing Education and the Library report to the Provost. The associate provosts for Academic Affairs, Faculty Affairs, Information Resources; the assistant provosts/directors of the Graduate School, Research, Rowan at Camden and the directors of Financial Aid, Student Information Services and Admissions also report to the Provost. The Provost reports directly to the President and is second in the chain of command at the University.

RESEARCH
Shreekanth Mandayam
Associate Provost for Research
Bole Hall Annex
856.256.5150
mandayam@rowan.edu

The mission of the Office of Research, overseen by the Associate Provost for Research (APR), is to work with faculty and students to develop research, scholarly, and creative activities at Rowan University. The Office includes the Office of Sponsored Programs (OSP) and conducts research compliance activities by staffing the Institutional Review Board for Human Subject Research (IRB), the Institutional Animal Care and Use Committee (IACUC), and the Institutional Biosafety Committee (IBC). The Office also works to advocate the development of intellectual property and the licensing and commercialization of technology developed by faculty and students, and it staffs the Intellectual Property Committee. The Office promotes research and scholarly activity through advocacy, information distribution, and collaboration with the academic colleges, the administration, and University Senate, and various campus committees.

INFORMATION RESOURCES
Anthony Mordosky
Associate Provost
Memorial Hall
856.256.4401
mordosky@rowan.edu

The Division of Information Resources provides leadership, planning, coordination, and support services for the information technology infrastructure of the university and its satellite campus. Information Resources is committed to providing students, faculty, and staff with universal access to library and information technology resources that support and enhance academic and administrative programs and promote student-centeredness, excellence in instructional practice,

quality management, and efficiency and integrity of operations. This division consists of the Office of the Associate Provost for Information Resources, Instructional Technology, Enterprise Information Services and Network and System Services Units.

DIVISION OF STRATEGIC ENROLLMENT MANAGEMENT
Jeff Hand
Associate Provost for Strategic Enrollment Management
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 Center for Academic Advising and Exploration, the International Center, and the Office of Academic Transition Programs. 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.

University Advising Center (UAC)

Carol Eigenbrot
Coordinator
Savitz Hall
856.256.4459

The University Advising Center (formerly the Center for Academic Advising & Exploration, CAAdE) is 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. The University Advising Center serves select undergraduate students in the College of Science & Math and the College of Humanities & Social Sciences, which includes the Exploratory Studies (undeclared) population. Additionally, the UAC assists students throughout the University who are seeking to transition from one college or major to another.

College of Education Advising Center
Nicholas Schmelz
Coordinator
James Hall, Second Floor
856.256.4420

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

Rowan University at Camden
Tyrone W. McCombs
Assistant Provost and Dean
mccombst@rowan.edu
Rowan University at Camden
856.361-2900

Rowan University at Camden is conveniently located in the University District of Camden, New Jersey. The campus currently offers graduate and undergraduate programs. The Campus has experienced positive growth from the early beginnings as Glassboro State Urban Center, providing training for local teachers and assistants, to a growing branch campus with academic majors, graduate programs, an English as a Second Language program, an Educational Opportunity Fund (EOF) program, and a variety of additional academic and student services.

All courses at Rowan at Camden are taught by members of the university faculty who take pride in teaching and who make student learning their top priority. The academic schedule accommodates the needs of both traditional and nontraditional students. Rowan at Camden is also proud to offer on-site childcare in the evening for students with children. The University provides a daily shuttle bus which travels between our Camden and Glassboro campuses to provide both an urban and suburban university experience for all Rowan students.

Undergraduate students may enroll in Sociology, Law and Justice and Elementary Education majors. In addition to these majors the campus also has an intensive academic English as a Second Language Program (ESL). The IELP at Rowan at Camden has a forty year history. Committed to providing international students, immigrants and newcomers access to

higher education, the IELP integrates academic content with language competencies so students are well-rounded in their preparation for university study.

Rowan at Camden currently offers three graduate programs:

The Ed.D. program in Educational Leadership at Rowan at Camden prepares educational professionals to serve in leadership roles within our educational systems. The Ed. D. program is an executive style part-time program offered in an accelerated face-to-face format. The focus of the program is on educational issues in P-16 settings.

The Certificate of Graduate Studies (COGS) English as a Second Language (ESL) Education is a non-degree graduate program leading to a New Jersey K-12 certification in English as a Second Language.

The Master of Science in Teaching Program is also available at Rowan at Camden. Throughout the program, students are enrolled in courses which provide training for teachers in an urban school setting.

Rowan at Camden also has many programs to provide support and services to other members of our neighboring community. During the day we operate a preschool funded by the Camden Board of Education and the NJ Department of Education for 3- and 4-year old children who are residents of the City. For over 25 years, the campus has been the home of CHAMP/GEAR UP, a program providing pre-college services to youth in high school. In addition, the campus also provides an Upward Bound program for high school English Language Learners. As an active member of the Camden community, Rowan University leads many initiatives to provide access to higher education and educational programs for our neighbors.

As we look toward the future, we plan to expand the campus. We will increase the access to higher education for our undergraduate and graduate populations through new programs of study and academic majors.

Library Services

Bruce A. Whitham
Dean
Keith and Shirley Campbell Library
856.256.4800
whitham@rowan.edu

Library Services supports the University's educational and research mission through the judicious selection, management, promotion, and training in the use of information resources and services. Library Services are provided through the virtual environment of the Internet and in library and archival spaces conducive to academic and social engagement, and to the promotion of intellectual curiosity.

Keith and Shirley Campbell Library

The Keith and Shirley Campbell Library is the main library on campus. Opened in 1993, the 118,000 sq. ft. facility, houses nearly 400,000 books, multimedia materials, periodicals, newspapers, and special collections in a variety of formats. Campbell Library provides orientations, tours, and workshops throughout the academic year, including the summer sessions. A 30-workstation lab is available for 'hands on' library instruction and labs. Seminar and group study rooms are available for use by students. Campbell Library also houses a state-of-the-art media center where computer-based skills are learned in structured classroom presentations and through informal collaborative learning opportunities.

Through a collaborative effort of Library and IT Services, personal computers and media equipment may be checked out at the Campbell Circulation Desk for use by the current Rowan University community.

Government Documents

Rowan University participates in the U.S. Federal Documents Depository program and maintains a selective depository, located on the second floor of Campbell Library. Library Services also collects paper and virtual materials at the city, state, and international government level as well as those of non-governmental organizations; and provides research assistance and help in obtaining desired documents.

Archives and Special Collections

University Archives and Special Collections are housed in the Stewart Room, located in the Campbell Library. Named in memory of Frank H. Stewart, a prominent New Jersey industrialist who donated an extensive and valuable collection of New Jersey historical documents and artifacts, the Stewart Room 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 Music Library at Wilson Hall

Located in Wilson Hall, the home of the Music and Performing Arts Department, the Music Library maintains unique collections and offers specialized information services and instruction for students and faculty. The Music Library houses significant collections of scores, CDs, and recordings. In addition, electronic access to the Naxos Music Library, Grove Music Online, and Music American, among others, is available through the Library Services Web Site. Listening equipment and specialized labs are also available in the Music Library.

Virtual Library Services

Most of Rowan University's educational and research resources are now available to current Rowan users when and from wherever needed. Research and Instructional Services staff are available for extended hours through the "Ask Us!" and "Virtual Reference Online" services. Hundreds of databases, electronic resources, research guides, and search tools are accessible, in addition to thousands of full-text journal titles and other unique and specialized resources.

Academic Policies

Every student pursuing studies at Rowan University is subject to the university's policies and procedures as outlined in the official Rowan Student Handbook available online at www.rowan.edu/studentaffairs/handbook.html .

The Rowan University Student Handbook provides an overview of policies and practices governing undergraduate, post-baccalaureate, and graduate work at the institution. The University expects students to access and review this Handbook in order to remain informed of rules, regulations, policies and practices in the Rowan catalog or issued by the faculty, administration and the Rowan University Board of Trustees.

CGCE students, CGCE Extension students (those in online, hybrid, off-site, and/or accelerated programs), and non-CGCE students who are enrolled in CGCE Extension courses (those with a letter appearing after the section number in the Rowan Section Tally) should be aware that they may be required to follow slightly different policies, practices and/or deadlines. (Due to accelerated scheduling, this is especially true with CGCE Admissions and registration as well as dropping/adding/withdrawing from classes/programs.)

Should you ever have any questions about CGCE, or the policies and practices that affect you as a CGCE student, please consult www.rowancgce.com/policies or contact cgceacademicservices@rowan.edu.

Rohrer College of Business

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Introduction and Mission

The Rohrer College of Business of Rowan University empowers its students to compete and succeed responsibly in their careers.

- The Rohrer College of Business Faculty makes effective teaching that engages students in the learning process its highest priority supported by relevant scholarship and appropriate levels of service.
- Rowan University's undergraduate business programs are grounded in liberal arts, focus on excellent business practices, and offer students opportunities for experience-based learning.
- Rowan University's graduate business programs provide contemporary graduate business education to professionals of diverse fields and academic backgrounds, and accentuate knowledge and skills required for career advancement.
- In partnership with the Center for Innovation and Entrepreneurship, the Rohrer College of Business promotes entrepreneurship throughout the University and in the regional community.
- The Rohrer College of Business will be responsive to emerging developments in industry and business education.

Accreditation

The Rowan University Rohrer College of Business M.B.A. program is accredited by AACSB International - The Association to Advance Collegiate Schools of Business. Awarded to less than 5% of business programs worldwide, AACSB accreditation assures quality and promotes excellence and continuous improvement in undergraduate and graduate education for business administration and accounting. Our college is just one of seven AACSB accredited schools in the nation to have their MIS Program also accredited by ABET, the Accredited Board for Engineering and Technology, Inc.

Departments

The College of Business houses the following academic departments: Accounting and Finance, Management and Entrepreneurship, and Marketing and Business Information Systems. (Not all departments offer programs through the College of Graduate & Continuing Education.)

Department of Accounting and Finance
George Romeo, Ph. D., Chair
Edgar F. Bunce Hall
856.256-4384
romeo@rowan.edu

Department of Management and Entrepreneurship
Dilip Mirchandani, Ph.D., Chair
Edgar F. Bunce Hall
856.256-4048
mirchandani@rowan.edu

Department of Marketing and Business Information Systems
Phillip Lewis, Ph.D., Chair
Edgar F. Bunce Hall
856.256-4298
lewisph@rowan.edu

Programs Offered

All programs offered are listed below in order of degree/program type and then in alphabetical order by program name. Details about each program are then listed within the catalog in the same order.

MASTER'S DEGREE

Program Name	Format/location	Program/Major Codes	Avail FT/PT	Total credits
Master of Business Administration (no specialization)	100% online and accelerated.	.COMBA-BUS/G501	Part-time	36
Master of Business Administration	Face-to-face at Glassboro campus with some accelerated/online course options	MBA-BUS/G501	Both	36

CERTIFICATES OF ADVANCED GRADUATE STUDY (NON-DEGREE)

Program Name	Format/location	Program/Major Codes	Avail FT/PT	Total credits
Certificate of Advanced Graduate Study in Accounting	Face-to-face at Glassboro campus	CAG-BUSACCT/G551	Part-time	9
Certificate of Advanced Graduate Study in Finance	Face-to-face at Glassboro campus	CAG-BUSFIN/G553	Part-time	9
Certificate of Advanced Graduate Study in Management	Face-to-face at Glassboro campus with some accelerated/online course options	CAG-BUSMANG/G554	Part-time	9
Certificate of Advanced Graduate Study in Management Information Systems (MIS)	Face-to-face at Glassboro campus with some accelerated/online course options	CAG-BUSMIS/G556	Part-time	9
Certificate of Advanced Graduate Study in Marketing	Face-to-face at Glassboro campus	CAG-BUSMARK/G555	Part-time	9

CERTIFICATES OF GRADUATE STUDY (NON-DEGREE)

Program Name	Format/location	Program/Major Codes	Avail FT/PT	Total credits
Certificate of Graduate Study in Business	Face-to-face on Glassboro campus with some accelerated/online course options	COG-BUSINESS/G133	Both	15
Certificate of Graduate Study in Management Information Systems (MIS)	Face-to-face on Glassboro campus with some accelerated/online course options	COG-MIS/G131	Part-time	12

A note about mode of delivery: We are always doing all we can to offer our courses and programs to students in the ways that best meet their needs – whether online, off-site, in a blended/hybrid format, accelerated, or some combination of these. For the most up-to-date information regarding mode of delivery options for your program of interest, please visit www.rowancgce.com/programs .

Admissions

For the most up-to-date information regarding admission requirements, entry points, and application deadlines, please visit www.rowancgce.com/programs . Click on your program of interest to be connected to program and admission details.

Master's Degrees

Master of Business Administration Overview

The Master of Business Administration (M.B.A.) program at Rowan University provides contemporary graduate business education to professionals from diverse fields and academic backgrounds. The program prepares students as team leaders and team players with effective interpersonal, oral, and written communication and group process skills. The M.B.A. curriculum emphasizes critical thinking, quantitative analysis and computing applications, and the technological and international nature of business.

The Rohrer College of Business M.B.A. program offers small class sizes with an average student/faculty ratio of 19 to 1. The program attracts graduates from business, sciences, engineering and other programs, whose careers are leading them to positions of increasing responsibility in business or industry. Graduates are prepared to assume managerial positions in commercial, not-for-profit, and governmental organizations/agencies.

The M.B.A. program consists of 12 graduate classes with nine required and three elective courses. The three elective courses allow the individual student to tailor the academic program to meet his/her specific career development needs. Prospective students who do not have the required foundation courses may choose to apply directly to the M.B.A. program, and complete their foundation courses while enrolled as a graduate student.

Rowan's Master of Business Administration (M.B.A.) program is especially designed to accommodate both full-time students and full-time employees. The program is personal, pragmatic and progressive. Classes are conveniently scheduled in the evening, on Saturdays, and online to accommodate demanding work schedules. Rowan's reputation makes the reasonable cost of a Rowan M.B.A. a wise investment.

Foundation Courses

Eligible applicants must have successfully completed the following undergraduate foundation courses at an accredited institution. (Foundation courses FC-6 and FC-7 must be completed at a 4-year institution to fulfill foundation course requirements. FC-1 through FC-5 may be taken at a junior/community college.) During the admissions process, the M.B.A. Academic Advisor will determine foundation course equivalencies and how any unfinished undergraduate foundation courses can be scheduled concurrently with graduate enrollment. If applicable, official notification of any unfinished foundation courses will be included in the applicant's official admission decision letter from Rowan University.

FC-1. Calculus Techniques & Applications (3.0 s.h.)

FC-2. Statistics I (3.0 s.h.)

FC-3. Foundations of Accounting (3.0 s.h.) (Or Principles of Accounting I & II)

FC-4. Principles of Econ: A Survey (3.0 s.h.) (Or Microeconomics & Macroeconomics)

FC-5. Principles of Marketing (3.0 s.h.)

FC-6. Principles of Finance (3.0 s.h.)

FC-7. Operations Management (3.0 s.h.)

M.B.A. Specializations

The M.B.A. program offers the degree with the following specialization options.

- No specialization
- Accounting
- Finance
- Management
- Management Information Systems (MIS)
- Marketing
- Supply Chain Logistical Systems

Program Requirements

Required Courses 27 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
ACC 03500	Managerial Accounting	3
FIN 04500	Financial Decision Making	3
MGT 01510	Professional, Legal and Managerial Responsibilities	3
MGT 06500	Designing, Developing, & Leading High Performance Organizations	3
MGT 06502	International Business and Society	3
MGT 06629	Managing Organizational Strategy	3
MGT 07500	Managerial Decision Making Tools	3

MIS 02500	Issues in Management Information Systems	3
MKT 09500	Marketing Management	3

Required Specialization Courses (take the place of any elective courses)

Accounting 9 s.h.

Choose 9 s.h. from the following options

Course #	Course Title	S.H.
ACC 03502	Advanced Managerial Accounting	3
ACC 03504	Seminar in Auditing	3
ACC 03507	Government and Non-for-Profit Accounting	3
ACC 03509	Intermediate Financial Accounting	3
ACC 03510	Financial Statement Analysis	3
ACC 03511	Federal Taxation	3
BUS 01600	Special Topics in Business Administration (Accounting topic)	3
FIN 04512	Capital Budgeting	3

Finance 9 s.h.

Choose 9 s.h. from the following options

Course #	Course Title	S.H.
BUS 01600	Special Topics in Business Administration (finance topic)	3
FIN 04512	Capital Budgeting	3
FIN 04516	Issues in Finance	3
FIN 04518	Financial Engineering	3
FIN 04600	Investment/Portfolio Analysis	3
FIN 04505	Advanced Financial Planning	3

Management 9 s.h.

Choose 9 s.h. from the following options

Course #	Course Title	S.H.
BUS 01600	Special Topics in Business Administration (management topic)	3
ENT 06505	Entrepreneurship and Innovation	3
ENT 06506	Corporate Entrepreneurship and New Venture Development	3
ENT 06599	Special Topics in Entrepreneurship	3
HRM 06598	Special Topics in Human Resources Management	3
HRM 06605	Strategic Human Resource Management	3
MGT 06501	Advanced Operations Management and Strategy	3
MGT 06503	Organization Development	3
MGT 06520	Global Leadership and Organization Culture	3
MGT 06599	Special Topics in Management	3
MGT 06601	Strategic Planning for Operating Managers	3
MGT 06603	Business Processes and Improvement	3
MGT 07600	Business Forecasting	3

Management Information Systems 9 s.h.

Choose 9 s.h. from the following options

Course #	Course Title	S.H.
MIS 02510	ERP Systems for Management	3
MIS 02515	Electronic Commerce	3
MIS 02522	Systems Analysis and Design	3
MIS 02525	Project Management	3
MIS 02528	Business Application Design and Development	3
MIS 02599	Special Topics in MIS	3
MIS 02538	Database Design	3

Marketing 9 s.h.

Choose 9 s.h. from the following options

Course #	Course Title	S.H.
BUS 01600	Special Topics in Business Administration (Marketing topic)	3
MKT 09501	Consumer Analysis	3
MKT 09502	Marketing Research	3
MKT 09503	Marketing Communication and Promotion	3
MKT 09575	Introduction to Logistics and Supply Chain Management	3

MKT 09599	Special Topics in Marketing	3
MKT 09600	International Marketing	3
MKT 09605	Competitive Advantage Through Supply Chain Management	3

Supply Chain and Logistics 9 s.h.

Course #	Course Title	S.H.
MKT 09575	Introduction to Logistics and Supply Chain Management	3
MKT 09605	Competitive Advantage Through Supply Chain Management	3

AND

Choose one (1) from the following options. 3 s.h.

Course #	Course Title	S.H.
MGT 06603	Business Processes and Improvement	3
MIS 02522	Systems Analysis and Design	3

No Specialization Courses (General) 9 s.h.

Choose three (3) from the following options.

(Not all electives will be offered every year. There may be options not included in the list below.)

Course #	Course Title	S.H.
ACC 03502	Advanced Managerial Accounting	3
ACC 03504	Seminar in Auditing	3
ACC 03507	Government & Non-for-Profit Accounting	3
ACC 03509	Intermediate Financial Accounting	3
ACC 03510	Financial Statement Analysis	3
ACC 03511	Federal Taxation	3
BUS 01600	Special Topics in Business Administration	3
ENT 06505	Entrepreneurship and Innovation	3
ENT 06506	Corporate Entrepreneurship and New Venture Development	3
FIN 04505	Advanced Financial Planning	3
FIN 04512	Capital Budgeting	3
FIN 04516	Issues in Finance	3
FIN 04518	Financial Engineering	3
FIN 04600	Investment & Portfolio Analysis	3
HRM 06605	Strategic Human Resource Management	3
HRM 06598	Special Topics in Human Resource Management	3
MGT 06501	Advanced Operations Management & Strategy	3
MGT 06503	Organization Development	3
MGT 06520	Global Leadership and Organization Culture	3
MGT 06601	Strategic Planning for Operating Managers	3
MGT 06603	Business Processes and Improvement	3
MGT 06599	Special Topics in Management	3
MGT 07600	Business Forecasting	3
MIS 02510	ERP Systems for Management	3
MIS 02515	Electronic Commerce	3
MIS 02522	Systems Analysis and Design	3
MIS 02525	Project Management	3
MIS 02528	Business Application Design and Development	3
MIS 02538	Database Design	3
MIS 02599	Special Topics in Management Information Systems	3
MKT 09501	Consumer Analysis	3
MKT 09502	Marketing Research	3
MKT 09503	Marketing Communication and Promotion	3
MKT 09575	Introduction to Logistics and Supply Chain Management	3
MKT 09600	International Marketing	3
MKT 09605	Competitive Advantage Through Supply Chain Management	3

Total Required Credits for the Program 36 s.h.

Foundation Courses

See M.B.A. Overview section.

Graduation/Exit, Benchmark, and Thesis Requirements
None

Program Coordinator/Advisor Contact Information
James C. Jordan, M.B.A., M.B.A. Program Director
Edgar F. Bunce Hall
856.256.5220
jordanja@rowan.edu

Certificates of Advanced Graduate Study (Non-degree)

Certificate of Advanced Graduate Study (Post-M.B.A. CAGS) Overview

Completion of a Certificate of Advanced Graduate Study will afford Rowan M.B.A. alumni as well as M.B.A. graduates of other universities the opportunity to complete an area of specialization or complete a new specialization. The Post M.B.A. CAGS provides M.B.A. graduates an opportunity to prepare themselves for opportunities in a rapidly changing workplace by enrolling in specializations related to their current or expected career paths.

Specializations
The Post M.B.A. CAGS program offers the following specialization options.

- Accounting
- Finance
- Management
- Management Information Systems (MIS)
- Marketing

Certificate of Advanced Graduate Study in Accounting (CAGS)

See "Certificate of Advanced Graduate Study Post-M.B.A. CAGS Overview."

Program Requirements

Required Courses 9 s.h.
(s.h.: semester hours/credit hours)

Choose three (3) from the following options.

Course #	Course Title	S.H.
ACC 03502	Advanced Managerial Accounting	3
ACC 03504	Seminar in Auditing	3
ACC 03507	Government and Non-for-Profit Accounting	3
ACC 03509	Intermediate Financial Accounting	3
ACC 03510	Financial Statement Analysis	3
ACC 03511	Federal Taxation	3
BUS 01600	Special Topics in Business Administration (accounting topic)	3
FIN 04512	Capital Budgeting	3

Total Required Credits for the Program 9 s.h.

Foundation Courses
None

Graduation/Exit, Benchmark, and Thesis Requirements
None

Program Coordinator/Advisor Contact Information
James C. Jordan, M.B.A., M.B.A. Program Director
Edgar F. Bunce Hall
856.256.5220
jordanja@rowan.edu

Certificate of Advanced Graduate Study in Finance (CAGS)

See "Certificate of Advanced Graduate Study Post-M.B.A. CAGS Overview."

Required Courses 9 s.h.

(s.h.: semester hours/credit hours)

Choose three (3) from the following options.

Course #	Course Title	S.H.
BUS 01600	Special Topics in Business Administration (finance topic)	3
FIN 04505	Advanced Financial Planning	3
FIN 04512	Capital Budgeting	3
FIN 04516	Issues in Finance	3
FIN 04518	Financial Engineering	3
FIN 04600	Investment/Portfolio Analysis	3

Total Required Credits for the Program 9 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and Thesis Requirements

None

Program Coordinator/Advisor Contact Information
James C. Jordan, M.B.A., M.B.A. Program Director
Edgar F. Bunce Hall
856.256.5220
jordanja@rowan.edu

Certificate of Advanced Graduate Study in Management (CAGS)

See "Certificate of Advanced Graduate Study Post-M.B.A. CAGS Overview."

Program Requirements

Required Courses 9 s.h.

(s.h.: semester hours/credit hours)

Choose three (3) from the following options.

Course #	Course Title	S.H.
BUS 01600	Special Topics in Business Administration (management topic)	3
ENT 06505	Entrepreneurship and Innovation	3
ENT 06506	Corporate Entrepreneurship and New Venture Development	3
ENT 06599	Special Topics in Entrepreneurship	3
HRM 06598	Special Topics in Human Resources Management	3
HRM 06605	Strategic Human Resource Management	3
MGT 06501	Advanced Operations Management and Strategy	3
MGT 06503	Organization Development	3
MGT 06520	Global Leadership and Organization Culture	3
MGT 06599	Special Topics in Management	3
MGT 06601	Strategic Planning for Operating Managers	3
MGT 06603	Business Processes and Improvement	3
MGT 07600	Business Forecasting	3

Total Required Credits for the Program 9 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and Thesis Requirements
None

Program Coordinator/Advisor Contact Information
James C. Jordan, M.B.A., M.B.A. Program Director
Edgar F. Bunce Hall
856.256.5220
jordanja@rowan.edu

Certificate of Advanced Graduate Study in Management Information Systems/MIS (CAGS)

See "Certificate of Advanced Graduate Study Post-M.B.A. CAGS Overview."

Program Requirements

Required Courses 9 s.h.
(s.h.: semester hours/credit hours)

Choose three (3) from the following options.

Course #	Course Title	S.H.
MIS 02510	ERP Systems for Management	3
MIS 02515	Electronic Commerce	3
MIS 02522	Systems Analysis and Design	3
MIS 02525	Project Management	3
MIS 02528	Business Application Design and Development	3
MIS 02599	Special Topics in MIS	3
MIS 02538	Database Design	3

Total Required Credits for the Program 9 s.h.

Foundation Courses
None

Graduation/Exit, Benchmark, and Thesis Requirements
None

Program Coordinator/Advisor Contact Information
James C. Jordan, M.B.A., M.B.A. Program Director
Edgar F. Bunce Hall
856.256.5220
jordanja@rowan.edu

Certificate of Advanced Graduate Study in Marketing (CAGS)

See "Certificate of Advanced Graduate Study Post-M.B.A. CAGS Overview."

Program Requirements

Required Courses 9 s.h.
(s.h.: semester hours/credit hours)

Choose three (3) from the following options.

Course #	Course Title	S.H.
BUS 01600	Special Topics in Business Administration (marketing topic)	3
MKT 09501	Consumer Analysis	3

MKT 09502	Marketing Research	3
MKT 09503	Marketing Communication and Promotion	3
MKT 09575	Introduction to Logistics and Supply Chain Management	3
MKT 09599	Special Topics in Marketing	3
MKT 09600	International Marketing	3
MKT 09605	Competitive Advantage Through Supply Chain Management	3

Total Required Credits for the Program 9 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and Thesis Requirements

None

Program Coordinator/Advisor Contact Information
James C. Jordan, M.B.A., M.B.A. Program Director
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856.256.5220
jordanja@rowan.edu

Certificates of Graduate Study (Non-degree)

Certificate of Graduate Study in Business (COGS)

The Business COGS provides graduate course exposure to students who are ultimately interested in pursuing the M.B.A. degree. There are many potential graduate students who are considering the M.B.A. degree. However, they hesitate investing the time and energy required to complete the GMAT exam (a requirement for admission to Rowan's M.B.A. program) without fully understanding the nature of the coursework. The purpose of the COGS in Business is to provide an opportunity for aspirant M.B.A. applicants to take several classes before they apply to the M.B.A. Program. Students who wish to later pursue a Rohrer M.B.A. may have all COGS credits transferred into the Rohrer College of Business M.B.A. program.

GMAT Waiver: Students who earn a 3.9 or higher cumulative GPA at the completion of all 5 COGS in Business courses will have the GMAT requirement waived should they decide to apply to the MBA program.

Program Requirements

Required Courses 15 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
ACC 03500	Managerial Accounting	3
MGT 01510	Professional, Legal and Managerial Responsibilities	3
MGT 06500	Designing Developing & Leading High Performance Organizations	3
MIS 02500	Issues in Management Information Systems	3
MKT 09500	Marketing Management	3

Total Required Credits for the Program 15 s.h.

Foundation Courses

Eligible applicants must have successfully completed the following undergraduate foundation courses at an accredited institution. During the admission process, the M.B.A. Academic Advisor will determine foundation course equivalencies. If applicable, official notification of any unfinished foundation courses will be included in the applicant's official decision letter from Rowan University.

FC-1. Foundations of Accounting (or Principles of Accounting I & II)

FC-2. Principles of Marketing

Students admitted without having completed these foundation courses may complete them while enrolled in the COGS in Business program. The foundation courses must be completed before the corresponding course for which the foundation course is a pre-requisite and do not count toward the 15 required semester hours for the program.

Graduation/Exit, Benchmark, and Thesis Requirements

None

Program Coordinator/Advisor Contact Information
James C. Jordan, M.B.A., M.B.A. Program Director
Edgar F. Bunce Hall
856.256.5220
jordanja@rowan.edu

Certificate of Graduate Study in Management Information Systems/MIS (COGS)

The MIS COGS will enhance a student's preparedness to assume jobs in a world of rapidly changing technology by preparing them to develop business solutions through the use of information and technology resources. Students will be experienced in dealing with technological issues, understand the role of humans in developing technology-based solutions, and have demonstrated ability to manage technology-related projects. Students may also choose to begin earning their M.B.A. by first completing the COGS in MIS.

Program Requirements

Required Courses 3 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
MIS 02500	Issues in Management Information Systems	3

Elective Courses 9 s.h.

Choose three (3) from the following options.

Course #	Course Title	S.H.
MIS 02510	ERP Systems for Management	3
MIS 02515	Electronic Commerce	3
MIS 02522	Systems Analysis and Design	3
MIS 02525	Project Management	3
MIS 02528	Business Application Design and Development	3
MIS 02599	Special Topics in MIS	3
MIS 02538	Database Design	3

Total Required Credits for the Program 12 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and Thesis Requirements

None

Program Coordinator/Advisor Contact Information
James C. Jordan, M.B.A., M.B.A. Program Director
Edgar F. Bunce Hall
856.256.5220
jordanja@rowan.edu

College of Communication and Creative Arts

Lorin Basden Arnold, Ph.D., Dean
Bozorth Hall
856.256.4340
arnold@rowan.edu

Julie Haynes, Ph.D., Associate Dean
Bozorth Hall
856.256.4337
haynes@rowan.edu

Introduction and Mission

The College of Communication and Creative Arts at Rowan University blends the theoretical and the practical, building upon an expansive base of general education courses that serve to develop liberalized perspectives in all areas.

Graduate programs in the College of Communication and Creative Arts offer students the opportunity to expand and hone their skills as writers and problem-solvers for the Information Age. With a mix of theoretically informed and practice-driven classes, students acquire important research and writing techniques that advance their professional and personal goals in an increasingly complex and diverse society.

The College of Communication and Creative Arts graduate courses are designed to provide students with challenging and rewarding activities that enhance their professional development. The faculty in the College of Communication and Creative Arts graduate programs is committed to produce an articulate and informed citizenry. Opportunities exist for graduate students to learn more about cutting-edge technology and the ethical practices of communication practitioners, as well as work with professional publications. In addition, numerous outreach programs provide students with practical application that relates to their courses of study.

Students who graduate from the College of Communication and Creative Arts master's degree programs are leaders in the communication industry, attend doctoral or M.F.A. programs to further their studies, or become successful freelance authors and public relations practitioners.

Departments

The College of Communication and Creative Arts houses the following academic departments: Art, Communication Studies, Journalism, Public Relations/Advertising, Radio/Television/Film, and Writing Arts. (Not all departments offer programs through the College of Graduate & Continuing Education.)

Department of Art
Susan Bowman, Chair
Westby Hall
856.256.4019
bowman@rowan.edu

Department of Communication Studies
Joy Cypher, Chair
Hawthorn Hall
856.256.4293
cypher@rowan.edu

Department of Journalism
Claudia Cuddy, Chair
Bozorth Hall
856.256.5414
cuddy@rowan.edu

Department of Public Relations/Advertising
Suzanne FitzGerald, Chair
Bozorth Hall
856.256.4265
sparks@rowan.edu

Department of Radio/Television/Film
Keith Brand, Chair
Bozorth Hall
856.256.4006
brandk@rowan.edu

Department of Writing Arts
Sanford Tweedie, Chair
Hawthorn Hall
856.256.5222
tweedie@rowan.edu

Programs Offered

All programs offered are listed below in order of degree/program type and then in alphabetical order by program name. Details about each program are then listed within the catalog in the same order.

MASTER'S DEGREE

Program Name	Format/location	Program/Major Codes	Avail FT/PT	Total credits
Master of Arts in Public Relations	Face-to-face at Glassboro campus (some course options available online)	MA-PUBREL/G895	Both	33
Master of Arts in Writing	Face-to-face at Glassboro campus	MA-WRITING/G608	Both	30
Certificate of Graduate Study in Creative Writing**	Face-to-face at Glassboro campus	COG-CREATWR/G641	Both	9
Certificate of Graduate Study in Editing and Publishing for Writers**	Face-to-face at Glassboro campus	COG-EDITGPUB/G640	Both	9
Certificate of Graduate Study in Integrated Marketing Communication & New Media*	100% Online	.COCOG-IMCNM/G132	Part-time	9
Certificate of Graduate Study in School Public Relations*, ***	100% Online	.COCOG-SCHPR/G616	Part-time	9
Certificate of Graduate Study In Radio, Television and Film	Face-to-face at Glassboro campus	COG-RTVF/G613	Part Time	12
Certificate of Graduate Study in Writing, Composition and Rhetoric**	Face-to-face at Glassboro campus	COG-COMRHET/G116	Both	9
Certificate of Graduate Study in Writing and New Media**	Face-to-face at Glassboro campus	COG-WRNMEDA/G642	Both	12

CERTIFICATIONS & ENDORSEMENTS & RELATED POST-BACCALAUREATE PROGRAMS (NON-DEGREE)

Program Name	Format/location	Program/Major Codes	Avail FT/PT	Total credits
Post-baccalaureate Certification for Subject Matter - Art	Face-to-face at Glassboro campus	CRT-ART/9001	Both	51

DUAL DEGREE (4+1 PROGRAMS)

Program Name	Format/location	Program/Major Codes	Avail FT/PT	Total credits
Master of Arts /Bachelor of Arts in Writing Arts	Face-to-face at Glassboro campus	MABA-WRARTS/G619	Full-time	138

*courses in this program count toward the M.A. in Public Relations.

**courses in this program may count toward the M.A. in Writing.

*** courses in this program may count toward the M.Ed. in Teacher Leadership.

A note about mode of delivery: We are always doing all we can to offer our courses and programs to students in the ways that best meet their needs – whether online, off-site, in a blended/hybrid format, accelerated, or some combination of these. For the most up-to-date information regarding mode of delivery options for your program of interest, please visit www.rowancgce.com/programs

Admissions

For the most up-to-date information regarding admission requirements, entry points, and application deadlines, please visit www.rowancgce.com/programs . Click on your program of interest to be connected to program and admission details.

Master's Degrees

Master of Arts in Public Relations (M.A.)

The Master of Arts in Public Relations emphasizes real-world applications of theories and techniques offered in an environment that emphasizes collaborative learning. The program attracts a cross section of students with experience levels ranging from recent graduates to senior managers. The M.A. in Public Relations curriculum grounds students in four key areas: writing, research, problem solving, and planning.

Program Requirements

Required Courses 21 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
MAPR 01551	Public Relations Overview	3
MAPR 01547	Techniques in Communication	3
MAPR 01550	Introduction to Communication Research	3
MAPR 01553	Case Studies	1
MAPR 01544	Public Relations Planning	2
MAPR 01561	Advanced Techniques in Communication	3
MAPR 01620	Seminar in Public Relations (2 semesters)	6

Students wishing to focus on Educational Public Relations should also take FNDS 21502 Foundations of Education 3.0 and a graduate-level Psychology course.

Elective Courses 12 s.h.

Approved Modules and Electives (Depending on Specialization) Please discuss with Academic Advisor.

Total Required Credits for the Program 33 s.h.

Foundation Courses

Eligible applicants must have successfully completed the following undergraduate foundation course at an accredited institution. During the admissions process, the M.A. in PR Academic Advisor will determine foundation course equivalencies. If applicable, official notification of any unfinished foundation courses will be included in the applicant's official admission decision letter from Rowan University.

FC-1. Publication Layout and Design (JRN 02317) (3.0 s.h.)

Students admitted without having completed this foundation course may complete it while enrolled in the M.A. in PR program. The foundation course must be taken before completing the program and does not count toward the 33 required semester hours for the Master's degree.

Graduation/Exit, Benchmark, and Thesis Requirements

Master's Thesis/Project, completed as a course requirement in Seminars I and II, and students must pass a comprehensive exam at the end of the program.

Program Coordinator/Advisor Contact Information
Edward H. Moore, APR
Bozorth Hall
856-256-4274
mooree@rowan.edu

Master of Arts in Writing (M.A.)

The Master of Arts in Writing is an innovative, interdisciplinary degree that integrates the scholarship on composition and new media with the practice of creative, journalistic, academic, and electronic writing.

The MA provides students with a strong theoretical foundation in writing studies through four core courses and offers several areas in which students may develop their personal and professional goals, including composition studies, new media and creative writing/journalism. A Master's Project is a requirement of the program.

Rowan University undergraduates majoring in the Bachelor of Arts in Writing Arts program can apply to the accelerated B.A./M.A. dual degree (4+1) program allowing them to earn both the B.A. and M.A. degrees in five years. Please see information about the B.A/M.A. admissions requirements at www.rowancgce.com/programs for details.

Program Requirements

Required Courses 12 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
MAWR 01554	Core I: Theories and Techniques for Writers	3
MAWR 01559	Core II: Research Methods for Writers	3
MAWR 01561	Seminar I	3
MAWR 01571	Seminar II	3

Elective Courses 18 s.h.

Four MAWR courses in the specialized area (Composition Studies, Creative Writing/Journalism or New Media), 12.0

Two elective courses at the graduate level, 6.0

Please discuss with Academic Advisor.

Total Required Credits for the Program 30 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and Thesis Requirements

Master's Project, completed as a course requirement in Seminars I and II

Program Coordinator/Advisor Contact Information
Ron Block- F13/Jennifer Courtney-S14
Hawthorn Hall/ Herman D. James Hall
856-256-4858/856-256-4847
blockr@rowan.edu/courtneyj@rowan.edu

Certificates of Graduate Study (Non-degree)

Certificate of Graduate Study in Creative Writing (COGS)

By participating in a curriculum that combines the writing workshop model with the study of craft through a close reading of published texts, students will engage in the advanced practices of the genres of their choice. They will learn to engage in a process of composition that, when combined with the development of a critical vocabulary, allows students to give, receive, and use criticism in their revisions. As they discover and develop their individual style, voice, and literary vision, they will acquire the discipline and the creative and organizational strategies necessary to prepare for and advance them toward publication.

Program Requirements

Required Courses 9 s.h.

(s.h.: semester hours/credit hours)

Choose three (3) from the following options.

Course #	Course Title	S.H.
MAWR 02505	Poetry Workshop	3
MAWR 02515	Creative Nonfiction Workshop	3
MAWR 02520	Writing the Novel	3
MAWR 02521	Writing the Nonfiction Book	3
MAWR 02522	Nonfiction Workshop	3
MAWR 02523	Writing the Memoir	3

Total Required Credits for the Program 9 s.h.

Foundation Courses
None

Graduation/Exit, Benchmark, and Thesis Requirements
None

Program Coordinator/Advisor Contact Information
Ron Block- F13/Jennifer Courtney-S14
Hawthorn Hall/ Herman D. James Hall
856-256-4858/856-256-4847
blockr@rowan.edu/courtneyj@rowan.edu

Certificate of Graduate Study in Editing and Publishing for Writers (COGS)

Due to recent changes in the publishing industry (corporate mergers, ever-advancing publishing technologies, radical alterations in traditional book distribution and bookselling) writers are now compelled to be excellent editors and marketers of their own work. Utilizing a curriculum that combines advanced editing and revision of works of the student's own choice (nonfiction book, YA novel, poetry, articles and essays), along with the hands-on opportunities in classes, students will acquire a necessary understanding of contemporary editing and publishing procedures in a variety of print and digital environments, including periodicals, and digital and book publishing, as well as the discipline and organizational strategies necessary to prepare and submit a variety of types of work for publication.

Program Requirements

Required Courses 9 s.h.
(s.h.: semester hours/credit hours)

Choose three (3) from the following options.

Course #	Course Title	S.H.
MAWR 01622	Publishing for Creative Writers	3
MAWR 01623	Writing Stories for Children and Young Adults	3
MAWR 01566	Editing the Literary Journal	3
MAWR 01557	Writing the Freelance Features	3
MAWR 02521	Writing the Nonfiction Book	3

Total Required Credits for the Program 9 s.h.

Foundation Courses
None

Graduation/Exit, Benchmark, and Thesis Requirements
None

Program Coordinator/Advisor Contact Information
Ron Block- F13/Jennifer Courtney-S14
Hawthorn Hall/ Herman D. James Hall
856-256-4858/856-256-4847
blockr@rowan.edu/courtneyj@rowan.edu

Certificate of Graduate Study in Integrated Marketing Communication and New Media (COGS)

The Certificate of Graduate Study (COGS) in Integrated Marketing Communication and New Media provides insight into how company efforts to offer greater accountability from their marketing efforts have intensified, and how new media have proliferated.

This has intensified the search for new ways to get more accountability from marketing communication efforts. The result has been a growing understanding on the part of corporate management that (1) the efficiencies of mass media advertising are not what they used to be; (2) consumers are more sophisticated, cynical, and distrusting than ever before; (3) tremendous gaps exist between what companies say in their advertising and what they actually do; and (4) in the long run, nourishing good customer relationships is far more important than making simple exchanges.

There is now a growing movement toward integrating all the messages created by various communication agencies and sent out by various departments within the company to achieve consistency. This process is known as Integrated Marketing Communication.

Students can use the coursework from this COGS and apply it toward the Master of Arts in Public Relations program.

Program Requirements

Required Courses		3 s.h.
(s.h.: semester hours/credit hours)		
Course #	**Course Title**	**S.H.**
MAPR 01565	IMC and New Media	3

Elective Courses		6 s.h.
Choose two (2) from the following options.		
Course #	**Course Title**	**S.H.**
MAWR 01555	Writing for Electronic Communities	3
MAPR 06515	Online Public Relations	3
MAWR 01564	Information Architecture	3
MAPR 01563	Research, Messaging and Audience Analysis	3
MAPR 01550	Intro to Communication Research	3

Total Required Credits for the Program	9 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and Thesis Requirements

None

Program Coordinator/Advisor Contact Information
Suzanne FitzGerald, Chair
Bozorth Hall
856.256.4265
sparks@rowan.edu

Certificate of Graduate Study in School Public Relations (COGS)

The School Public Relations Certificate of Graduate Study provides students with a broad overview of School Public Relations and a focus on several essential components of the field. By investigating and assessing real world case studies, students will develop an understanding of the need for formal planning and evaluation of an educational organization's public relations initiatives.

Students can use the coursework from this COGS and apply it toward the Master of Arts in Public Relations program.

Program Requirements

Required Courses		6 s.h.
(s.h.: semester hours/credit hours)		
Course #	**Course Title**	**S.H.**
MAPR 98503	School Public Relations	3
MAPR 01547	Techniques of Communication	3

Elective Courses	3 s.h.

Choose three (3) credits from any combination of the following existing communication modules:

Course #	Course Title	S.H.
MAPR 01553	Graduate Case Studies in PR	1
MAPR 01544	Public Relations Planning	2
MAPR 01533	Crisis Public Relations	1
MAPR 01534	Small Group Communication	1
MAPR 01535	Interpersonal Communication	1
MAPR 01537	Contemporary PR Challenges	1
MAPR 01538	Legislative Liaison for PR Practitioners	1
MAPR 01555	Persuasive and Feature Writing	1
MAPR 01557	Using Electronic Media in Public Relations	2
MAPR 01554	Planning and Conducting Special Events	1
MAPR 01524	Fundraising and Development	2
MAPR 01528	Global PR	1
MAPR 01558	Integrated Marketing Communication	1
MAPR 01530	Internal Communication in Organizations	1
MAPR 01550	Intro to Communication Research	3

Total Required Credits for the Program 9 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and Thesis Requirements

None

Program Coordinator/Advisor Contact Information
Edward H. Moore, APR
Bozorth Hall
856-256-4274
mooree@rowan.edu

Certificate of Graduate Study in Radio, Television and Film (COGS)

Emerging media technologies are putting increased pressure on media producers to upgrade their skills. Additionally, practitioners outside traditional media businesses (educators, small-business owners) are increasingly incorporating media technologies into their work. By participating in this curriculum, working professionals can learn new tools and production practices or update their existing media production skills in a creative and supportive environment. In addition, students will acquire the skills to write, produce and edit their own independent audio, documentary or narrative media projects.

Program Requirements

Required Courses 12 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
RTF 10523	Graduate Screenwriting	3
RTF 10520	Graduate Audio Production	3
RTF 10522	Graduate Film Production	3
RTF 10521	Graduate Documentary Production	3

Total Required Credits for the Program 12 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and Thesis Requirements

None

Program Coordinator/Advisor Contact Information
Keith Brand
Bozorth Hall
856-256-4006
brandk@rowan.edu

Certificate of Graduate Study in Writing, Composition and Rhetoric (COGS)

This 9-credit program for teachers and other writing professionals improves students' knowledge of contemporary theories, issues, and practices in writing and writing instruction. Students develop their writing abilities by analyzing their own writing and that of published writers. Courses emphasize composition theory, writing assessment, and the role of technology in writing.

Program Requirements

Required Courses — 9 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
MAWR 01549	Issues in Composition Studies	3
MAWR 01556	Assessment of Writing	3
MAWR 01555	Writing for Electronic Communities	3

Total Required Credits for the Program — 9 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and Thesis Requirements

None

Program Coordinator/Advisor Contact Information
Ron Block- F13/Jennifer Courtney-S14
Hawthorn Hall/ Herman D. James Hall
856-256-4858/856-256-4847
blockr@rowan.edu/courtneyj@rowan.edu

Certificate of Graduate Study in Writing and New Media (COGS)

This Certificate will increase students' awareness of composing opportunities, theories, and practices that are emerging as a result of the ubiquity of new media technologies and online writing spaces. Students will learn how to effectively compose in and for a variety of online writing spaces using a variety of modes and genres. Students will also learn theories in areas that hold significant import for understanding the implications of new media communication technologies: information architecture, visual rhetoric, social media, computers and writing, and designing with web standards. These marketable skills will enhance students' current and future career opportunities.

Program Requirements

Required Courses — 12 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
MAWR 01620	Internet and Writing Studies	3
MAWR 01555	Writing for Electronic Communities	3
MAWR 01564	Information Architecture	3
MAWR 01621	Visual Rhetoric and Multimodal Composition	3

Total Required Credits for the Program — 12 s.h.

Foundation Courses
None

Graduation/Exit, Benchmark, and Thesis Requirements
None

Program Coordinator/Advisor Contact Information
Ron Block- F13/Jennifer Courtney-S14
Hawthorn Hall/ Herman D. James Hall
856-256-4858/856-256-4847
blockr@rowan.edu/courtneyj@rowan.edu

Certifications & Endorsements & Related Post-Baccalaureate programs (Non-degree)

Post-baccalaureate Certification for Subject Matter – Art

Candidates must have a BA in Art or BFA plus a strong background in general education. The post baccalaureate certification for Subject Matter-Art requires 5 semesters to complete

Program Requirements

Required Courses 51 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
EDUC 01270	Teaching in Learning Communities I	3
PHED 35103	Health & Wellness or Biology w/lab	3
FNDS 21150	History of American Education	3
FNDS 21230	Characteristics of Knowledge Acquisition	3
EDUC 01282	Teaching in Learning Communities II Art	3
SMED 33420	Educational Technology	1
READ 30319	Teaching Reading/Writing in the Content Area	3
SPED 08130	Human Exceptionality	3
SMED 31350	Elem Art Methods: TCHG/LRNG A: Art	3
SECD 03330	Practicum TCHG/LRNG A: Art	1
PSY 09209	Child Development	3
ART 09200	Theory & Analysis of Art Education	3
SMED 31360	Secondary Art Methods: TCHG/LRNG B: Art	3
SECD 03332	Practicum B TCHG/LRNG B: Art	1
PSY 09210	Adolescent Development	3
SMED 31450	Clinical Practice in Art Education	10
SMED 31451	Clinical Practice Seminar for Art Education	1
SECD 03350	Teaching Students of Linguistic & Cultural Diversity	1

Elective Courses TBD
Additional Studio/Art History may be selected if necessary for the program and at the discretion of the Academic Advisor.

Total Required Credits for the Program 51 s.h.

Foundation Courses
The prospective student's bachelor degree must include a minimum of 30 credits in Art of which 12 credits are at the advanced level of study (300-400 level). Within the 30 credits, the candidate must present a foundation of study in Drawing, Painting, and Sculpture/Ceramics.

Graduation/Exit, Benchmark, and Thesis Requirements
None

Program Coordinator/Advisor Contact Information
Jane Graziano, Ed.D.
Westby Hall

856-256-3186
graziano@rowan.edu

Dual Degree (4+1 Programs)

Overview

The dual degree 4+1 program is designed to be completed in five years. Students typically apply during their junior year. If admitted, the senior year (fourth year) marks the official start of the dual degree 4+1 program. During this year, students will be matriculated as undergraduate 4+1 students and will usually enroll in up to 12 graduate credits while also completing any remaining undergraduate B.A. in Writing Arts and general education course requirements. The 12 graduate credits double-count towards both the undergraduate and graduate degrees. If approved to officially continue in the graduate

portion of the program, during year five students will be matriculated as graduate 4+1 students and their coursework will include the remaining graduate credits required for the Master's degree. (Students in this program must satisfy all the requirements for the undergraduate degree before proceeding to the +1 year [or graduate year] of the program.)

Master of Arts/Bachelor of Arts in Writing Arts – 4+1 Program (M.A/B.A.)

The dual Bachelor of Arts/Master of Arts in Writing Arts is an innovative, interdisciplinary accelerated degree program that integrates the scholarship on composition and new media and the practice of creative, journalistic, academic, and electronic writing.

The undergraduate major in Writing Arts provides students an in-depth understanding of the multiple facets of written communication. Through a variety of courses and learning experiences, students develop their awareness of writing's theoretical foundations and practical applications.

The M.A. provides students with a strong theoretical foundation in writing studies through four core courses and offers several areas in which students may develop their personal and professional goals, including composition studies, creative writing, new media, and journalism. A Master's Project is a requirement of the program.

This program allows students to earn a Bachelor of Arts in Writing Arts and a Master of Arts in Writing in five years.

4+1 Undergraduate Program Requirements

Required Major Courses 19 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
CMS 04250	Communication Theory	3
WA 01200	Introduction to Writing Arts	3
WA 07290	Creative Writing I	3
OR		
WA 07309	Writing Children's Stories	3
WA 01300	The Writer's Mind (A graduate-level elective course may substitute for this course. Discuss with your Academic Advisor.)*	3
WA 01301	Writing, Research and Technology (A graduate-level elective course may substitute for this course. Discuss with your Academic Advisor.)*	3
WA 01405	Evaluating Writing (A graduate-level elective course may substitute for this course. Discuss with your Academic Advisor.)*	3
WA 01450	Writing Arts Portfolio Seminar	1

Elements of Language 3 s.h.

Choose one course from the following options.

Course #	Course Title	S.H.
CMS 04225	Semantics	3
CMS 04325	Linguistics	3
ENGL 05301	American English Grammar	3
ANTH 02250	Introduction to Anthropological Linguistics	3
	Completion of second semester 200-level foreign language course	3

Note: Languages that offer this level course: Chinese, French, German, Italian, Russian, Spanish. Also, while the requirement is 3 s.h., other courses prior to this 200-level course will likely be necessary.

Writing Specialization 12 s.h.

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 diploma and transcript. If you complete more than one specialization, you must take at least 9 s.h. in each specialization. See www.rowan.edu/wa for more information on shaping a specialization.

Creative Writing

Course #	Course Title	S.H.
WA 07291	Creative Writing II	3
WA 07391	Fiction Writing (A graduate-level elective course may substitute for this course. Discuss with your Academic Advisor.)*	3
WA 07395	Writing Poetry (A graduate-level elective course may substitute for this course. Discuss with your Academic Advisor.)*	3
WA 01304	Writing with Style (A graduate-level elective course may substitute for this course. Discuss with your Academic Advisor.)*	3
WA 07392	Fundamentals of Playwriting (A graduate-level elective course may substitute for this course. Discuss with your Academic Advisor.)*	3
WA 07410	Tutoring Writing (A graduate-level elective course may substitute for this course. Discuss with your Academic Advisor.)*	3
WA 01370	Professions in Writing Arts	1
JRN 02332	The Publishing Industry (A graduate-level elective course may substitute for this course. Discuss with your Academic Advisor.)*	3
RTF 03393	Film Scenario Writing (A graduate-level elective course may substitute for this course. Discuss with your Academic Advisor.)*	3
	Internship or Research Practicum	3-6

Technical and Professional Writing

Course #	Course Title	S.H.
WA 01302	Intro to Technical Writing (A graduate-level elective course may substitute for this course. Discuss with your Academic Advisor.)*	3
WA 01400	Writing for the Workplace (A graduate-level elective course may substitute for this course. Discuss with your Academic Advisor.)*	3
WA 01370	Professions in Writing Arts	1
WA 07410	Tutoring Writing (A graduate-level elective course may substitute for this course. Discuss with your Academic Advisor.)*	3
CMS 04290	Rhetorical Theory	3
JRN 02332	The Publishing Industry (A graduate-level elective course may substitute for this course. Discuss with your Academic Advisor.)*	3
RTF 03295	Introduction to New Media	3
	Internship or Research Practicum	3-6

New Media Writing and Publishing

Course #	Course Title	S.H.
WA 01400	Writing for the Workplace (A graduate-level elective course may substitute for this course. Discuss with your Academic Advisor.)*	3
WA 01370	Professions in Writing Arts (A graduate-level elective course may substitute for this course. Discuss with your Academic Advisor.)*	1
CMS 04315	Participatory Media (A graduate-level elective course may substitute for this course. Discuss with your Academic Advisor.)*	3
CMS 04215	Fiction to Film (A graduate-level elective course may substitute for this course. Discuss with your Academic Advisor.)*	3
JRN 02314	Photojournalism (A graduate-level elective course may substitute for this course. Discuss with your Academic Advisor.)*	3
JRN 02317	Publication Layout and Design	3
JRN 02321	Online Journalism I (A graduate-level elective course may substitute for this course. Discuss with your Academic Advisor.)*	3
JRN 02332	The Publishing Industry (A graduate-level elective course may substitute for this course. Discuss with your Academic Advisor.)*	3
JRN 02335	Media Law (A graduate-level elective course may substitute for this course. Discuss with your Academic Advisor.)*t3	
RTF 03275	Applied Media Aesthetics: Sight, Sound, and Story (A graduate-level elective course may substitute for this course. Discuss with your Academic Advisor.)*	3
RTF 03295	Introduction to New Media (A graduate-level elective course may substitute for this course. Discuss with your Academic Advisor.)*	3

Internship or Research Practicum	3-6

*No more than 12 graduate credits total may be used to replace undergraduate coursework. Discuss with your Academic Advisor.

General Education, Rowan Experience, and Free Elective Courses 86 s.h.
Please discuss course options with your Academic Advisor and 4+1 Coordinator.

Total Required Credits for the Undergraduate Portion of the Program 120 or 108** s.h.

*(**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 4th/senior year and count for both the undergraduate and graduate degrees.)*

4+1 Graduate Program Requirements

Required Graduate Courses taken while an *undergraduate* 4+1 student 6 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
MAWR 01554	Core I: Theories and Techniques for Writing	3
MAWR 01559	Core II: Research Methods for Writers	3

Required Graduate Elective Courses taken while an *undergraduate* 4+1 student 6 s.h.
Choose two (2) from the "Required Elective Course Listing" below to complete while an undergraduate student. Your Academic Advisor/4+1 Coordinator will help to shape a specialization within the program.

Required Graduate Courses taken while a *graduate* 4+1 student 6 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
MAWR 01561	Seminar I	3
MAWR 01571	Seminar II	3

Required Graduate Elective Courses taken while a *graduate* 4+1 student 12 s.h.
Choose four (4) from the "Required Elective Course Listing" to complete while a graduate student.

Course #	Course Title	S.H.
MAWR 01546	Contemporary Rhetoric	3
MAWR 01549	Issues in Composition Studies	3
MAWR 01555	Writing for Electronic Communities	3
MAWR 01556	Assessment of Writing	3
MAWR 01557	Writing Freelance Features	3
MAWR 01558	Fiction Workshop	3
MAWR 01560	Managerial Communication	3
MAWR 01564	Information Architecture	3
MAWR 01565	Technical Writing	3
MAWR 01566	Editing the Literary Journal	3
MAWR 01615	Independent Study	3
MAWR 01618	Special Topics	3
MAWR 01620	Internet and Writing Studies	3
MAWR 01621	Visual Rhetoric and Multimodal Composition	3
MAWR 01622	Publishing for Creative Writers	3
MAWR 01623	Writing Stories for Children and Young Adults	3
MAWR 01630	Writing Difference	3
MAWR 02505	Poetry Workshop	3
MAWR 02510	Writing for Broadcast	3
MAWR 02515	Creative Nonfiction Workshop	3
MAWR 02520	Writing the Novel	3
MAWR 02521	Writing and Publishing the Nonfiction Book	3
MAWR 02522	Nonfiction Workshop	3
MAWR 02523	Writing the Memoir	3
MAWR 07500	The Essay: Art and Craft	3

Total Required Credits for the Graduate Portion of the Program 30 s.h.

(This number includes the 12 graduate credits that will double-count for the graduate and undergraduate portions of the program.)

Total Required Credits for the Entire 4+1 Program 138 s.h.

Foundation Courses
None

Graduation/Exit, Benchmark, and Thesis Requirements
Master's Project, completed as a course requirement in Seminars I and II

Program Coordinator/Advisor Contact Information
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College of Education

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Introduction and Mission

The College of Education's primary mission is to ensure that faculty and undergraduate and graduate candidates develop the knowledge, skills, and dispositions needed to foster academic achievement, social responsibility, personal responsibility and social justice in themselves so that they can, in turn, facilitate high achievement in P-16 learners. The overarching theme of the graduate programs in the College of Education is 'The Learning Community in Action'. The goals of all programs are based on this theme.

The College of Education's graduate programs combine the study of research, theory, and wisdom of practice in diverse settings with a variety of opportunities to apply knowledge and dispositions to practice, thus promoting professional achievement and personal fulfillment. Our programs provide an intellectually rigorous and challenging environment for preparing to teach, preparing for other education or health-related services, or preparing for leadership in education and selected health-related services.

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) since 1956. In addition, College of Education graduate programs have received National Recognition from the following professional organizations that are aligned with NCATE:

- Association for Childhood Education International (ACEI)
- Council for Exceptional Children (CEC)
- Educational Leadership Constituent Council (ELCC)
- International Reading Association (IRA)
- National Association of School Psychologists (NASP)
- Teachers of English to Speakers of Other Languages (TESOL)

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.

Departments

The College of Education houses the following academic departments: Educational Leadership; Educational Services, Administration and Higher Education; Health and Exercise Science; Language, Literacy and Special Education; and Teacher Education. (Not all departments offer programs through the College of Graduate & Continuing Education.)

Department of Educational Leadership
James Coaxum III, Ph.D., Chair
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Department of Language, Literacy, and Special Education
S. Jay Kuder, Ed.D., Chair
Herman D. James Hall
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Department of Educational Services, Administration, and Higher Education
MaryBeth Walpole, Ph.D., Chair
Herman D. James Hall
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Department of Teacher Education
Issam Abi El Mona, Ed.D., Chair
Herman D. James Hall
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Department of Health and Exercise Science
Peter Rattigan, Ph.D., Chair
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Programs Offered

All programs offered are listed below in order of degree/program type and then in alphabetical order by program name. Details about each program are then listed within the catalog in the same order.

DOCTORAL DEGREES/EDUCATIONAL SPECIALIST DEGREE

Program Name	Format/location	Program/Major Codes	Avail FT/PT	Total credits
Doctor of Education in Educational Leadership	Face-to-face/Glassboro with some online coursework	.CMEDD-EDLDR/D928	Part-time	60
Doctor of Education in Educational Leadership	Blended/Hybrid; 60% online & 40% face-to-face at NJPSA (New Jersey Principals and Supervisor's Association) in Jamesburg, NJ	.CXEDD-EDLDR/D928	Part-time	60
Doctor of Education in Educational Leadership	Online with 2 residencies on the Glassboro campus	.COEDD-EDLDR/D928	Part-time	60
Educational Specialist in School Psychology-School Psychologist Certification#	Face-to-face at Glassboro campus	EDS-SCHPSYCH/ES03	Both	39

MASTER'S DEGREE

Program Name	Format/location	Program/Major Codes	Avail FT/PT	Total credits
Master of Arts in Counseling in Educational Settings#	Face-to-face at Glassboro campus	MA-COUNEDSET/G825	Both	48
Master of Arts in Higher Education	Face-to-face at Glassboro campus	MA-HIGHED/G807	Both	31-37 depending upon track/specialization selected
Master of Arts in Learning Disabilities#	Face-to-face at Glassboro campus	MA-LRNDIS/G818	Both	33-39 depending upon track selected
Master of Arts in Reading Education#	Blended	.COMA-READED/G830	Part-time	33

Master of Arts in School Administration#	Blended: 100% Online coursework with a total of 4 face-to-face meetings during the program	.CXMA-SCHADM/G827	Part-time	36
Master of Arts in School Administration#	Face-to-face at Glassboro campus	.CMMA-SCHADM/G827	Part-time	36
Master of Arts in School Psychology	Face-to-face at Glassboro campus	MA-SCHPSYCH/G822	Both	34
Master of Arts in Special Education#	Face-to-face at Glassboro campus	MA-SPECED/G809	Both	30-41 depending upon track selected
Master of Arts in Wellness and Lifestyle Management	100% online	.COMA-WLM/G837	Part-time	30
Master of Education in Teacher Leadership	100% online	.COMED-TCHLD/G815	Part-time	33-36 depending upon content area/COGS selected
Master of Science in Teaching – Elementary Education#	Face-to-face at Glassboro campus	.CXMST-ELED/G800	Full-time	40
Master of Science in Teaching – Elementary Education#	Face-to-face at Camden campus	.CXCMST-ELED/G800	Full-time	40
Master of Science in Teaching – Subject Matter Education– Theatre Education#	Face-to-face at Glassboro campus	.CXMST-THRED/G008	Full-time	40
Master of Science in Teaching – Subject Matter Education#	Face-to-face at Glassboro campus	.CXMST-SEED/G802	Full-time	40
Master of Science in Teaching – Subject Matter Education#	Face-to-face at Camden campus	.CXCMST-SEED/G802	Full-time	40
Master of Science in Teaching – Subject Matter Education – Theatre Education#	Face-to-face at Camden campus	.CXCMST-THRED/G008	Full-time	40

CERTIFICATES OF ADVANCED GRADUATE STUDY (NON-DEGREE)

Program Name	Format/location	Program/Major Codes	Avail FT/PT	Total credits
Certificate of Advanced Graduate Study in Principal Preparation**#	100% online	.COCAG-PRIN/G628	Part-time	21-24 depending upon track selected

CERTIFICATES OF GRADUATE STUDY (NON-DEGREE)

Program Name	Format/location	Program/Major Codes	Avail FT/PT	Total credits
Certificate of Graduate Study in Autism Spectrum Disorders	Face-to-face at Glassboro campus	COG-AUTDIS/G108	Part-time	15
Certificate of Graduate Study in Educational Technology*	100% online	.COCOG-EDTEC G124	Part-time	15
Certificate of Graduate Study in English as a Second Language (ESL)*#	Face-to-face at Camden campus	.CCCOG-ESL/G604	Part-time	16-21 depending whether or not the candidate has an NJ teaching certificate

Certificate of Graduate Study in English as a Second Language (ESL)*#	100% online	.COCOG-ESL/G604	Part-time	16-21 depending whether or not the candidate has an NJ teaching certificate
Certificate of Graduate Study in Reading	100% online	.COCOG-READ/G630	Part-time	15
Certificate of Graduate Study in Reading/Writing Literacy	Blended	COG-RWLITRCY/G126	Part-time	15
Certificate of Graduate Study in Special Education*	100% online	.COCOG-SPED/G127	Part-time	18
Certificate of Graduate Study in Teaching and Learning*	100% online	.COCOG-TCHLR/G109	Part-time	18

CERTIFICATIONS & ENDORSEMENTS & RELATED POST-BACCALAUREATE PROGRAMS (NON-DEGREE)

Program Name	Format/location	Program/Major Codes	Avail FT/PT	Total credits
Learning Disabilities Teacher Consultant Certification (LDTC)#	Face-to-face at Glassboro campus	GCT-LRNDIS/G618	Both	33
Supervisor Certification **#	100% online	.COGCT-SPRVR/G629	Part-time	12
Bilingual/Bicultural Education Endorsement#	100% online	.COGE-BILBIC/G605	Part-time	12
Endorsement in Driver Education#	Blended/Hybrid	.BMND-DRVED/0886	Part-time	3 – this is a one-course program intended for current undergraduate students who do not yet have their Bachelor's degree
Endorsement in Driver Education#	Blended/Hybrid	.BMUE-DRVED/9610	Part-time	3 – this is a one-course program intended for certified HPE teachers
Graduate Endorsement for Teacher of Students with Disabilities#	Face-to-face at Glassboro campus	GE-TCHSTUDIS/G609	Part-time	23
Graduate Endorsement for Teacher of Students with Disabilities#	100% online	.COGE-TCHDIS/G609	Part-time	23 – this is intended for those who already have their teacher certification
Post-baccalaureate:Teacher of Reading #	Face-to-face at Glassboro campus	CRT-READ/9830	Part-time	30
Post-baccalaureate: Teacher of Students with Disabilities#	Face-to-face at Glassboro campus	CRT-TCHSTDIS/9811	Full-time/Part-time	27 – this is intended for those who do not already have but are concurrently pursuing their teacher certification

Post-baccalaureate: Teacher of Students with Disabilities#	100% online	.COCRT-STDIS/9811	Part-time	27 – this is intended for those who do not already have but are concurrently pursuing their teacher certification
Post-baccalaureate School Nursing Certification #	100% online	.CXCRT-SCHNR/9221	Part-time	18

*The coursework in this program counts as approximately one half of the coursework required for the Master of Education in Teacher Leadership.

**The coursework in this program counts toward the coursework required for the Master of School Administration.

These programs also lead to a state certificate/endorsement.

A note about mode of delivery: We are always doing all we can to offer our courses and programs to students in the ways that best meet their needs – whether online, off-site, in a blended/hybrid format, accelerated, or some combination of these. For the most up-to-date information regarding mode of delivery options for your program of interest, please visit www.rowancgce.com/programs .

Admissions

For the most up-to-date information regarding admission requirements, entry points, and application deadlines, please visit www.rowancgce.com/programs. www.rowancgce.com/programs . Click on your program of interest to be connected to program and admission details.

Doctoral Degrees/Educational Specialist Degree

Doctor of Education in Educational Leadership (Ed.D.)

The Educational Leadership doctoral program provides opportunities for students to acquire and construct knowledge that enhances their ability to transform educational institutions to meet the challenging needs of an ever-changing society. This is achieved by educating students to become reflective practitioners who comprehend and evaluate professional literature and research, and who understand leadership and change. In addition, students learn how to translate the research and theory into practice.

Benchmarks and Dissertation

The Ed. D. at Rowan University requires the completion of 60 graduate semester hours (S.H.) made up of 16 courses (48 S.H.) and 12 S.H. of dissertation. The program includes three distinct benchmarks. Benchmark I takes place after the completion of four of the five core courses and consists of a written assessment, followed by an interview with a committee of faculty. Benchmark II consists of a presentation to a committee of faculty. Benchmark III is the dissertation symposium.

Track Options

There are 3 tracks/focus areas offered in the doctoral program. Each track includes 4 specialized courses. All of the track courses are offered across 8 weeks and are 100% online regardless of the overall delivery format chosen. The three track options are:

1. Higher Education Track: This track is for educators who are looking to gain advanced knowledge in the field of higher education with a special focus on administration and leadership at the post-secondary/four-year college level.
2. P-12 Track: This track is for those educators who are looking to gain advanced knowledge in the field with a special focus on developing the leadership skills and dispositions necessary to enact lasting and meaningful change within the preschool through secondary school levels.
3. Nurse Educator Track:This track is for those educators who are looking to gain advanced knowledge in the field with a special focus on educating nurses.

A fourth track option is only available to those enrolled in one of the Community College Leadership Initiative hybrid cohorts. This cohort option is typically offered on a biennial basis. This track is for those educators who are looking to gain advanced knowledge in the field with a special focus on community college.

Residency Requirement

The Ed.D. program is available in a number of different delivery modes including online. Those who choose the online delivery format will be required to complete 2 residencies as outlined below:

- Residency 1 will take place typically the last weekend in July. Students will spend three days/two nights on the campus of Rowan University becoming familiar with policies and procedures of the College, the mission and conceptual framework of the College, as well as campus resources and program expectations of the Educational Leadership Department. This orientation-based residency is a wonderful introduction to the doctoral experience that serves to enhance the online learning environment by providing face-to-face opportunity to engage with cohort members, Educational Leadership faculty, and staff. Students will also attend workshops designed to acquaint them with leadership development, action research and change strategies, reflective practice, social justice issues, and the development and implementation of professional learning communities. On-campus housing is available.
- Residency 2 involves a three day/two night stay at the conclusion of year one on Rowan's Glassboro campus (Friday-Sunday). It occurs in early June and will include the taking of the written portion of the comprehensive exam (Benchmark I), as well as focus on research methodologies and data analysis techniques in order to help prepare students for dissertation work and become familiar with the dissertation process.

Program Requirements

Required Courses for all Tracks 36 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
EDSU 28715	Leadership Theory	3
EDUC 01700	Leadership Through Professional Learning Communities	3
EDST 24721	Action Research in Educational Leadership	3
EDAM 27704	Changing Organizations	3
EDSU 28706	Diversity in Educational Leadership	3
EDST 24724	Issues in Qualitative Analysis in Educational Leadership	3
EDAM 27750	Applied Ethics in Educational Leadership	3
EDST 24725	Mixed Methods Research in Educational Leadership	3
EDAM 27733	The Policy Environment	3
EDAM 27719	Dissertation Seminar I	3
EDAM 27720	Dissertation Seminar II	3
EDAM 27752	Advanced Leadership	3

Required Track Courses 12 s.h.

All students must also complete the four courses in their selected track. (You select your track during the application process.)

Course #	Course Title	S.H.
Higher Education Track Courses		
EDAM 27783	Student Development and Adult Learning Theory	3
EDAM 27741	Current Issues in Higher Education	3
EDAM 27746	Higher Education Governance	3
TBD	Nature and Function in Higher Education	3
P-12 Track Courses		
EDAM 27790	Instructional Leadership and the Curriculum	3
EDAM 27749	Issues in School Governance	3
EDAM 27735	Promoting Effective Learning	3
EDAM 27714	Planning and Negotiating	3
Community College Track Courses		
EDAM 27783	Student Development and Adult Learning Theory	3
EDAM 27782	The American Community College	3
EDAM 27780	Community College Leadership and Governance	3
EDAM 27781	Community College Budgeting and Finance	3
Nurse Educator Track Courses		
EDAM 27783	Student Development and Adult Learning Theory	3
SNUR 92751	Instructional Design & Curriculum Development in Nursing Education	3
SNUR 92752	Nursing Program Evaluation & Information Resources	3
SNUR 92753	Practicum in Nursing	3

Required Dissertation Research Course/Credits 12 s.h.

All students must also complete a minimum of 12 credits of Dissertation Research.

Course #	Course Title	S.H.

EDST 24795	Dissertation Research	12

Note about Dissertation Research: Students will continue to register for EDST 24795 (Dissertation Research) as needed. In order to maintain matriculation in the program, students must register for at least 1 dissertation credit per term until their dissertation is complete and approved and at least 12 Dissertation Research semester hours total have been completed

Total Required Credits for the Program 60 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

- Students must successfully complete and defend Dissertation

Benchmarks: *Successful completion of all benchmarks is required for continuation in and graduation from the program. Details regarding benchmarks' timing and assessments will be shared with the student throughout the program by the Academic Advisor.*

Benchmark I:

- *Timing*: Occurs after the completion of 12 prescribed credits (Phase I)
- *Requirements*: Benchmark consists of two parts: a timed, written examination, followed by an oral portion consisting of an interview with a committee of faculty.
- *Options*: If the student does not successfully pass the benchmark on the first try, then the student is invited to re-take the exam. Student will not be permitted to continue coursework during this time. If unsuccessful or the student chooses not to attempt the exam when offered a second time, the student will be dismissed from the program.

Benchmark II:

- *Timing*: Occurs after the completion of 30 prescribed credits (Phase II)
- *Requirements*: Students may present his or her dissertation proposal at a time mutually agreed upon by the student and his or her dissertation committee. The dissertation proposal must be approved before moving onto the completion of the dissertation project.
- *Options*: If the student does not successfully pass the benchmark, meaning an approved dissertation proposal is not obtained, then the student is able to revise and take again while continuing dissertation coursework.

Benchmark III:

- *Timing*: Occurs after the completion of all 60 prescribed credits (Phase III)
- *Requirements*: Students must successfully complete and defend a dissertation at a final symposium.
- *Options*: If the student does not successfully pass the benchmark, then the student may resubmit and defend the dissertation. If still unsuccessful, student will not be approved for graduation from the program.

Program Coordinator/Advisor Contact Information
Maria Lanza-Gladney
Herman D. James Hall
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lanza-gladney@rowan.edu

Educational Specialist in School Psychology – School Psychologist Certification (Ed.S.)

The Ed.S. is an advanced degree that enables the candidate to develop practitioner expertise in psychological, educational, professional and related areas. Candidates hone skills in assessment, consultation, counseling and intervention to prepare to work with children and adolescents, parents, guardians, teacher and other educational professionals in a school setting. To earn the Ed.S. degree, a candidate must complete all courses, a school-based 300 hour practicum and a school-based 1200-hour externship/internship.

Upon completion of the Ed.S., candidates are eligible for New Jersey Department of Education certification as a school psychologist. Rowan University Ed.S. graduates may also apply to become a Nationally Certified School Psychologist

Rowan University's School Psychology program is an approved program by the National Association of School Psychology (NASP).

Program Requirements

Required Courses for all Tracks 39 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
SPSY 08547	Professional School Psychology	3
SPSY 08545	Home/School/Community Collaboration	3
SPSY 06627	Cognitive Assessment and Data-Based Decision Making	3
SPSY 06628	Psychoeducational Assessment and Data-Based Decision Making	3
SPSY 06629	Behavioral-Social Assessment and Data-Based Decision Making	3
SPSY 06632	School Psychology: Consultation, Collaboration, and Intervention	3
CURR 29580	Fundamentals of Curriculum Development	3
EDSU 28546	Educational Organization and Leadership	3
SPSY 22630	Practicum in School Psychology	3
SPSY 22634	Internship in School Psychology	6 (*2)
OR SPSY 22623	Internship in School Psychology	3(*4)

*Students should take 2-6 s.h. SPSY 22634 Internship in School Psychology courses or 4-3 s.h. SPSY 22623 Internship in School Psychology courses.

Total Required Credits for the Program 39 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

Students must successfully complete the Praxis Exam in School Psychology

Program Coordinator/Advisor Contact Information
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Herman D. James Hall
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Master's Degrees

Master of Arts in Counseling in Educational Settings (M.A.)

This program leads to a Master of Arts degree in Counseling in Educational Settings, and also, New Jersey certification in School Counseling. Graduates may work in elementary, middle, and/or secondary school settings, providing student counseling services. Such services include individual and group counseling for students regarding personal, social, and educational needs; consultation with faculty and other professional staff; assessment of individual students regarding personal-social, academic and career interests and needs; consultation with families regarding the individual's educational progress and career-related plans, as well as ones personal and social development; and working cooperatively with community resources in assisting individuals and families. A number of our graduates seek careers in Higher Education settings, such as Residence Hall, Student Services, and Career and Academic Planning.

Program Requirements

Required Courses 48 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
COUN 26501	Introduction to Counseling and Guidance	3
COUN 26526	Individual Counseling Procedures	3
COUN 26509	Group Counseling in Educational Settings	3
COUN 26605	Advanced Workshop/Counseling in Educational Settings	1 (3)*
COUN 26520	Design and Administration of Developmental Counseling Programs	3
COUN 26527	Practicum/Counseling in Educational Settings	3
COUN 26597	Institutions and Agencies	3
COUN 26523	Counseling Interviewing Skills and Techniques	3

LDTC 18516	Applied Tests and Measurements	3
OR COUN 26524	Assessment and Appraisal Tech in CES	3
PSY 09560	Life Span Development	3
COUN 26603	Research and Evaluation Procedures/ Counseling in Educational Settings	3
COUN 26601	Internship/Counseling in Educational Settings (3 credits Fall and 3 credits Spring)	6
PSY 22507	Development and Learning	3
OR LDTC 18510	Applied Theories of Learning	3
COUN 26525	Multicultural Counseling and Advocacy	3
COUN 26582	Career Counseling in Educational Settings	3

*Students should take 3-1 s.h. Advanced Workshops. The Advanced Workshop that is offered in the fall semester is mandatory.

Total Required Credits for the Program 48 s.h.

Foundation Courses
None

Graduation/Exit/Thesis Requirements
None

Program Coordinator/Advisor Contact Information
Hector Rios, Ph.D.
Herman D. James Hall
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rios@rowan.edu

Master of Arts in Higher Education (M.A)

The Administration track is intended to serve individuals employed in a higher education setting who wish to increase their knowledge and skills as well as those who seek an entry level position in a two year or four year college or university. Full-time students in the administration track may complete the program in two years, excluding summers, by following a highly sequenced pattern of course enrollments. Part-time students may also enroll in the administration track and will be advised regarding the sequencing of courses in order to complete the program in four years or less. The administration track is a 36 credit program and includes a culminating seminar/internship sequence (6 credits) in which all students are required to enroll. All students are expected to work closely with the program advisor in determining course selection and the appropriate sequence for course enrollments. All students are also required to complete a major research project (thesis) as part of their culminating sequence of courses.

Additional Information

Students in the M.A. in Higher Education (Administrative Track) program are required to prepare and keep a portfolio throughout the duration of the program experience. The portfolio serves as a tool to help faculty observe student progress and learning which is assessed through a Synthesis/Reflective Application Exercise conducted usually at the end of the first year of study but prior to enrolling in the Seminar/Internship in Higher Education Administration I capstone course.

In the capstone experience students must complete a research project on a topic approved by the program advisor. Students in the administration track are required to complete a two-semester 300 clock-hour clinical experience (150 clock hours each semester) within the courses, Seminar/Internship in Higher Education Administration I and II.

The Instructional track is offered in a limited number of academic specializations: computer science, mathematics, English as a Second Language, and reading. It is also possible to craft programs in biology, chemistry, and physics. Students wishing to pursue programs in computer science, mathematics, biology, chemistry, or physics are expected to possess the corresponding baccalaureate degrees as a prerequisite for program admission.

The instructional track is designed for individuals who wish to pursue employment opportunities as adjunct instructors or as instructors in developmental education/basic skills programs or in selected science disciplines at 2-year or 4-year colleges. This track is not recommended for individuals who plan to seek full-time tenure track professorial positions in a specific academic discipline.

Specializations

The programs in the instructional track range from 31-37 credits, depending on the academic specializations as follows: Computer Science (37 cr), Mathematics (37 cr), English as a Second Language (34 cr), and Reading (31 cr). Academic specializations in Biology, Chemistry and Physics may vary according to student experience in those areas.

Generally, students will be required to complete 13 credits in higher education courses including course work in adult learning. Also included in this course work is a seminar/internship in higher education instruction. All of the remaining course work is in the academic specialization. Students are required to pass a comprehensive examination in selected academic specializations and are further required to undertake a major research project on a topic of significant interest within their academic specialization.

Program Requirements

Required Courses for all Tracks 9 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
HIED 06605	Higher Education in America	3
EDST 24501	Procedures and Evaluation in Research	3
CURR 29504	Understanding Adult Learning and Development	3

Required Track Courses

Students select one track area from the options below and complete the listed courses.

Administrative Track 21 s.h.

Course #	Course Title	S.H.
EDAM 27637	Higher Education Administration	3
EDAM 27737	The College Student: Issues and Support Programs	3
EDAM 27620	Legal Issues in Higher Education	3
EDAM 27622	Planning and Resource Allocation in Higher Education	3
EDAM 27623	Diversity in Higher Education	3
EDAM 27628	Seminar/Internship in Higher Education Administration I (Capstone course)	3
EDAM 27629	Seminar/Internship in Higher Education Administration II (Capstone course)	3

Restricted Elective Courses 3 s.h.

Course #	Course Title	S.H.
MGT 06503	Organization Development	3
MAPR 01551	Public Relations Overview	3
FNDS 21530	Foundations of Multicultural Education	3
EDST 24503	Quantitative Analusis in Educational Research	3
EDST 24707	Applied Analysis for Educational Leadership	3
EDST 24709	Issues in Survey Research	3
COUN 26509	Group Counseling in Educational Settings	4
COUN 26526	Individual Counseling in Educational Settings	4
COUN 26582	Career Counseling in Educational Settings	3
CURR 29503	Teaching Adult Learners	3
EDAM 27625	Change in Higher Education	3
EDAM 27741	Current Issues in Higher Education	3
EDAM 27742	The Curriculum of Higher Education	3
EDAM 27746	Higher Education Governance	3
EDSU 28706	Diversity and Educational Leadership	3
EDAM 27624	College Admission and Transition	3
HIED 06606	Selected Topics in Higher Education	3

Instructional Track 4 s.h.

Course #	Course Title	S.H.
HIED 06603	Seminar/Internship in Higher Education Instruction*	4

*The Seminar/Internship in Higher Education Instruction must be taken in the student's final semester.

Restricted Elective Courses 18-24 s.h.

Discuss course offerings with program advisor. Students wishing to matriculate in the teaching specializations of mathematics, computer science, or in a teaching specialization in one of the hard sciences, must possess the corresponding baccalaureate degree. Within the scope of the academic specialization, students must undertake a major research or thesis project and pass a comprehensive examination.

Total Required Credits for the Program **31-37 s.h.**

Foundation Courses
None

Graduation/Exit, Benchmark, and/or Thesis Requirements

- Administrative Track: Students must successfully complete and defend a Master's thesis, in addition to a cumulative portfolio completed before enrolling in Seminar coursework
- Instructional Track: Students must successfully complete a comprehensive exam and a major research project in the area of specialization

Program Coordinator/Advisor Contact Information
Burton Sisco, Ed.D.
Herman D. James Hall
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sisco@rowan.edu

Master of Arts in Learning Disabilities (M.A.)

The Master of Arts in Learning Disabilities is an innovative program designed to provide motivated teachers with the knowledge and skills needed to meet the multitude of challenges found in both regular and special education classrooms. Both tracks in the program, each with a specific focus, are designed to prepare classroom teachers to meet the needs of students with learning difficulties. Collaborative field experiences are included in each track.

This program received national accreditation and recognition from NCATE and CEC.

There are two track options in this program. The total number of required credits varies from 33-39 depending upon the track selected during the application process.

- **Track I** (Learning Disabilities Teacher-Consultant Track) is designed to prepare candidates for the Learning Disabilities Teacher-Consultant certification. Students in this track work in collaboration with other members of a child study team.
- **Track II** (Pre-school Track) is designed for graduate students who wish to facilitate learning for young children with developmental delays and disabilities.

Program Requirements for Track I

Required Courses 39 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
LDTC 18516	Applied Tests and Measurements	3
LDTC 18510	Applied Theories of Learning	3
SPED 08555	Education & Psychology of Exceptional Learners	3
LDTC 18520	Neurological Bases of Educational Disorders	3
READ 30530	Teaching Reading to Exceptional Children	3
LDTC 18503	Foundations of Learning Disabilities	3
LDTC 18504	Assessment of Learning Disabilities	3
LDTC 18505	Correction of Learning Disabilities	3
LDTC 18525	Advanced Assessment Techniques	3
LDTC 18650	Clinical Experiences in Learning Disabilities*	6
LDTC 18600	Seminar and Research in Learning Disabilities I	3
LDTC 18601	Seminar and Research in Learning Disabilities II	3

* matriculated students only and only with permission of program advisor

Total Required Credits for the Program 39 s.h.

Foundation Courses
None

Graduation/Exit, Benchmark, and/or Thesis Requirements
Students must successfully complete and defend Master's thesis.

Program Requirements for Track II

Required Courses		33 s.h.
(s.h.: semester hours/credit hours)		
Course #	**Course Title**	**S.H.**
LDTC 18516	Applied Tests and Measurements	3
LDTC 18510	Applied Theories of Learning	3
SPED 08555	Education & Psychology of Exceptional Learners	3
LDTC 18540	Motor Development in Young Children with Disability	3
LDTC 18520	Neurological Bases of Educational Disorders	3
LDTC 18503	Foundations of Learning Disabilities	3
LDTC 18550	Foundation of Early Childhood Special Education	3
LDTC 18545	Language Development in Young Children with Disability	3
PSY 06631	Psychological Testing of the Preschool Child	3
LDTC 18600	Seminar and Research in Learning Disabilities I	3
LDTC 18601	Seminar and Research in Learning Disabilities II	3
Total Required Credits for the Program		33 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

Students must successfully complete and defend Master's thesis.

Program Coordinator/Advisor Contact Information
Sharon Davis, Ed.D.
Herman D. James Hall
856.256.4500 ext. 3796
bianco@rowan.edu

Master of Arts in Reading Education (M.A.)

The Masters of Arts in Reading Education is nationally accredited by the National Council for Accreditation in Teacher Education in conjunction with the International Reading Association. This degree leads to a Reading Specialist state certification. It is designed for candidates who have an initial teaching license and want to expand their knowledge, skills, and dispositions in teaching literacy and coaching paraprofessionals and colleagues. Students in the program will have the opportunity to develop both a contemporary conceptual framework and effective strategies that are appropriate for guiding literacy development in classroom and clinical environments.

The goals and objectives for the program and for the individual courses therein are aligned with the International Reading Association standards, preparing reading specialists to work with professionals and students to enable all students to meet the appropriate New Jersey Core Curriculum Standards in Language Arts/Literacy.

The course of studies provides students with an understanding of the basic principles of developmental and remedial reading instruction for grades pre-k-12. Students acquire advanced knowledge of the reading process. They engage in hands-on experiences in diagnosing and teaching learners who are having difficulty with literacy acquisition. The program prepares professionals to teach literacy to all learners and serve as leaders in supporting their colleagues in the field.

Program Requirements

Required Courses		33 s.h.
(s.h.: semester hours/credit hours)		
Course #	**Course Title**	**S.H.**
READ 30540	Administration and Supervision of School Reading Programs	3
READ 30570	Clinical Experiences in Reading	6
READ 30520	Content Area Literacy	3
READ 30560	Correction of Remedial Reading Problems	3
READ 30550	Diagnosis of Remedial Reading Problems	3
READ 30530	Teaching Reading to the Exceptional Child	3
READ 30600	Seminar and Research in Reading	3

READ 30515	Teaching Reading and Writing across the Grades	3
READ 30545	Using Multicultural Literature in the K-12 Reading and Writing Classroom	3
READ 30535	Word Study: Phonics, Spelling and Vocabulary Instruction	3

Total Required Credits for the Program 33 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

- Students must successfully complete a comprehensive exam.
- Students must successfully complete and defend a Master's Thesis.

Program Coordinator/Advisor Contact Information
Alicia Groatman
Herman D. James Hall
856.256.4420
groatman@rowan.edu

Master of Arts in School Administration (M.A.)

This principal preparation program provides the candidate with the opportunity to learn the diagnostic and prescriptive skills necessary to function as a collaborative leader in a P-12 learning organization. The program meets the requirements established by the New Jersey Department of Education for state certification as a public school administrator in positions such as assistant superintendent for curriculum and instruction, principal, assistant principal, vice principal, and director. In order for candidates to qualify for the Certificate of Eligibility (C.E.) for the principal endorsement, they must achieve a satisfactory score on the School Leaders Licensure Assessment.

Program Requirements

Required Courses 36 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
CURR 29580	Fundamentals of Curriculum Development	3
EDST 24504	Action Research in Education	3
EDSU 28546	Educational Organizations and Leadership	3
EDAM 27521	Introduction to the Principalship	3
EDAM 27535	School Finance and Records	3
EDAM 27559	Law and Ethics for School Leadership	3
EDSU 28522	Instructional Leadership and Supervision	3
EDAM 27510	Change for School Improvement	3
EDSU 28523	Building Organizational Capacity	3
CURR 29590	Curriculum Evaluation	3
EDAM 27600	Practicum/Seminar I in Administration and Supervision	3
EDAM 27601	Practicum/Seminar II in Administration and Supervision	3

Total Required Credits for the Program 36 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

Benchmarks: *Successful completion of all benchmarks is required for continuation in and graduation from the program. Details regarding benchmarks timing and assessments will be shared with the student throughout the program by the Academic Advisor.*

Benchmark I:

- *Timing*: Occurs after the completion of 12 prescribed credits (Phase I)
- *Requirements*: Candidates must successfully complete all Phase I courses and begin collecting a sample of course products from Phase I courses that demonstrate formative or developing achievement of appropriate ISLLC/ELCC standards to be ultimately included in final professional portfolio. Discuss details with Academic Advisor.

- *Options*: If the student does not successfully pass the benchmark, then the student is invited to re-take any necessary coursework.

Benchmark II:

- *Timing*: Occurs after the completion of 30 prescribed credits (Phase II)
- *Requirements*: Candidates must achieve a passing score on the School Leader Licensure Assessment and have an approved tenative plan for the Practicum and Seminar in Administration and Supervision courses (internship). Discuss details with the Academic Advisor.
- *Options* : If the student does not successfully pass the benchmark, then the student is able to re-take Assessment Exam or any incomplete coursework, until such time as benchmark is passed or student is made inactive.

Program Coordinator/Advisor Contact Information
Maria Lanza-Gladney
Herman D. James Hall
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lanza-gladney@rowan.edu

Master of Arts in School Psychology (M.A.)

Completion of the Master of Arts (MA) in School Psychology provides a background in the theories, major knowledge, and methodological procedures in school psychology. This program (or its equivalent) is required for admission into the Educational Specialist (EdS) program. The MA and EdS in School Psychology combine to meet the requirements for NJ Department of Education certification in School Psychology.

Program Requirements

Required Courses 31 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
SPED 08555	Educational Psychology of the Exceptional Learner	3
LDTC 18520	Neurological Bases of Educational Disorders	3
COUN 26526	Individual Counseling Procedures	3
COUN 26509	Group Counseling in Educational Settings	3
PSY 09560	Lifespan Development	3
PSY 22507	Development and Learning	3
PSY 03624	Psychopathology of Childhood and Adolescence	3
PSY 01570	Research Methodology and Statistics in Counseling Psych	3
PSY 22600	Seminar I: App Res in School Psychology	
or		
SCPY 22600	Applied Research Seminar I: School Psychology	3
PSY 22601	Seminar II: App Res in School Psychology	
or		
SCPY 22601	Applied Research Seminar II: School Psychology	3
PSY 22602	Applied Research Statistics Lab	1

Required Courses for all Tracks 3 s.h.

Choose one (1) from the following options.

Course #	Course Title	S.H.
FNDS 21530	Foundation of Multicultural Education	3
PSY 05610	Social and Cultural Diversity	3

Total Required Credits for the Program 34 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

- Students must successfully complete and defend Master's thesis.
- Successful completion of comprehensive exam

Program Coordinator/Advisor Contact Information
Barbara Bole Williams, Ph.D.
Herman D. James Hall
856.256.4500 ext. 3804
williamsb@rowan.edu

Master of Arts in Special Education (M.A.)

This advanced program is designed for individuals who possess an instructional certificate and want to pursue a master's degree in Special Education. The purpose of the program is to provide advanced studies focusing on educational, psychological and sociological needs of the children and youth with disabilities. The course work and related field experiences are designed to foster an understanding of students with special needs, combined with pedagogical skills to accommodate these needs and provide appropriate curriculum modifications when necessary. Upon completing the program, candidates earn a Master of Arts in Special Education.

Track Information

There are two track options in this program. The total number of required credits varies from 30-41 depending upon the track selected during the application process.

- **Track I (Low Incidence Disabilities)** is designed for individuals who possess a standard instructional certificate in special education, and wish to increase competency in theory, knowledge, and methodological procedures for working with exceptional individuals.
- **Track II (High Incidence Disabilities)** is designed for individuals who possess a standard instructional certificate, or possess/are eligible for a CEAS, and wish to pursue a masters degree that will increase their knowledge and skills related to working with individuals with exceptional learning needs. The coursework and related field experiences are designed to foster an understanding of students' unique strengths and needs, as well as the pedagogical skills to accommodate these needs and provide appropriate curriculum modifications when necessary. Teacher candidates who successfully complete this program will be recommended for the New Jersey Teacher of Students with Disabilities certification.

Program Requirements for Track I

Required Courses 15 s.h.

(s.h.: semester hours/credit hours)

Choose five (5) of the following courses:

Course #	Course Title	S.H.
SELN 10577	Collaborative Instruction in Inclusive Classrooms	3
LDTC 18503	Foundation of Learning Disabilities	3
SELN 10590	Introduction to Autism Spectrum Disorders	3
SELN 10591	Instructional Methods for Students with Autism Spectrum Disorders	3
SELN 10580	Teaching Students with Moderate and Severe Disabilities	3
SELN 10582	Communication Skills for Students with Disabilities	3
SELN 10586	Emotional & Behavioral Support Strategies	3

Required Restricted Elective Courses 9 s.h.

Choose three (3) of the following:

Course #	Course Title	S.H.
READ 30530	Teaching Reading to the Exceptional Child	3
SELN 10578	Administration & Supervision in Special Education	3
SPED 08540	Technology for Students with Special Needs	3
LDTC 18520	Neurological Bases of Educational Disorders	3
SELN 10593	Clinical Internship	3

Required Seminar Courses 6 s.h.

Course #	Course Title	S.H.
SELN 10600	Research Seminar in Special Education	3
SELN 10601	Research Seminar in Special Education	3

Total Required Credits for the Program 30 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/orThesis Requirements
Students must successfully complete and defend Master's thesis.

Program Requirements for Track II

Required Courses 23 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
SPED 08555	Education & Psychology of Exceptional Learners	3
SELN 10581	Teaching Strategies for Manage. Behavior Disabled	3
SPED 08515	Curriculum, Instruction, and Transition in Special Education	3
SELN 10585	Educational Assessment in Special Education	3
READ 30530	Teaching Reading to Exceptional Children	3
SELN 10577	Collaborative Instruction in Inclusive Classrooms	3
SPED 08520	Clinical Experiences in Special Education	4
SELN 10592	Clinical Seminar in Special Education	1

Required Specialization Courses 9 s.h.

Choose three (3) of the following:

Course #	Course Title	S.H.
LDTC 18503	Foundation of Learning Disabilities	3
SELN 10590	Introduction to Autism Spectrum Disorders	3
SELN 10591	Instructional Methods for Students with Autism Spectrum Disorders	3
SELN 10580	Teaching Students with Moderate and Severe Disabilities	3
SELN 10582	Communication Skills for Students with Disabilities	3
SELN 10586	Emotional & Behavioral Support Strategies	3

Required Restricted Elective Courses 3 s.h.

Choose one (1) of the following:

Course #	Course Title	S.H.
SELN 10578	Administration & Supervision in Special Education	3
SPED 08540	Technology for Students with Special Needs	3
LDTC 18520	Neurological Bases of Educational Disorders	3

Required Seminar Courses 6 s.h.

Course #	Course Title	S.H.
SELN 10600	Research Seminar in Special Education	3
SELN 10601	Research Seminar in Special Education	3

Total Required Credits for the Program 33 s.h.

Foundation Courses
None

Graduation/Exit, Benchmark, and/or Thesis Requirements
Students must successfully complete and defend Master's thesis.

Program Coordinator/Advisor Contact Information
Joy Xin, Ed.D.
Herman D. James Hall
856.256.4734
xin@rowan.edu

Master of Arts in Wellness and Lifestyle Management (M.A.)

The M.A. in Wellness and Lifestyle Management (WLM) is a program for professionals from a variety of disciplines who want to work with clients or students to create and maintain lifestyle changes. The program is designed to prepare graduates to develop and implement wellness and lifestyle change programs in community, hospital, corporate, and school settings.

The M.A. in Wellness and Lifestyle Management program consists of 10 courses and a total of 30 graduate semester hours (S.H.). This is a part-time accelerated program with degree completion possible in 5 consecutive semesters.

Program Requirements

Required Courses 30 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
HLTH 37541	Wellness Coaching and Behavior Change	3
HLTH 37542	Program Planning in Health Promotion	3
HLTH 37512	Understanding and Applying the Professional Literature in HES	3
HRM 06688	Human Resource Management in Health Promotion	3
MGT 06519	Leadership in Health Promotion	3
HLTH 37600	Wellness through the Lifecycle	3
HLTH 37590	Integrating Wellness into School Settings	3
PSY 05512	Positive Psychology	3
HLTH 37580	Obesity and Diabetes Management	3
HLTH 37550	Capstone Course	3

Total Required Credits for the Program 30 s.h.

Foundation Courses

Students must have completed one undergraduate Basic Nutrition course at an accredited institution before beginning HLTH 37580 Obesity and Diabetes Management.

Graduation/Exit, Benchmark, and/or Thesis Requirements

None

Program Coordinator/Advisor Contact Information
Leslie Spencer, Ph.D.
Herman D. James Hall
856.256.4500 ext. 3761
spencer@rowan.edu

Master of Education in Teacher Leadership (M.Ed.)

The M.Ed. in Teacher Leadership program is a graduate program of Rowan University's NCATE accredited College of Education. It is designed for teachers who want to develop and hone their leadership skills but wish to remain in the classroom. Candidates work with curriculum, become mentor/master teachers, and develop programs aimed at improving schooling for all children.

The Master of Education degree program has three goals:

1. To develop teacher leaders who practice teaching skills aligned with the National Board for Professional Teaching Standards (NBPTS)'s Five Core Propositions
2. To develop teacher expertise in a content area of choice
3. To empower teachers to assume leadership roles within their schools and districts

This is a part-time program with its core courses offered in an online accelerated format. The degree requires the completion of 33 to 36 graduate semester hours (s.h.) or 11-12 courses in six consecutive semesters. The following three components make up the M.Ed. in Teacher Leadership program: Core Courses (18 semester hours, also offered as a separate Teaching and Learning COGS) in teaching and learning, Content Area (COGS) (15-18 semester hours), and the Program Exit (a professional synthesis portfolio and teacher leadership presentation completed during the final semester of study).

The six core courses for this program are offered completely online. The approved Content Area Certificates of Graduate Study (COGS) are offered in varying formats depending on the COGS (online, online and face-to-face, face-to-face Glassboro Campus, and face-to-face Camden Campus).

Content COGS Options

Following are the currently accepted content area COGS for this M.Ed. Advisement for each of those COGS is managed by the department in which it is housed.

- Autism Spectrum Disorders (Language, Literacy, and Special Education Department, Glassboro Campus)
- Educational Technology (Teacher Education Department, Online)
- ESL/Bilingual (Teacher Education Department, Online)
- Global History (History Department, Glassboro Campus)
- History (History Department, Glassboro Campus)
- Middle School Mathematics (Mathematics Department, Glassboro Campus)
- Reading (Language, Literacy, and Special Education Department, Glassboro Campus)
- School Public Relations (Public Relations and Advertising Department, Glassboro Campus)
- Secondary Mathematics (Mathematics Department, Glassboro Campus)
- Special Education (Language, Literacy, and Special Education Department, Online and Glassboro Campus)

Program Requirements

Required Courses (Core COGS/Teaching and Learning COGS courses) 18 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
ELEM 02511	Learning Community Classrooms	3
ELEM 02550	Analysis of Classroom Teacher Behaviors	3
EDUC 01624	Educational Change	3
READ 30566	Researching Classroom Practice	3
CURR 29580	Fundamentals of Curriculum Development	3
LDTC 18510	Applied Theories of Learning	3

If students hold National Board certification, two courses in the Core/Teaching and Learning COGS will be waived.

Required Content Area Courses 15-18 s.h.

Choose one of the Content Area COGS options listed and follow the course requirements as listed in this catalog.

Total Required Credits for the Program 33-36 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

- Professional Synthesis Portfolio (includes an Action Research Project)
- Teacher Leadership Presentation

Benchmarks: *Successful completion of all benchmarks is required for continuation in and graduation from the program. Details regarding benchmarks' timing and assessments will be shared with the student throughout the program by the Academic Advisor.*

Benchmark I:

- *Timing*: Occurs after the completion of 12 prescribed credits (Core COGS)
- *Requirements*: Candidates must successfully complete all Core COGS courses and complete a written reflection on progress toward program goals after each course with assigned teacher leadership coach. Discuss details with Academic Advisor.
- *Options*: If the student does not successfully pass the benchmark, then the student is invited ....

Program Coordinator/Advisor Contact Information

Gina Gondos
Herman D. James Hall
856.256.4420
gondos@rowan.edu

Master of Science in Teaching: K-5 Elementary Education (M.S.T.)

The Master of Science in Teaching (M.S.T.) in Elementary Education program offers the unique opportunity for students to pursue an initial New Jersey teaching certificate and a Master's degree simultaneously. The program is designed to prepare individuals who have undergraduate degrees to be certified elementary teachers. Students whose undergraduate degree is in a professional or technical area may need to take as many as 30 additional credits to meet certification requirements before being accepted into the program. Courses that demonstrate content knowledge in the areas of instruction in the elementary classroom are required. Questions about appropriate undergraduate majors, academic sequences or pre-requisites should be directed to the program advisor. The elementary program is designed to prepare prospective teachers for kindergarten through grade five. The M.S.T. program is a full-time program. The program cycle includes four consecutive terms beginning with a summer term and concluding after a second summer term.

Program Requirements

Required Courses 40 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
ELEM 02511	Learning Community Classrooms	3
EDUC 01500	Trends & Practices in Classroom Teaching	3
READ 30515	Teaching Reading and Writing across the Grades	3
ELEM 02512	Teaching Math, Science, and Health in Elementary Classrooms	3
EDUC 01601	Clinical Internship I [FIELD PLACEMENT; 3 full days per week]	5
EDUC 01610	Teaching for Equity and Achievement in Diverse Classrooms	3
SELN 10576	Effective Inclusive Instruction	3
ELEM 02513	Teaching Language Arts, Social Studies, and the Arts in Elementary Classrooms	3
EDUC 01605	Clinical Internship II [FIELD PLACEMENT; 5 full days per week]	7
EDST 24504	Action Research in Education	3
EDUC 02602	MST Professional Seminar	2
EDST 24608	Internship Project Report [INDEPENDENT STUDY]	2

Total Required Credits for the Program 40 s.h.

Foundation Courses

Bachelor's degree must include 60 credits of Liberal Arts and Sciences coursework.

Graduation/Exit, Benchmark, and/or Thesis Requirements

Students must successfully complete a Teacher Work Sample, as well as an Action Research Project, as part of the coursework.

Program Coordinator/Advisor Contact Information
Alicia Groatman
Herman D. James Hall
856-256-4420
groatman@rowan.edu

Master of Science in Teaching in Subject Matter Education (M.S.T.)

The Master of Science in Teaching (M.S.T.) in Subject-Matter (K-12) Education program offers the unique opportunity for students to pursue an initial New Jersey teaching certificate and a Master's degree simultaneously. The program is designed to prepare individuals who have undergraduate degrees to be certified as subject- matter (K-12) teachers. Students whose undergraduate degree is in a professional or technical area may need to take as many as 30 additional credits in the desired content discipline necessary to meet certification requirements before being accepted into the program. Questions about appropriate undergraduate majors, academic sequences or pre-requisites should be directed to the program advisor. The subject- matter program is designed for prospective social studies, English, mathematics, Spanish, or science teachers. The M.S.T. program is a full-time program. The program cycle includes four consecutive terms beginning with a summer term and concluding after a second summer term.

Subject Matter Focus Areas

The following eight *focus areas are available in the Subject Matter Education program. (Students will officially declare their focus area at the time of application.)

- K-12 Biology
- K-12 Chemistry
- K-12 English
- K-12 Foreign Language
- K-12 Mathematics
- K-12 Physical Science
- K-12 Physics
- K-12 Social Studies

*Note: There is also an option for Subject Matter Education – Theatre Education, which has its own catalog entry in this section.

Program Requirements

Required Courses 40 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
ELEM 02511	Learning Community Classrooms	3
EDUC 01500	Trends & Practices in Classroom Teaching	3
READ 30515	Teaching Reading and Writing across the Grades	3
SMED 60500	Teaching Methods I: [Subject Area]	3
EDUC 01601	Clinical Internship I [FIELD PLACEMENT; 3 full days per week]	5
EDUC 01610	Teaching for Equity and Achievement in Diverse Classrooms	3
SELN 10576	Effective Inclusive Instruction	3
SMED 60501	Teaching Methods II: [Subject Area]	3
EDUC 01605	Clinical Internship II [FIELD PLACEMENT ; 5 full days per week]	7
EDST 24504	Action Research in Education	3
EDUC 02602	MST Professional Seminar	2
EDST 24608	Internship Project Report [INDEPENDENT STUDY]	2

Total Required Credits for the Program 40 s.h.

Foundation Courses

For a list of foundation courses for each focus area, please contact the Academic Advisor.

Graduation/Exit, Benchmark, and/or Thesis Requirements

Students must successfully complete a Teacher Work Sample, as well as an Action Research Project, as part of the coursework.

Program Coordinator/Advisor Contact Information
Alicia Groatman
Herman D. James Hall
856-256-4420
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Master of Science in Teaching in Subject Matter Education – Theatre Education (M.S.T.)

The Master of Science in Teaching (M.S.T.) in Theatre Education program offers the unique opportunity for students to pursue an initial New Jersey teaching certificate and a Master's degree simultaneously. The program is designed to prepare individuals who have undergraduate degrees to be certified K-12 Theatre teachers. Students whose undergraduate degree is in a professional or technical area may need to take as many as 30 additional credits in the desired content discipline necessary to meet certification requirements before being accepted into the program. Questions about appropriate undergraduate majors, academic sequences or pre-requisites should be directed to the program advisor. The Theatre Education program is designed for those with undergraduate theatre degrees who wish to teach theatre in K-12 classrooms. The M.S.T. program is a full-time program. The program cycle includes four consecutive terms beginning with a summer term and concluding after a second summer term.

Program Requirements

Required Courses 40 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
ELEM 02511	Learning Community Classrooms	3
EDUC 01500	Trends & Practices in Classroom Teaching	3
THD 07525	Theory and Practice in Teaching Theatre K-12	3
READ 30515	Teaching Reading and Writing across the Grades	3
EDUC 01601	Clinical Internship I [FIELD PLACEMENT; 3 full days per week]	5
EDUC 01610	Teaching for Equity and Achievement in Diverse Classrooms	3
SELN 10576	Effective Inclusive Instruction	3
SMED 60501	Teaching Methods II: [Subject Area]	3
EDUC 01605	Clinical Internship II [FIELD PLACEMENT; 5 full days per week]	7
EDST 24504	Action Research in Education	3
EDUC 02602	MST Professional Seminar	2
EDST 24608	Internship Project Report [INDEPENDENT STUDY]	2

Total Required Credits for the Program 40 s.h.

Foundation Courses

Bachelor's degree should include at least 30 credits from an accredited, four year institution in a coherent sequence in the prospective content area, for which 12 credits must be at the junior, senior, or graduate level.

Graduation/Exit, Benchmark, and/or Thesis Requirements

Students must successfully complete a Teacher Work Sample, as well as an Action Research Project, as part of the coursework.

Program Coordinator/Advisor Contact Information
Alicia Groatman
Herman D. James Hall
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Certificates of Advanced Graduate Study (Non-degree)

Certificate of Advanced Graduate Study in Principal Preparation (CAGS)

This program meets the requirements specified by the state of New Jersey, including a 300 hour internship and is designed to serve the person who has already earned a Master's degree in some field and who wants to qualify as a principal in the public schools. The Principal's Certification Program comprises two different tracks. Applicants must select a track that best meets their needs (based on supervisory experience and NJ Certification code) at the time of admission.

Track Information There are two track options in this program. The total number of required credits varies from 21-24 depending upon the track selected during the application process.

- Track I is for those candidates with a Masters Degree, Supervisor's Certificate, and 5 Years or More of Supervisory Experience. Track I students are required to complete 7 courses.
- Track II is for those candidates with a Masters Degree, Supervisor's Certificate, 5 Years of Full-Time Teaching Experience, and 0-5 Years of Supervisory Experience. Track II students are required to complete 8 courses.

Program Requirements for Track I

Required Courses 21 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
EDAM 27521	Introduction to the Principalship	3
EDAM 27559	Law & Ethics for School Leadership	3
EDSU 28523	Building Organizational Capacity	3
EDAM 27535	School Finance & Records	3
EDAM 27510	Change for School Improvement	3
EDAM 27600	Practicum/Seminar I in Administration & Supervision	3
EDAM 27601	Practicum/Seminar II in Administration & Supervision	3

Total Required Credits for the Program 21 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

Benchmarks: *Successful completion of all benchmarks is required for continuation in and graduation from the program. Details regarding benchmarks' timing and assessments will be shared with the student throughout the program by the Academic Advisor.*

Benchmark I:

- *Timing*: Occurs after the completion of 12 prescribed credits
- *Requirements*: Candidates must achieve a passing score on the School Leader Licensure Assessment and have an approved tenative plan for the Practicum and Seminar in Administration and Supervision courses (internship). Discuss details with the Academic Advisor.
- *Options*: If the student does not successfully pass the benchmark, then the student is able to re-take Assessment Exam or any incomplete coursework, until such time as benchmark is passed or student is made inactive.

Program Requirements for Track II

Required Courses 24 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
EDAM 27521	Introduction to the Principalship	3
EDAM 27559	Law & Ethics for School Leadership	3
EDSU 28522	Instructional Leadership & Supervision (Track II only)	3
EDSU 28523	Building Organizational Capacity	3
EDAM 27535	School Finance & Records	3
EDAM 27510	Change for School Improvement	3
EDAM 27600	Practicum/Seminar I in Administration & Supervision	3
EDAM 27601	Practicum/Seminar II in Administration & Supervision	3

Total Required Credits for the Program 24 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

Benchmarks: *Successful completion of all benchmarks is required for continuation in and graduation from the program. Details regarding benchmarks' timing and assessments will be shared with the student throughout the program by the Academic Advisor.*

Benchmark I:

- *Timing*: Occurs after the completion of 12 prescribed credits
- *Requirements*: Candidates must achieve a passing score on the School Leader Licensure Assessment and have an approved tenative plan for the Practicum and Seminar in Administration and Supervision courses (internship). Discuss details with the Academic Advisor.
- *Options*: If the student does not successfully pass the benchmark, then the student is able to re-take Assessment Exam or any incomplete coursework, until such time as benchmark is passed or student is made inactive.

Program Coordinator/Advisor Contact Information
Maria Lanza-Gladney
Herman D. James Hall
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lanza-gladney@rowan.edu

Certificates of Graduate Study (Non-degree)

Certificate of Graduate Study in Autism Spectrum Disorders (COGS)

The Certificate of Graduate Study in Autism Spectrum Disorders program is designed to enable school professionals and behavior specialists to develop their knowledge about students on the autism spectrum and to learn about instructional strategies for or this rapidly expanding population. Students will understand the definition and causes of the various syndromes within the broad category of Autism Spectrum Disorders. They will also learn how to design and modify instruction for individuals with ASD to address their learning, social, behavior, and communication needs.

Program Requirements

Required Courses 15 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
SELN 10590	Introduction to Autism Spectrum Disorders	3
SELN 10591	Instructional Methods for Students with Autism Spectrum Disorders	3
SELN 10582	Communication Skills for Students with Disabilities	3
PSY 02600	ABC's of ABA	3
PSY 02520	Assessment and Interventions for Social Skills and Relationships in Children	3

Total Required Credits for the Program 15 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

None

Program Coordinator/Advisor Contact Information
S. Jay Kuder, Ed.D., Chair
Herman D. James Hall
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Certificate of Graduate Study in Educational Technology (COGS)

The Certificate of Graduate Study in Educational Technology includes a comprehensive picture of the use of computers in education today. The goal of this program is to provide educators with the knowledge and proficiencies needed to incorporate the existing and emerging educational technologies into their classroom. Individuals completing this program will not only be skilled in the use of computers in the classroom, they will be prepared to assume leadership roles in educational technology in preschool to twelfth grades.

Program Requirements

Required Courses 15 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
EDTC 33580	Introduction to Educational Technology	3
EDTC 33584	Desktop Publishing in the Educational Environment	3
EDTC 33510	Computers and the Curriculum	3
EDTC 33585	Internet in the Classroom	3
SPED 08540	Technology for Students with Special Needs	3

Total Required Credits for the Program 15 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements
None

Program Coordinator/Advisor Contact Information
Gina Gondos
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Certificate of Graduate Study in English as a Second Language (COGS)

There is a critical need for highly qualified teachers trained to work with the growing numbers of English language learners in US schools. This program is open to candidates who possess NJ standard instructional certification in other areas, as well as to alternate route candidates who are eligible for NJ instructional certification. The program is approved by the New Jersey State Department of Education. Specific objectives are to: (1) develop multifaceted understandings of the unique needs, challenges, and experiences of ELL students in order to advocate for their success; (2) develop curriculum, including lesson and unit plans, that integrates language and content for ELL students at various levels of English proficiency; and (3) instruct ELL students using cutting-edge, research-based teaching methods.

The COGS also represents an opportunity for prospective teachers of ESL to continue their professional development in the M.Ed. in Teacher Leadership and in the MA in Higher Education, Instructional Track.

The number of credit hours required for the program varies depending upon whether or not the candidate holds a NJ teaching certificate. Those who already possess a NJ teaching certificate complete 16 s.h. and those without complete 21 s.h.

Program Requirements

Required Courses 16-21 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
BLED 40510	Issues of Language and Cultural Diversity in ESL/Bilingual Programs	3
BLED 40512	Linguistics and Second Language Acquisition for Teaching Languages	3
BLED 40520	Planning, Teaching and Assessment in ESL	3
BLED 40515	Language, Culture, and Communication	3
BLED 40522	Integrating Language and Content in ESL/ Bilingual Education	3
BLED 40523	Practicum in Teaching ESL	1
or		
BLED 40524*	Clinical Internship in ESL	6

*BLED 40.524: Clinical Internship in ESL will be required for all program candidates who do not currently hold a Standard certificate, or a Certificate of Eligibility with Advanced Standing (CEAS) license from the State of NJ. Any program candidate who currently holds one of those licenses must take BLED 40.523: Practicum in Teaching ESL.

Total Required Credits for the Program 16-21 s.h.

Foundation Courses
None

Graduation/Exit, Benchmark, and/or Thesis Requirements
None

Program Coordinator/Advisor Contact Information
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Certificate of Graduate Study in Reading (COGS)

This program meets the increasing need for highly qualified practitioners in the area of reading. This program benefits classroom teachers K-12 who wish to increase their knowledge of literacy instruction. It offers a strong pedagogical and theoretical core from the reading discipline that will enable teachers to pursue an advanced degree. The COGS in Reading does not lead to any state certification. All courses carry over to the MA in Reading as appropriate.

Program Requirements

Required Courses 15 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
READ 30515	Teaching Reading and Writing Across the Grades	3
READ 30520	Content Area Literacy	3
READ 30535	Word Study: Phonics, Spelling, and Vocabulary Instruction	3
READ 30530	Teaching Reading to Exceptional Children	3
READ 30545	Using Multicultural Literature in the K-12 Reading & Writing Classroom	3

Total Required Credits for the Program 15 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

None

Program Coordinator/Advisor Contact Information
Alicia Groatman
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Certificate of Graduate Study in Reading/Writing Literacy (COGS)

This program meets the increasing need for highly qualified practitioners in the area of Reading/Writing Literacy as required by the Common Core English and Language Arts Standards. This program benefits classroom teachers K-12 who wish to increase their knowledge of literacy instruction. Courses in this program also enable teachers to apply for National Board Certification by building content area knowledge in reading and writing. The COGS in Reading/Writing Literacy does not lead to any state certification. All courses carry over to either the MA in Writing or the MA in Reading as appropriate.

Program Requirements

Required Courses 15 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
READ 30515	Teaching Reading and Writing Across the Grades	3
READ 30520	Content Area Literacy	3
READ 30535	Word Study: Phonics, Spelling, and Vocabulary Instruction	3
READ 30552	Selected Topics in Reading	3
or		
MAWR 01618	Special Topics in Writing	3
MAWR 01549	Issues in Composition	3
MAWR 01556	Assessment of Writing	3

Total Required Credits for the Program 15 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

None

Program Coordinator/Advisor Contact Information
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Certificate of Graduate Study in Special Education (COGS)

The Certificate of Graduate Study (COGS) in Special Education is designed for general education teachers who wish to increase their knowledge of special education, as well as special education teachers who wish to pursue further coursework at the graduate level. The goal of this certificate is to provide teachers with an overview of the salient issues in special education, as well as opportunities to focus on the essential aspects of evidence-based practices.

The six course sequence and corresponding field experiences are aligned with the professional standards set forth by the Council for Exceptional Children, as well as the New Jersey Department of Education; collectively they ensure program graduates acquire the essential knowledge, skills, and dispositions needed to best serve students with disabilities.

This COGS is offered in an online format and can be used to satisfy the COGS requirement in the Master of Education. Teachers who successfully complete the COGS coursework can also opt to continue pursuit of the Teacher of Students with Disabilities Graduate Endorsement Program (see a department representative for additional details).

Program Requirements

Required Courses 18 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
READ 30530	Teaching Reading to Exceptional Children	3
SELN 10577	Collaborative Instruction in Inclusive Classrooms	3
SPED 08515	Curriculum, Instruction, Transition in Special Education	3
SELN 10585	Educational Assessment in Special Education	3
SPED 08555	Education and Psychology of Exceptional Learners	3
SELN 10581	Implementing Positive Behavior Strategies	3

Total Required Credits for the Program 18 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

Successful completion of the comprehensive exam.

Program Coordinator/Advisor Contact Information
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Certificate of Graduate Study in Teaching and Learning (COGS)

The Certificate of Graduate Study in Teaching and Learning COGS is designed for teachers who desire to develop and hone their leadership skills and who wish to remain in the classroom. The program approaches leadership from the perspectives of exemplary teaching, continuous learning for all, a need to balance change with stability and the importance of peaceful existence in a diverse community of learners. This COGS also serves as the Core of the M.Ed. in Teacher Leadership and is offered in an online format.

The following Five Core Propositions of the National Board for Professional Teaching Standards (NBPTS) and three additional Principles identified by College of Education faculty provide the focus for the master's program:

NBPTS Propositions

1. Teachers are committed to students and their learning.
2. Teachers know the subjects they teach and how to teach those subjects to students.
3. Teachers are responsible for managing and monitoring student learning.
4. Teachers think systematically about their practice and learn from their experience.
5. Teachers are members of learning communities.

Rowan Program Principles

1. Teachers account for the needs of culturally, linguistically, and cognitively diverse learners.
2. Teachers are change agents, teacher leaders, and partners with colleagues.
3. Teachers use technology to facilitate student learning and their own professional development.

Program Requirements

Required Courses 18 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
ELEM 02511	Learning Community Classrooms	3
ELEM 02550	Analysis of Classroom Teacher Behavior	3
EDUC 01624	Educational Change	3
READ 30566	Researching Classroom Practice	3
CURR 29580	Fundamentals of Curriculum Development	3
LDTC 18510	Applied Theories of Learning	3

If students hold National Board certification, two courses in the Core/Teaching and Learning COGS will be waived.

Total Required Credits for the Program 18 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

None

Program Coordinator/Advisor Contact Information
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Certifications & Endorsements & Related Post-Baccalaureate programs (Non-degree)

Learning Disabilities Teacher/Consultant Certification (LDTC)

Learning Disabilities Teacher-Consultants work in collaboration with other members of a child study team to determine eligibility for special services. LDT-Cs also consult with parents, teachers, and other school personnel to provide research-based instructional strategies to assist pupils struggling academically.

Graduates of the Master of Arts in Learning Disabilities Program at Rowan University earn the Learning Disabilities Teacher-Consultants certificate (an Educational Services credential) concomitantly with the Master of Arts in Learning Disabilities degree. However, applicants who have earned a Masters degree in learning disabilities from another institution or a masters degree in a related field (e.g., special education or reading) may apply to the Learning Disabilities Teacher-Consultant (LDT-C) certificate-only program. This program meets all State of New Jersey requirements for the LDT-C certificate. It also received national recognition for accreditation through CEC for educational diagnosticians.

Program Requirements

Required Courses 33 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.

LDTC 18516	Applied Tests and Measurements	3
LDTC 18510	Applied Theories of Learning	3
SPED 08555	Education & Psychology of Exceptional Learners	3
LDTC 18520	Neurological Bases of Educational Disorders	3
READ 30530	Teaching Reading to Exceptional Children	3
LDTC 18503	Foundations of Learning Disabilities	3
LDTC 18504	Assessment of Learning Disabilities	3
LDTC 18505	Correction of Learning Disabilities	3
LDTC 18525	Advanced Assessment Techniques	3
LDTC 18650	Clinical & Field Experiences in Learning Disabilities*	6

* matriculated students only and only with permission of program advisor

Total Required Credits for the Program 33 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

None

Program Coordinator/Advisor Contact Information
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Supervisor Certification

This program meets the requirements specified by the state of New Jersey and is designed to serve the person who has already earned a Master's degree in some field and who wants to qualify as a supervisor in the public schools; one who is charged with authority and responsibility for the continuing direction and guidance of the work of instructional personnel.

Program Requirements

Required Courses 12 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
EDSU 28546	Educational Organizations & Leadership	3
CURR 29580	Fundamentals of Curriculum Development	3
EDSU 28522	Instructional Leadership & Supervision	3
CURR 29590	Curriculum Evaluation	3

Total Required Credits for the Program 12 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

None

Program Coordinator/Advisor Contact Information
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Bilingual/Bicultural Education Endorsement

This program responds to the need for highly qualified teachers prepared to teach content in both the student's native language and in English to the growing numbers of English language learners in the schools. The program, approved by the New Jersey State Department of Education, includes 12 credits hours of formal instruction in the following topics: linguistics, language acquisition, development of literacy skills for the second language learner, methods of teaching content in bilingual education, and theory and practice of bilingual education. Specific objectives emphasize the application of theory to practice, development of long-range and short-range plans that integrate language and content, design of appropriate authentic assessment instruments, and use of technology to research content and instructional techniques.

Program Requirements

Required Courses 12 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
BLED 40510	Issues of Language and Cultural Diversity in ESL/Bilingual Programs	3
BLED 40512	Linguistics and Second Language Acquisition for Teaching Languagest	3
BLED 40522	Integrating Language and Content in the ESL/ Bilingual Education Classroom	3
BLED 40521	Teaching Bilingual Education: Process and Practicet	3

Total Required Credits for the Program 12 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

None

Program Coordinator/Advisor Contact Information
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Endorsement in Driver Education

The Endorsement in Driver Education is designed to provide individuals seeking New Jersey State Driver Education Teacher Endorsement a convenient route to that goal. This program consists of one course, Teaching Concepts of Drivers Education. Coursework is a combination of in class, behind-the-wheel, and online work. Students may opt to register for the course only or seek Driver's Education Endorsement. Those wishing to have their credentials submitted to the State of New Jersey for endorsement must officially matriculate into the program. Any qualified person meeting the course qualifications may register for this course.

There are two pathways/codes for the Driver Education Endorsement:

- Current undergraduates still pursuing their Bachelor's degree, will apply for the .BMND-DRVED code/program.
- Those who are already certified Health and Physical Education (HPE) teachers will apply for the .BMUE-DRVED code/program.

Program Requirements

Required Courses 3 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
PHED 36100	Teaching Concepts of Drivers Education	3

Total Required Credits for the Program 3 s.h.

Foundation Courses
None

Graduation/Exit, Benchmark, and/or Thesis Requirements
None

Program Coordinator/Advisor Contact Information
Shari Willis, Ph.D.
Herman D. James Hall
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Graduate Endorsement for Teacher of Students with Disabilities

This program is designed for individuals who possess a standard instructional certificate, or possess/are eligible for CEAS and wish to obtain Teacher of Students with Disabilities certification in New Jersey. The purpose of the program is to provide advanced studies focusing on educational, psychological and sociological needs of children and youth with disabilities. Each course in the program builds on the earlier knowledge and skills gained in the candidates initial certification programs.

The coursework and related field experiences are designed to foster an understanding of students with special learning needs, combined with pedagogical skills to accommodate these needs and provide appropriate curriculum modifications when necessary. Upon completing the program, candidates will be recommended for certification.

Candidates who want to pursue a Masters degree may transfer 9 credit hours to the Master of Arts in Special Education program and must apply through the College of Graduate & Continuing Education.

Students who have completed the COGS in Special Education and want to pursue the certification of Teacher of Students with Disabilities need to reapply for this endorsement program.

Program Requirements

Required Courses 23 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
SELN 10577	Collaborative Instruction in Inclusive Classrooms	3
SELN 10581	Implementing Positive Behavior Strategies	3
SELN 10585	Educational Assessment in Special Education	3
SPED 08515	Curriculum, Instruction, Transition in Special Education	3
SPED 08520	Clinical Experiences in Special Education	4
SPED 08555	Education and Psychology of Exceptional Learners	3
SELN 10592	Clinical Seminar in Special Education	1
READ 30530	Teaching Reading to Exceptional Children	3

Total Required Credits for the Program 23 s.h.

Foundation Courses
None

Graduation/Exit, Benchmark, and/or Thesis Requirements
Successful completion of comprehensive exam

Program Coordinator/Advisor Contact Information
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Post-baccalaureate: Teacher of Reading

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.

Program Requirements

Reading Theory and Pedagogy 12 s.h.

(s.h.: semester hours/credit hours)

Choose from the following:

Course #	Course Title	S.H.
READ 30280	Teaching Literacy	3
READ 30319	Teaching Reading and Writing in the Content Area (for Subject Matter Education)	3
READ 30320	Language Development and Emergent Literacy (for Early Childhood Education)	4
READ 30351	Differentiated Literacy Instruction	2
and		
ELEM 02338	Practicum in Mathematics and Literacy	1
READ 30347	Phonics and Spelling	3
READ 30350	Using Children's Literature in the Reading/Writing Classroom	3
READ 30515	Teaching Reading and Writing Across the Grades	3
READ 30520	Content Area Literacy	3
READ 30530	Teaching Reading to the Exceptional Child	3
READ 30535	Word Study: Phonics, Spelling, and Vocabulary Instruction	3
READ 30545	Using Multicultural Literature in the K-12 Reading and Writing Classroom	3
READ 30540	Administration & Supervision of School Reading Programs	3

Application through Tutoring 6 s.h.

Choose from the following:

Course #	Course Title	S.H.
READ 30421	School Reading Problems	3
READ 30451	Supervised Clinical Practice	3
READ 30550	Diagnosis of Remedial Reading Problems	3
READ 30560	Correction of Remedial Reading Problems	3
READ 30570	Clinical Experiences in Reading	6

Core/Supporting Courses 12 s.h.

Choose from the following:

Course #	Course Title	S.H.
PSY 22512	Educational Psychology	3
PSY 22586	Psychology of Motivation and Learning	3
FNDS 21230	Characteristics of Knowledge Acquisition	3
SPED 08130	Human Exceptionality	3
READ 30120	Literacies in Today's World	3
EDUC 01272	Teaching in Learning Communities II	2
SECD 03350	Teaching Students of Linguistic and Cultural Diversity	1
WA 01401	Writer's Mind	3

Total Required Credits for the Program 30 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

None

Program Coordinator/Advisor Contact Information
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Herman D. James Hall
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Post-baccalaureate: Teacher of Students with Disabilities

This endorsement program leads to certification as a Teacher of Students with Disabilities and is available to students who have been admitted to teacher certification programs or who already hold, or are eligible for, New Jersey teaching certificates. The program requires students to successfully complete 27 semester hours of coursework in special education and special education-related areas to obtain the Teacher of Students with Disabilities Certification. Please note that all classes have required field placement components. Teacher of Students with Disabilities certification is granted only when a student has fulfilled all requirements for an initial teaching certification and has passed the Praxis II (10352): Application of Core Principles across Categories of Disability.

Program Requirements

Required Courses 27 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
SPED 08130	Human Exceptionality	3
SPED 08307	Assessment of Students with Exceptional Learning Needs (ELNs)	3
SPED 08308	Assistive Technology and Transition Planning for Students with ELNs	3
READ 30280	Teaching Literacy	3
READ 30351	Differentiated Literacy Instruction	2
SPED 08316	Differentiated Instruction in the Inclusive Classroom	2
SPED 08360	Positive Behavioral Support Systems	3
SPED 08415	Specialized Instruction for ELNs	3
SPED 08445	Clinical Seminar in Special Education	1
SPED 08450	Clinical Practice in Special Education	4

Note: Students who are currently matriculated in the B.A. in Education Specialization: Early Childhood Education (P-3) program should consult with their Academic Advisors regarding specific requirements.

Total Required Credits for the Program 27 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

Benchmarks: *Successful completion of all benchmarks is required for continuation in and graduation from the program. Details regarding benchmarks' timing and assessments will be shared with the student throughout the program by the Academic Advisor.*

Benchmark I:

- *Timing*: Occurs after the completion of 22 prescribed credits
- *Requirements*: Candidates must achieve passing scores on the Praxis I, Praxis II: Subject, and Praxis II: Special Education.
- *Options*: If the student does not successfully pass the benchmark, then the student is able to re-take Assessment Exam or any incomplete coursework, until such time as benchmark is passed or student is made inactive.

Program Coordinator/Advisor Contact Information
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Post-baccalaureate: School Nursing Certification

The Post Baccalaureate School Nursing Certification Program is designed to build upon the baccalaureate prepared registered nurse's varied educational and experiential foundation of previously acquired knowledge, skills, and attitudes for the enhancement of the nurse's professional performance in the school setting. A dual preparation in health and education best qualifies school nurses for participation in the intraprofessional and interdisciplinary aspects of school health.

The Post-Baccalaureate School Nursing Certification Program reflects a curriculum that requires students to matriculate into the program, have a baccalaureate degree from an accredited college or university, a current New Jersey professional registered nurse (RN) license issued by the New Jersey Board of Nursing and current certificates in cardiopulmonary resuscitation (CPR) and automated external defibrillators (AED).

The curriculum permits students to become eligible for the New Jersey Standard Educational Services Certificate with a School Nurse Endorsement. It is a non-degree post baccalaureate certification program designed to prepare registered nurses with the course requirements to meet the mandates of the New Jersey Administrative Code (NJAC 6A: 9-13.3) and with the NASN Standards of Professional School Nursing Practice and Standards of Care.

Program Requirements

Required Courses 18 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
SNUR 92407	School & Family Issues for Children with Ongoing Health Care Needs	3
SNUR 92466	School Health Services	3
SNUR 92430	Methods & Materials in Health Teaching for School Nurses	3
SNUR 92444	Practicum in School Nursing	3
SPED 08130	Human Exceptionality	3
SNUR 92445	Internship in Health Teaching for School Nursing	3

Total Required Credits for the Program 18 s.h.

Foundation Courses

Eligible applicants must have successfully completed the following undergraduate foundation courses at an accredited institution. During the admissions process, the School Nursing Academic Advisor will determine foundation course equivalencies and how any unfinished undergraduate foundation courses can be scheduled concurrently with post-bac enrollment. If applicable, official notification of any unfinished foundation courses will be included in the applicant's official admission decision letter from Rowan University.

- FC-1. NURS 03.401 Community Health Nursing (3.0 s.h.)
- FC-2. PSY 09.210 Adolescent Development (3.0 s.h.)
- FC-3. NURS 03.303 Health Assessment (3.0 s.h.)
- FC-4. An equivalent to Human & Intercultural Relations (3.0 s.h.)

Graduation/Exit, Benchmark, and/or Thesis Requirements

None

Program Coordinator/Advisor Contact Information

Gina Gondos
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College of Engineering

Anthony Lowman, Ph.D., Dean
Henry M. Rowan Hall
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Steven H. Chin, Ph.D., P.E., Associate Dean
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Introduction and Mission

The mission of the 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 of Engineering 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.

The College of Engineering consists of programs in the areas of chemical engineering, civil engineering, environmental engineering, electrical & computer engineering, engineering management, and mechanical engineering. At the core of the program are faculty who collaborate as a multidisciplinary team. The engineering program is designed to provide students with the tools needed to contribute to the technological and economic development of our global society.

The graduate program is tailored to provide students with opportunities to enhance the breadth of their education, or to specialize in a technical area. It also provides a strong foundation for doctoral studies. Industry partnerships provide an additional dimension to the graduate program through joint ventures in Engineering Clinic, research and development projects. The result is a new breed of engineer; professionals schooled in practical applications and theory, and agile engineers ready to improve existing processes and products, and create new systems.

Departments

The College of Engineering houses the following academic departments: Chemical Engineering, Civil and Environmental Engineering, Electrical and Computer Engineering, and Mechanical Engineering. (Not all departments offer programs through the College of Graduate & Continuing Education.)

Department of Chemical Engineering
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Department of Civil and Environmental Engineering
Beena Sukumaran, Ph.D., Chair
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Department of Electrical and Computer Engineering
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Programs Offered

All programs offered are listed below in order of degree/program type and then in alphabetical order by program name. Details about each program are then listed within the catalog in the same order.

MASTER'S DEGREES

Program Name	Format/location	Program/Major Codes	Avail FT/PT	Total credits
Master of Engineering Management	100% online and accelerated	.COMEM-ENMAN\G913	Part-time	30
Master of Science in Chemical Engineering	Face-to-face/Glassboro	MS- CHEMENGR\G907	Both	30
Master of Science in Civil Engineering	Face-to-face/Glassboro	MS-CIVENGR\G905	Both	30
Master of Science in Electrical & Computer Engineering	Face-to-face/Glassboro	MS-ECENGR\G903	Both	30
Master of Science in Engineering Management	Face-to-face/Glassboro, with accelerated/online course options	MS-ENMAN\G902	Both	30
Master of Science in Mechanical Engineering	Face-to-face/Glassboro	MS- MECHENGR\G904	Both	30

A note about mode of delivery: We are always doing all we can to offer our courses and programs to students in the ways that best meet their needs – whether online, off-site, in a blended/hybrid format, accelerated, or some combination of these. For the most up-to-date information regarding mode of delivery options for your program of interest, please visit www.rowancgce.com/programs .

Admissions

For the most up-to-date information regarding admission requirements, entry points, and application deadlines, please visit www.rowancgce.com/programs . Click on your program of interest to be connected to program and admission details.

Master's Degrees

Master of Engineering Management (M.E.M.)

The goal of the Engineering Management (M.E.M.) program is to effectively prepare engineers for management level positions. Students in this program receive knowledge of administrative procedures such as budgeting, strategic decision making, and supervising. Also, the combination of courses from Rowan's College of Engineering and AACSB accredited Rohrer College of Business equips students with the ideal balance of advanced technical knowledge and managerial skills required to advance as managers. The M.E.M. is a part-time program offered in an accelerated online format. Two courses are scheduled per semester for five consecutive semesters resulting in possible degree completion in less than 24 months.

Program Requirements

Required Courses 30 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S. H.
ENGR 01501	Special Topics in Engineering: Facilities Management	3
ENGR 01501	Special Topics in Engineering: Systems	3
MGT 06677	Management Skills for Engineers	3
EM 01512	Quality in Engineering Management	3
MGT 06666	Managing Engineering Teams	3
EM 01501	Engineering Economics	3
EM 01511	Strategic Risk Management	3
MIS 02526	Project Management for Engineers	3
EM 01541	Engineering Law and Ethics	3
EM 01513	Engineering Decisions	3

Total Required Credits for the Program 30 s.h.

Foundation Courses

The following undergraduate courses must be successfully completed at an accredited institution: Chemistry I, Physics I, Calculus I, and Statistics I.

Graduation/Exit, Benchmark, and Thesis Requirements

None

Program Coordinator/Advisor Contact Information
Ralph Alan Dusseau, Ph.D., P.E.
Rowan Hall
856.256.5320
dusseau@rowan.edu

Master of Science in Chemical Engineering (M.S.)

The Chemical Engineering specialization emphasizes project management skills and industrially relevant research that prepares students and working engineers for successful careers in high-tech fields. This specialization also includes the following focus areas: Bioengineering; Signals, Systems and Computational Intelligence; and Sustainability.

Students can choose between a thesis track, and a coursework track. Students may also work on a project, which may be counted toward a coursework track degree. Most full time students work on funded research projects, leading to a thesis. Most part time students select the coursework track. In order to be eligible for a Research Assistantship, students must select the thesis track.

Tracks

The program includes two tracks. Each have different course and graduation exit requirements which are outlined in the chart.

- Thesis Track: The thesis option requires the completion of 30 semester hours, 6-9 of which are in thesis research/engineering project.
- Non-Thesis Track: The non-thesis option requires the completion of 30 semester hours of coursework.

Program Requirements

Required Courses 9 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S. H.
MATH 01515	Engineering Applications of Analysis (or equivalent)	3
TBD	Engineering Application of Computers (or equivalent determined in consultation with Academic Advisor)	3
TBD	Approved Business course – determined in consultation with Academic Advisor)	3

Required Specialized Courses 12–21 s.h.

Choose 21 s.h. (non-thesis track) or 12-15 s.h. (thesis track) of approved electives in consultation with the Academic Advisor. The eligible courses include, but are not limited to the following:

Course #	Course Title	S. H.
CHE 06502	Special Topics in Chemical Engineering	3
CHE 06506	Process Heat Transfer	3
CHE 06508	Membrane Process Technology	3
CHE 06510	Biochemical Engineering	3
CHE 06512	Safety in the Process Industries	3
CHE 06514	Transport Phenomena for Engineers	3
CHE 06515	Advanced Reactor Design	3
CHE 06516	Advanced Separation Process Technology	3
CHE 06518	Polymer Engineering	3
CHE 06520	Green Engineering Design in the Chemical Industry	3
CHE 06528	Fluid Flow Applications in Processing and Manufacturing	3
CHE 06568	Electrochemical Engineering	3
CHE 06570	Air Pollution Control	3
CHE 06572	Biomedical Process Engineering	3
CHE 06574	Advances in Particle Technology	3
CHE 06576	Bioseparation Processes	3
CHE 06577	Advanced Engineering Process Analysis & Experimental Design	3
CHE 06579	Industrial Process Pathways	3
CHE 06580	Optimization of Engineering Projects	3
CHE 06581	Advanced Process Analysis	3

CHE 06582	Food Engineering Systems	3

Required Thesis/Project Courses 6–9 s.h.

Course #	Course Title	S. H.
ENGR 01599	Masters Research	6-9

Total Required Credits for the Program 30 s.h.

Foundation Courses

The following undergraduate courses must be successfully completed at an accredited institution: Chemistry I, Physics I, Calculus I, II, and III, Linear Algebra, and Differential Equations.

Graduation/Exit, Benchmark, and Thesis Requirements

If thesis track is selected, students must successfully complete and defend the Master's Thesis.

Program Coordinator/Advisor Contact Information
Zeneida Otero Gephardt, Ph.D.
Rowan Hall
856.256.5314
gephardtzo@rowan.edu

Master of Science in Civil Engineering (M.S.)

The Civil Engineering specialization allows students to develop an interdisciplinary focus through their coursework and thesis topic. Graduate students work with faculty with expertise in transportation, geo-technology, structures, water resources, and the environment. Interdisciplinary areas include mechanics and materials, and sustainability. This specialization also includes the following focus areas: Mechanics and Materials; Signals, Systems and Computational Intelligence; Sustainability; and Transportation Engineering.

Students can choose between a thesis track, and a coursework track. Students may also work on a project, which may be counted toward a coursework track degree. Most full time students work on funded research projects, leading to a thesis. Most part time students select the coursework track. In order to be eligible for a Research Assistantship, students must select the thesis track.

Tracks

The program includes two tracks. Each have different course and graduation exit requirements which are outlined in the chart.

- Thesis Track: The thesis option requires the completion of 30 semester hours, 6-9 of which are in thesis research/engineering project.
- Non-Thesis Track: The non-thesis option requires the completion of 30 semester hours of coursework.

Program Requirements

Required Courses 9 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S. H.
MATH 01515	Engineering Applications of Analysis (or equivalent determined in consultation with Academic Advisor)	3
TBD	Engineering Application of Computers (or equivalent determined in consultation with Academic Advisor)	3
TBD	Approved Business course – Please discuss with Academic Advisor.	3

Required Specialization Courses 12–21 s.h.

Choose 21 s.h. (non-thesis track) or 12-15 s.h. (thesis track) of approved electives in consultation with the Academic Advisor. The eligible courses include, but are not limited to the following:

Course #	Course Title	S. H.
CEE 08504	Engineering Estimating	3
CEE 08507	Prestressed Concrete	3
CEE 08512	Advanced Environmental Treatment Process	3
CEE 08522	Site Remediation Engineering	3

CEE 08531	Solid/Hazardous Water Management	3
CEE 08532	Pollutant Fate & Transport	3
CEE 08533	Integrated Solid Waste Management	3
CEE 08543	Advanced Water Resources	3
CEE 08544	Hydraulic Design	3
CEE 08545	Environmental Fluid Mechanics	3
CEE 08552	Foundation Engineering	3
CEE 08553	Earth Retaining Systems	3
CEE 08562	Advanced Transportation	3
CEE 08564	Design Elements Transport Engineering	3
CEE 08573	Advanced Structural Analysis	3
CEE 08584	Prestressed Concrete	3
CEE 08585	Advanced Reinforced Concrete	3
CEE 08586	Bridge Engineering	3

Required Thesis/Project Courses 6–9 s.h.

Course #	Course Title	S. H.
ENGR 01599	Masters Research	6-9

Total Required Credits for the Program 30 s.h.

Foundation Courses

The following undergraduate courses must be successfully completed at an accredited institution: Chemistry I, Physics I, Calculus I, II, and III, Linear Algebra, and Differential Equations.

Graduation/Exit, Benchmark, and Thesis Requirements

If thesis track is selected, students must successfully complete and defend the Master's Thesis.

Program Coordinator/Advisor Contact Information
Yusuf Mehta, Ph.D., P.E.
Rowan Hall
856.256.5320
mehta@rowan.edu

Master of Science in Electrical and Computer Engineering (M.S.)

The Electrical Engineering specialization gives students an opportunity to expand their skill sets in advanced topics of interest. Specialization areas include signal & image processing, computational intelligence and pattern recognition, power systems and renewable energy, discrete event systems, and virtual reality systems. This specialization also includes the following focus areas: Bioengineering; Signals, Systems and Computational Intelligence; and Sustainability.

Students can choose between a thesis track, and a coursework track. Students may also work on a project, which may be counted toward a coursework track degree. Most full time students work on funded research projects, leading to a thesis. Most part time students select the coursework track. In order to be eligible for a Research Assistantship, students must select the thesis track.

Tracks

The program includes two tracks. Each have different course and graduation exit requirements which are outlined in the chart.

- Thesis Track: The thesis option requires the completion of 30 semester hours, 6-9 of which are in thesis research/engineering project.
- Non-Thesis Track: The non-thesis option requires the completion of 30 semester hours of coursework.

Program Requirements

Required Courses 9 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S. H.
MATH 01515	Engineering Applications of Analysis (or equivalent)	3
TBD	Engineering Application of Computers (or equivalent determined in consultation with Academic Advisor)	3
TBD	Approved Business course – Please discuss with Academic Advisor.	3

Required Specialization Courses 12–21 s.h.

Choose 21 s.h. (non-thesis track) or 12-15 s.h. (thesis track) of approved electives in consultation with the Academic Advisor. The eligible courses include, but are not limited to the following:

Course #	Course Title	S. H.
ECE 09504	St Elec & Comp Engineering	3
ECE 09551	Digital Signal Processing	3
ECE 09552	Digital Image Processing	3
ECE 09553	Digital Speech Processing	3
ECE 09554	Theory/Eng App of Wavelets	3
ECE 09555	Adv Topics in Pattern Recog	3
ECE 09556	Embedded System Design	3
ECE 09560	Artificial Neural Networks	3
ECE 09571	Instrumentation	3
ECE 09521	Fundamentals in Systems Engineering	3
ECE 09566	Advanced Topics in Devices, Algorithms, in Bio	3
ECE 09572	Advanced Smart Grid	3
ENGR 01510	Finite Element Analytics\3	
ENGR 01511	Engineering Optimization	3

Required Thesis/Project Courses 6–9 s.h.

Course #	Course Title	S. H.
ENGR 01599	Masters Research	6-9

Total Required Credits for the Program 30 s.h.

Foundation Courses

The following undergraduate courses must be successfully completed at an accredited institution: Chemistry I, Physics I, Calculus I, II, and III, Linear Algebra, and Differential Equations.

Graduation/Exit, Benchmark, and Thesis Requirements

If thesis track is selected, students must successfully complete and defend the Master's Thesis.

Program Coordinator/Advisor Contact Information
Robi Polikar, Ph.D.
Rowan Hall
856.256.5372
polikar@rowan.edu

Master of Science in Engineering Management (M.S.)

The Engineering Management Specialization effectively prepares students for management positions in the engineering profession by providing them with the necessary skill sets, knowledge, and training to succeed as engineering managers. The courses that can be taken as part of this program include courses that are taught in-class and courses that are taught entirely online.

Students learn about administrative procedures such as budgeting, strategic decision-making, and supervising. The combination of courses from the College of Engineering and AACSB-accredited Rohrer College of Business equips students with the ideal balance of advanced technical knowledge and managerial skills required to advance as a manager. Courses are taught in-class and online.

Students can choose between a thesis track, and a coursework track. Students may also work on a project, which may be counted toward a coursework track degree. Most full time students work on funded research projects, leading to a thesis. Most part time students select the coursework track. In order to be eligible for a Research Assistantship, students must select the thesis track.

Tracks

The program includes two tracks. Each have different course and graduation exit requirements which are outlined in the chart.

- Thesis Track: The thesis option requires the completion of 30 semester hours, 6-9 of which are in thesis research/engineering project.
- Non-Thesis Track: The non-thesis option requires the completion of 30 semester hours of coursework.

Program Requirements

Required Common Core Courses 12 s.h.

(s.h.: semester hours/credit hours)

Required Math/Computer Applications Courses

Choose two (2) from the following options.

Course #	Course Title	S. H.
ENGR 01511	Engineering Optimization	3
MATH 03511	Operations Research I	3
MATH 03512	Operations Research II	3
MATH 01515	Engineering Applications of Analysis	3

Required Business Courses

Choose two (2) from the following options.

Course #	Course Title	S. H.
ENT 06506	Corp. Entrepreneurship and New Venture Development	3
MGT 06510	Strategic Engineering Management	3
MGT 06677	Management Skills for Engineers	3
MGT 06666	Managing Engineering Teams	3
MIS 02526	Project Management for Engineers	3

Required Specialization Courses 9–18 s.h.

Choose 18 s.h. (non-thesis track) or 9-15 s.h. (thesis track) of approved electives in consultation with the Academic Advisor. The eligible courses include, but are not limited to the following:

Course #	Course Title	S. H.
ENGR 01511	Engineering Optimization	3
ENGR 01599	Masters Thesis Research	3
CHE 06577	Advanced Engineering Process Analysis and Experimental Design	3
CHE 06512	Safety in the Process Industries	3
CHE 06580	Optimization of Engineering Projects	3
CHE 06581	Advanced Process Analysis	3
CEE 08504	Engineering Estimating	3
CEE 08522	Site Remediation Engineering	3
CEE 08531	Solid and Hazardous Waste Management	3
MGT 06677	Management Skills for Engineers	3
EM 01512	Quality in Engineering Management	3
MGT 06666	Managing Engineering Teams	3
EM 01501	Engineering Economics	3
EM 01511	Strategic Risk Management	3
MIS 02526	Project Management for Engineers	3
EM 01541	Engineering Law and Ethics	3
EM 01513	Engineering Decisions	3

Thesis/Project Courses (if thesis option is selected) 0–9 s.h.

Course #	Course Title	S. H.
ENGR 01599	Masters Research	0-9

Total Required Credits for the Program 30 s.h.

Foundation Courses

The following undergraduate courses must be successfully completed at an accredited institution: Chemistry I, Physics I, Calculus I, and Statistics I.

Graduation/Exit, Benchmark, and Thesis Requirements

If thesis track is selected, students must successfully complete and defend the Master's Thesis.

Program Coordinator/Advisor Contact Information
Ralph Alan Dusseau, Ph.D., P.E.
Rowan Hall
856.256.5320

dusseau@rowan.edu

Master of Science in Mechanical Engineering (M.S.)

The Mechanical Engineering specialization allows a student to develop a high level of competence in engineering design, and a deep understanding of current technology. The interdisciplinary nature of the program provides students with an opportunity to work on exciting research areas at the leading edge of technology. This specialization also includes the following focus areas: Bioengineering; Mechanics and Materials; Signals, Systems and Computational Intelligence; and Sustainability.

Students can choose between a thesis track, and a coursework track. Students may also work on a project, which may be counted toward a coursework track degree. Most full time students work on funded research projects, leading to a thesis. Most part time students select the coursework track. In order to be eligible for a Research Assistantship, students must select the thesis track.

Tracks

The program includes two tracks. Each have different course and graduation exit requirements which are outlined in the chart.

- Thesis Track: The thesis option requires the completion of 30 semester hours, 6-9 of which are in thesis research/engineering project.
- Non-Thesis Track: The non-thesis option requires the completion of 30 semester hours of coursework.

Program Requirements

Required Courses 12 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S. H.
MATH 01515	Engineering Applications of Analysis (or equivalent)	3
TBD	Engineering Application of Computers (or equivalent determined in consultation with Academic Advisor)	3
TBD	Approved Business course – Please discuss with Academic Advisor.	3
MGT 06510	Strategic Engineering Management	3

Required Specialization Courses 12–18 s.h.

Choose 18 s.h. (non-thesis track) or 12-15 s.h. (thesis track) of approved electives in consultation with the Academic Advisor. The eligible courses include, but are not limited to the following:

Course #	Course Title	S. H.
ME 10501	Computer Integrated Manufacturing and Automation	3
ME 10505	Sp Tp Mech Eng	3
ME 10506	Computational Materials Sci	3
ME 10511	Combustion	3
ME 10512	Rocket Propulsion	3
ME 10514	Energy Conversion Systems	3
ME 10521	Gas Dynamics	3
ME 10522	Computational Fluid Dynamics	3
ME 10541	Advanced Mechanism Design	3
ME 10542	Advanced Mechatronics	3
ME 10544	Automotive Engineering	3
ME 10550	Advanced Solid Mechanics	3
ME 10551	Mechanics Continuous Media	3
ME 10552	Structural Acoustics	3
ME 10553	Analytical Dynamics	3
ME 10554	Elastic Stability of Structures	3
ME 10570	Principles in Biomechanics	3
ME 10571	Principles of Biotransport	3

Required Thesis/Project Courses 6–9 s.h.

Course #	Course Title	S. H.
ENGR 01599	Masters Research	6-9

Total Required Credits for the Program 30 s.h.

Foundation Courses

The following undergraduate courses must be successfully completed at an accredited institution: Chemistry I, Physics I, Calculus I, II, and III, Linear Algebra, and Differential Equations.

Graduation/Exit, Benchmark, and Thesis Requirements

If thesis track is selected, students must successfully complete and defend the Master's Thesis.

Program Coordinator/Advisor Contact Information

Krishan Bhatia, Ph.D.
Rowan Hall
856.256.5340
bhatia@rowan.edu

College of Performing Arts

John Pastin, Dean
Harold F. Wilson Hall
856.256.4551
pastin@rowan.edu

Melanie Stewart, Associate Dean
Edgar F. Bunce Hall
856.256.4034
stewartm@rowan.edu

Introduction and 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

Our programs are accredited by the National Association of Schools of Music and the National Association of Schools of Theatre.

Departments

The College of Performing Arts houses the following academic departments: Music and Theatre and Dance. (Not all departments offer programs through the College of Graduate & Continuing Education.)

Department of Music
Rick Dammers, Chair
Harold F. Wilson Hall
856.256.4557
dammers@rowan.edu

Department of Theatre and Dance
Elizabeth Hostetter, Chair
Harold F. Wilson Hall
856.256.4034
hostetter@rowan.edu

Programs Offered

All programs offered are listed below in order of degree/program type and then in alphabetical order by program name. Details about each program are then listed within the catalog in the same order.

MASTER'S DEGREE

Program Name	Format/location	Program/Major Codes	Avail FT/PT	Total credits
Master of Music - Performance: Composition	Face-to-face/Glassboro	MM-PERFORM/G005/P012	Both	33–40
Master of Music - Performance: Conducting (Instrumental or Choral)	Face-to-face/Glassboro	MM-PERFORM/G005/P011	Both	34–40
Master of Music - Performance: Jazz Studies	Face-to-face/Glassboro	MM-PERFORM/G005/P013	Both	32–38
Master of Music - Performance	Face-to-face/Glassboro	MM-PERFORM/G005	Both	34–38
Master of Arts in Theatre: Arts Administration	100% Online	.COMA-TARTAD/G007	Part-Time	30

A note about mode of delivery: We are always doing all we can to offer our courses and programs to students in the ways that best meet their needs—whether online, off-site, in a blended/hybrid format, accelerated, or some combination of these. For the most up-to-date information regarding mode of delivery options for your program of interest, please visit www.rowancgce.com/programs

Admissions

For the most up-to-date information regarding admission requirements, entry points, and application deadlines, please visit www.rowancgce.com/programs . Click on your program of interest to be connected to program and admission details.

Master's Degrees

Master of Music Overview

The Master of Music program provides intensive experiences in performance, conducting, jazz studies, or composition as well as courses geared to enhance the student's knowledge and understanding of the literature of their area of specialization, and a greater understanding of music in general. The M.M. program at Rowan University is for the aspiring musician who wishes to make a career as a jazz musician, classical performer, conductor, or composer or will continue their studies at the Ph.D. or DMA level. Graduates of Rowan's Master of Music program have gone on to major doctoral programs, performing careers, arts leadership positions, and careers as college professors and public school teachers.

M.M. Specializations

The M.M. program offers the degree with four specializations as detailed. Two of the specializations also offer specific focus areas as outlined below:

- Composition
- Conducting
  Focus areas available in: Choral, Orchestral, and Wind
- Jazz Studies
- Performance
  Focus areas available in: Orchestral Instruments, Guitar, Keyboard, and Vocal

Notes:

- Students will officially declare their focus area at the time of application during the audition.
- Specialization requirements may only be modified by permission of the program coordinator.

The Master of Music requires 32-40 semester hours depending upon the specialization selected at the time of application. The Master of Music degree at Rowan University is designed to be 4 semesters long.

Students will take Music Theory and Music History placement exams the first week of classes (not admission bearing).

Master of Music – Performance: Composition (M.M.)

Program Requirements

See the Master of Music Overview.

Required Courses 12 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
MUS 04560	Form and Analysis	3
MUSG 05547	Music and the Related Arts	3
MUS 04570	20th Century Literature and Techniques	3
SMED 32502	Teaching Music Theory	3

Required Specialization Courses

Group A 12–16 s.h.

Choose 12-16 s.h. from the following being sure to include at least one offering each of Composition I and one offering of Composition II.

Course #	Course Title	S.H.
MUS 10525	Graduate Music Composition I	4
MUS 10526	Graduate Music Composition II	4
MUS 10527	Graduate Music Composition I	6
MUS 10528	Graduate Music Composition II	6

Group B 2 s.h.

Choose 2 s.h. from the following (Course numbers rotate each semester.)

Course #	Course Title	S.H.
MUS 10537 - MUS 10540	Graduate Ensemble: Concert Choir	1
MUS 10541 - MUS 10544	Graduate Ensemble: Jazz Band	1
MUS 10545 - MUS 10548	Graduate Ensemble: Lab Band	1
MUS 10549 - MUS 10552	Graduate Ensemble: Orchestra	1
MUS 10553 - MUS 10556	Graduate Ensemble: Wind Ensemble	1
MUS 10576 - MUS 10579	Graduate Ensemble: Contemporary Music	1
MUS 10569 - MUS 10572	Graduate Ensemble: Chamber Music	1

Group C 2 s.h.

Choose 2 s.h. from the following.

Course #	Course Title	S.H.
MUS 10501	Graduate Secondary Applied Instrument I	2
MUS 10505	Graduate Secondary Applied Voice I	2

Elective Courses 5-8 s.h.

Choose courses from the following to total 5-8 credit hours.

Course #	Course Title	S.H.
MUSG 06546	Development & Interpretation of Symphonic Literature	3
MUSG 06509	String Instrument Literature	3
MUSG 06503	Jazz History	3
MUS 04541	Jazz Piano (non-keyboard students)	1
MUSG 06542	Opera Literature	3
MUSG 06506	Art Song Literature	3
MUS 04551	Piano Accompanying	1
MUSG 06511	Survey of 20th Century Band Literature	3
MUSG 06303	Choral Literature	3
MUS 04565	Seminar in Band Conducting	3
MUS 04557	Advanced Orchestration	3
MUS 04561	Score Reading I	1
MUS 04562	Score Reading II	1

Total Required Credits for the Program 33–40 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and Thesis Requirements

- Culminating Experience: recital, lecture, and/or thesis
- Successful completion of oral comprehensive exam

Program Coordinator/Advisor Contact Information
Marian Stieber
Harold F. Wilson Hall
856.256.4500 x3715
stieber@rowan.edu

Master of Music – Performance: Conducting (Instrumental or Choral) (M.M)

See the Master of Music Overview. The following three focus areas are available for a Master of Music in Conducting:

- Choral Conducting
- Orchestral Conducting
- Wind Conducting

Program Requirements

Required Courses 8 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
MUS 04560	Form and Analysis	3
MUSG 05547	Music and the Related Arts	3
MUS 04561	Score Reading I	1
MUS 04562	Score Reading II	1

Required Specialization Courses

Group A 12-16 s.h.

Choose 12-16 s.h. from the following.

Course #	Course Title	S.H.
MUS 10529	Graduate Conducting I	4
MUS 10530	Graduate Conducting II	4
MUS 10531	Graduate Conducting III	4
MUS 10532	Graduate Conducting IV	4
MUS 10533	Graduate Conducting I	6
MUS 10534	Graduate Conducting II	6

Group B 2-4 s.h.

Choose 2-4 s.h. from the following. (Course numbers rotate each semester.)

Course #	Course Title	S.H.
MUS 10565- MUS 10568	Graduate Ensemble: Women's Choir	1
MUS 10561- MUS 10565	Graduate Ensemble: Statesmen	1
MUS 10537 - MUS 10540	Graduate Ensemble: Concert Choir	1
MUS 10541 - MUS 10544	Graduate Ensemble: Jazz Band	1
MUS 10545 - MUS 10548	Graduate Ensemble: Lab Band	1
MUS 10549 - MUS 10552	Graduate Ensemble: Orchestra	1
MUS 10553 - MUS 10556	Graduate Ensemble: Wind Ensemble	1
MUS 10569- MUS 10572	Graduate Ensemble: Chamber Music	1

Required Focus Area Courses 2-4 s.h.

Students select one focus area from the three below.

Choral Conducting Focus Area

Choose 9 s.h. from the following.

Course #	Course Title	S.H.
MUSG 06303	Choral Literature	3
MUSG 06542	Opera Literature	3
MUS 04557	Advanced Orchestration	3
	Select an approved French or Italian or German language course	3

Orchestral Conducting Focus Area

Choose 9 s.h. from the following.

Course #	Course Title	S.H.
MUSG 06546	Development & Interpretation of Symphonic Literature	3
MUSG 06542	Opera Literature	3
MUS 04557	Advanced Orchestration	3
	Select an approved French or Italian or German language course	3

Wind Conducting Focus Area

Choose 9 s.h. from the following.

Course #	Course Title	S.H.
MUSG 06511	Survey of 20th Century Band Literature	3
MUS 04565	Seminar in Band Conducting	3
MUS 04557	Advanced Orchestration	3
	Select an approved French or Italian or German language course	3

Elective Courses 3 s.h.

Choose 3 s.h. from the following.

Course #	Course Title	S.H.
MUSG 06546	Development & Interpretation of Symphonic Literature	3
MUSG 06509	String Instrument Literature	3
MUSG 06542	Opera Literature	3
MUSG 06503	Jazz History	3
MUSG 06506	Art Song Literature	3
MUS 04551	Piano Accompanying	1
MUSG 06303	Choral Literature	2

Total Required Credits for the Program 34-40 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and Thesis Requirements

- Culminating Experience (Recital)
- Successful completion of oral comprehensive exam

Program Coordinator/Advisor Contact Information
Marian Stieber
Harold F. Wilson Hall
856.256.4500 x3715
stieber@rowan.edu

Master of Music – Performance: Jazz Studies (M.M.)

See the Master of Music Overview.

Program Requirements

Required Courses 12 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
MUS 04540	Jazz Arranging and Composition	3
MUSG 05547	Music and the Related Arts	3
MUSG 06503	Jazz History	3
MUS 04575	CD Project	2
MUS 04541	Jazz Piano (non-keyboard students)	1

Required Specialization Courses

Group A 12–16 s.h.

Choose 12-16 s.h. from the following.

Course #	Course Title	S.H.
MUS 10509	Graduate Applied Instrument I	4
MUS 10510	Graduate Applied Instrument II	4
MUS 10511	Graduate Applied Instrument III	4
MUS 10512	Graduate Applied Instrument IV	4
MUS 10517	Graduate Applied Instrument I	6
MUS 10518	Graduate Applied Instrument II	6
MUS 10519	Graduate Applied Instrument III	6
MUS 10520	Graduate Applied Instrument IV	6

Group B 2-4 s.h.

Choose 2-4 s.h. from the following. (Course numbers rotate each semester.)

Course #	Course Title	S.H.
MUS 10541 - MUS 10544	Graduate Ensemble: Jazz Band	1
MUS 10545 - MUS 10548	Graduate Ensemble: Lab Band	1

Elective Courses 6 s.h.

Choose 6 s.h. from the following.

Course #	Course Title	S.H.
MUSG 06546	Development & Interpretation of Symphonic Literature	3
MUSG 06509	String Instrument Literature	3
MUSG 06542	Opera Literature	3
MUSG 06503	Jazz History	3
MUSG 06506	Art Song Literature	3
MUSG 06511	Survey of 20th Century Band Literature	3
MUS 04565	Seminar in Band Conducting	3
MUS 04557	Advanced Orchestration	3
MUS 10569- MUS 10572	Graduate Ensemble: Chamber Music	1
MUSG 06509	String Instrument Literature	1

Total Required Credits for the Program 32-38 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and Thesis Requirements

- Culminating Experience (Recital)
- Successful completion of oral comprehensive exam

Program Coordinator/Advisor Contact Information
Marian Stieber
Harold F. Wilson Hall
856.256.4500 x3715
stieber@rowan.edu

Master of Music - Performance (M.M.)

See the Master of Music Overview.

The following four focus areas are available for a Master of Music in Performance:

- Orchestral Instruments
- Guitar
- Keyboard
- Voice

Program Requirements

Required Courses 6 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
MUS 04560	Form and Analysis	3
MUSG 05547	Music and the Related Arts	3

Required Graduate Performance Music Courses 12–16 s.h.

Choose 12-16 s.h. from the following.

Course #	Course Title	S.H.
MUS 10509	Graduate Applied Instrument I	4
MUS 10510	Graduate Applied Instrument II	4
MUS 10511	Graduate Applied Instrument III	4
MUS 10512	Graduate Applied Instrument IV	4
MUS 10513	Graduate Applied Voice I	4
MUS 10514	Graduate Applied Voice II	4
MUS 10515	Graduate Applied Voice III	4
MUS 10516	Graduate Applied Voice IV	4
MUS 10517	Graduate Applied Instrument I	6
MUS 10518	Graduate Applied Instrument II	6

MUS 10519	Graduate Applied Instrument III	6
MUS 10520	Graduate Applied Instrument IV	6
MUS 10521	Graduate Applied Voice I	6
MUS 10522	Graduate Applied Voice II	6
MUS 10523	Graduate Applied Voice III	6
MUS 10524	Graduate Applied Voice IV	6

Required Specialization Courses 2–4 s.h.

Choose 2-4 s.h. from the following. (Course numbers rotate each semester.)

Course #	Course Title	S.H.
MUS 10537 -MUS 10540	Graduate Ensemble: Concert Choir	1
MUS 10541 -MUS 10544	Graduate Ensemble: Jazz Band	1
MUS 10545 - MUS 10548	Graduate Ensemble: Lab Band	1
MUS 10549 - MUS 10552	Graduate Ensemble: Orchestra	1
MUS 10553 -MUS 10556	Graduate Ensemble: Wind Ensemble	1
MUS 10557- MUS 10560	Graduate Ensemble: Opera Company	1
MUS 10569- MUS 10572	Graduate Ensemble: Chamber Music	1

Required Focus Area Courses 2–11 s.h.

Students select one focus area from the four below.

Orchestral Instruments Focus Area

Students in this focus area complete 2 s.h. as follows.

Course #	Course Title	S.H.
MUS 04536	Chamber Music I	1
MUS 04537	Chamber Music II	1

Guitar Focus Area

Students in this focus area complete 8 s.h. as follows.

Course #	Course Title	S.H.
MUS 04536	Chamber Music I	1
MUS 04537	Chamber Music II	1
MUSG 06505	History and Literature of Guitar and Lute	3
SMED 32506	Guitar Pedagogy	3

Keyboard Focus Area

Students in this focus area complete 7 s.h. as follows.

Course #	Course Title	S.H.
MUSG 06510	Keyboard Literature	3
MUS 04551	Piano Accompanying	1
SMED 32507	Piano Pedagogy	3

Vocal Focus Area

Students in this focus area complete 11 s.h. as follows.

Course #	Course Title	S.H.
	Select an approved French or Italian or German language course	3
MUSG 06506	Art Song	3
MUSG 06542	Opera Literature	3
MUS 04551	Piano Accompanying	2

Elective Courses 3–12 s.h.

Students select one focus area from the four below.

- Students in the Orchestral Instruments focus area choose 12 s.h. from the following.
- Students in the Guitar focus area choose 5 s.h. from the following.
- Students in the Keyboard focus area choose 7 s.h. from the following.
- Students in the Vocal focus area choose 3 s.h. from the following.

Course #	Course Title	S.H.
MUSG 06546	Development & Interpretation of Symphonic Literature	3
MUSG 06509	String Instrument Literature	3
MUSG 06542	Opera Literature	3
MUSG 06503	Jazz History	3
MUSG 06506	Art Song Literature	3
MUS 04536	Chamber Music I	1
MUS 04537	Chamber Music II	1
SMED 32502	Teaching Music Theory	3
MUS 04541	Jazz Piano	1
MUS 04545	Opera Role Study	3
MUSG 06303	Choral Literature	3

Total Required Credits for the Program 34–38 s.h.

Foundation Courses
None

Graduation/Exit, Benchmark, and Thesis Requirements
- Culminating Experience (Recital)
- Successful completion of oral comprehensive exam

Program Coordinator/Advisor Contact Information
Marian Stieber
Harold F. Wilson Hall
856.256.4500 x3715
stieber@rowan.edu

Master of Art in Theatre: Arts Administration (M.A.)

The Master of Arts (M.A.) in Theatre: Arts Administration will provide students with the business, marketing, and administrative skills needed to initiate their own performing arts organizations or to secure stable administrative positions in regional or national arts venues or arts institutions. This program provides vital, up-to-date strategies taught by well-known working professionals from the field for career development in the professional disciplines of visual arts, music, theatre, dance, and business. Students who graduate from this program would be prepared to pursue careers in theatre management or in related businesses such as gallery directors, music producers, and dance company managers or as arts/cultural entrepreneurs.

Program Requirements

Required Courses 30 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
THD 07530	Arts Administration Leadership	3
THD 07532	Arts Planning: An Elegant Process	3
THD 07533	Audience Development	3
THD 07531	Producing & The Arts	3
THD 07534	Education & Outreach Programs in the Arts	3
THD 07535	Curatorial Practice in the Arts	3
THD 07505	Independent Study in Graduate Theatre & Arts Administration	3
OR THD 07515	Internship in the Arts	3
THD 07511	Production/Performance/Arts Administration Project	3 (x2)
MAPR 01524	Fundraising & Development	2
MAPR 01541	Understanding and Writing Grants and Proposals	1

Total Required Credits for the Program 30 s.h.

Foundation Courses
None

Graduation/Exit, Benchmark, and Thesis Requirements
None

Program Coordinator/Advisor Contact Information
Elizabeth Hostetter
Harold F. Wilson Hall
856.256.4034
hostetter@rowan.edu

College of Humanities and Social Sciences

Cindy Vitto, Dean
Edgar F. Bunce Hall
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Larry Butler, Associate Dean
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Kristen diNovi, Assistant Dean
Edgar F. Bunce Hall
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diNovi@rowan.edu

Introduction and Mission

Building on the foundation of a liberal education, the College of Humanities and Social Sciences offers advanced studies that lead to professional positions in several areas and promote responsible, ethical leadership. The College's graduate programs also provide students essential skills for continuing study through doctoral programs and for lifelong learning, including critical thinking, effective communication, and an understanding of the complexity of contemporary society in the context of diverse traditions and paradigms.

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 College of Humanities and Social Sciences houses the following academic departments: English; Foreign Languages and Literatures; Geography and Environment; History; Law and Justice Studies; Philosophy and Religion Studies; Political Science and Economics, and Sociology and Anthropology. (Not all departments offer programs through the College of Graduate & Continuing Education.)

Department of English
Joseph L. Coulombe, Chair
Edgar F. Bunce Hall
856.256.4832
coulombe@rowan.edu

Department of Foreign Languages and Literatures
Laurie Kaplis-Hohwald, Chair
Edgar F. Bunce Hall
856.256.4500 ext. 3470
hohwald@rowan.edu

Department of Geography and Environment
John Hasse, Chair
Robinson Hall
856.256.4812
hasse@rowan.edu

Department of History
William D. Carrigan, Chair
Robinson Hall
856.256.4500 ext. 3986
carrigan@rowan.edu

Department of Law and Justice Studies
Michael S. Weiss, Chair
Campbell Library
856.256.4840
weissm@rowan.edu

Department of Philosophy and Religion Studies
David Clowney, Co-Chair
Edgar F. Bunce Hall
856.256.4211
clowney@rowan.edu

Eileen M. Miller, Co-Chair
Edgar F. Bunce Hall
856.256.4835
millere@rowan.edu

Department of Political Science and Economics
Bruce E. Caswell, Chair
Robinson Hall
856.256.4500 ext. 3996
caswell@rowan.edu

Department of Sociology and Anthropology
Mary J. Gallant, Chair
Campbell Library
856.256.4887
gallant@rowan.edu

Programs Offered

All programs offered are listed below in order of degree/program type and then in alphabetical order by program name. Details about each program are then listed within the catalog in the same order.

MASTER'S DEGREE

Program Name	Format/location	Program/Major Codes	Avail FT/PT	Total credits
Master of Arts in Criminal Justice	100% online	.COMA-CRIJUST/G105	Part-time	30
Master of Arts in Criminal Justice	Face-to-face at Glassboro campus (some online course options)	MA-CRIMJUST/G105	Both	30
Master of Arts in History	Face-to-face at Glassboro campus	MA-HIST/G205	Both	30

CERTIFICATES OF GRADUATE STUDY (NON-DEGREE)

Program Name	Format/location	Program/Major Codes	Avail FT/PT	Total credits
Certificate of Graduate Study in Global History	Face-to-face at Glassboro campus	COG-WRLDHIS/G121	Both	15
Certificate of Graduate Study in History	Face-to-face at Glassboro campus	COG-HISTORY/G120	Both	15

DUAL DEGREE (4+1 PROGRAMS)

Program Name	Format/location	Program/Major Codes	Avail FT/PT	Total credits
Master of Arts/ Bachelor of Arts in History	Face-to-face at Glassboro campus	MABA-HIST/G200	Both	138
Master of Arts/ Bachelor of Arts in Criminal Justice/Law and Justice Studies	Face-to-face at Glassboro campus(some online course options)	MABA-LAWCJ/G104	Both	138

UNDERGRADUATE DEGREE COMPLETION PROGRAMS

(These programs lead to Bachelor's degrees. They are offered through the College of Graduate & Continuing Education but official course descriptions and more about the program as a whole are included in Rowan's Undergraduate Catalog: www.rowan.edu/catalogs .)

Program Name	Format/location	Program/Major Codes	Avail FT/PT	Total credits
Bachelor of Arts in Liberal Studies: Humanities/Social Science	100% online and accelerated	.BOBA-LIBSTU/4933	Both if student chooses and has the need for additional credits beyond the major	120

A note about mode of delivery: We are always doing all we can to offer our courses and programs to students in the ways that best meet their needs – whether online, off-site, in a blended/hybrid format, accelerated, or some combination of these. For the most up-to-date information regarding mode of delivery options for your program of interest, please visit www.rowancgce.com/programs .

Admissions

For the most up-to-date information regarding admission requirements, entry points, and application deadlines, please visit www.rowancgce.com/programs . Click on your program of interest to be connected to program and admission details.

Master's Degrees

Master of Arts in Criminal Justice (M.A.)

The master's degree in Criminal Justice prepares students for leadership positions in criminal justice agencies; for research positions in federal, state, county, city, non-profit and private research institutions; and for further study in doctoral programs. The program focuses on the growing emphasis in the criminal justice system on using research evidence to evaluate the effectiveness of programs and policies aimed at preventing and controlling crime.

Graduate faculty have earned doctoral degrees from the best Criminal Justice programs in the country, and have practical experience working in the system as well as diverse academic interests. Both tracks prepare students for professional careers by providing an understanding of the causes of crime, the impact of law on society and contemporary issues in policing, courts and corrections.

Tracks

The program includes two tracks. Each has different course and graduation exit requirements which are outlined in the chart.

- **Thesis Track:** Students choosing the Thesis Track will complete 6 required courses, select two electives, and earn six credits for doing research and writing a thesis while working closely with experienced faculty.
- **Non-Thesis Track:** Students choosing the Non-Thesis Track will complete 6 required courses, select four electives, and take a comprehensive exam after completing their coursework.

Rowan University undergraduates majoring in the Bachelor of Arts in Law and Justice Studies program can apply to the accelerated B.A./M.A. dual degree (4+1) program allowing them to earn both the B.A. and M.A. degrees in five years.

Program Requirements

Required Courses 18 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
CJ 09510	Contemporary Issues in Criminal Justice	3
CJ 09518	Contemporary Developments in Theory	3
CJ 09511	Research Methods I	3
CJ 09512	Research Methods II	3
CJ 09515	Law and Society	3
CJ 09517	Criminal Justice Policy Analysis	3

Elective Courses 6-12 s.h.

Choose 12 s.h. (non-thesis track) or 6 s.h. (thesis track) of approved electives in consultation with the Academic Advisor.

Course #	Course Title	S.H.
CJ 09516	Administrative Law/Ethics	3

CJ 09519	Seminar in Criminal Justice Planning	3
CJ 09520	Courts and Supportive Agencies	3
CJ 09521	Prevention and Rehabilitation	3
CJ 09522	Seminar in Violence	3
CJ 09524	Police and Society	3
CJ 09525	Altruism, Cooperation, and Criminal Justice	3
CJ 09526	Management of Criminal Justice Organizations	3
CJ 09528	Seminar in Juvenile Justice and Delinquency	3
CJ 09529	Community Justice	3
CJ 09530	International Criminal Law Seminar	3
CJ 09532	Race, Ethnicity, Class & Justice	3
	Other approved graduate-level courses as approved by Academic Advisor	3

Required Thesis Courses (if Thesis-track is selected) 6 s.h.

Course #	Course Title	S.H.
CJ 09601	Master's Thesis in Criminal Justice I	3
CJ 09602	Master's Thesis in Criminal Justice II	3

Total Required Credits for the Program 30 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

- Successful completion of comprehensive exam is required for those who select the non-thesis track.
- If thesis track is selected, students must successfully complete and defend Master's Thesis.

Program Coordinator/Advisor Contact Information

(On-campus)Wanda D. Foglia, J.D., Ph.D.
Campbell Library
856-256-4399
foglia@rowan.edu

(Online) Michael Vigorita, Ph.D.
Campbell Library
856-256-3724
vigorita@rowan.edu

Master of Arts in History (M.A.)

The Master of Arts in History at Rowan is designed mainly for students who desire increased competence in historical studies preparatory or supplementary for teaching in that field on the high school or community college level. It is also appropriate for students who seek qualification for admission to a doctoral program at another institution and for students who wish to pursue a liberal education at an advanced level for intellectual challenge and personal self-fulfillment.

Our exciting new program is set in the tradition of a Liberal Arts education. Courses offer an opportunity for students to extend their knowledge and enhance their competence in historical studies through direct, face-to-face interaction with Rowan's award-winning, full-time faculty members.

Total graduate semester hours required for program completion is 30. Students are encouraged to devote at least 12 credits of their electives to pursuing an area of specialization in American, European, or global history, but they must take at least one course in another area. Up to 6 credits may be taken as independent study, and students may take one elective graduate course outside of the History Program, chosen in consultation with the Graduate Advisor.

Tracks

The program includes two tracks. Each has different course and graduation exit requirements which are outlined in the chart.

- **Thesis Track:** The M.A. Thesis Track is designed for those who are interested in pursuing original research and is strongly recommended for those who are planning to do doctoral work in history. Students pursuing the thesis track will complete the 6 required credits, 18 elective graduate credits in history, and 6 credits of Master's Thesis.
- **Non-Thesis Track:** Students may choose to complete the degree by pursuing coursework without a thesis. This track may be appropriate for those seeking professional development or broader content knowledge. Students pursuing the non-thesis track will complete the 6 required credits and 24 elective graduate credits in history.

Rowan University undergraduates majoring in the Bachelor of Arts in History program can apply to the accelerated B.A./M.A. dual degree (4+1) program allowing them to earn both the B.A. and M.A. degrees in five years.

Program Requirements

Required Courses 6 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
HIST 05510	Readings & Research in History I	3
HIST 05512	Readings & Research in History II	3

Elective Courses 18-24 s.h.

Choose 24 s.h. (non-thesis track) or 18 s.h. (thesis-track) of approved electives in consultation with the Academic Advisor.

Course #	Course Title	S.H.
HIST 05511	Colloquium in American History I	3
HIST 05514	Colloquium in American History II	3
HIST 05516	Colloquium in American History III	3
HIST 05522	Colloquium in European History I	3
HIST 05523	Colloquium in European History II	3
HIST 05524	Colloquium in European History III	3
HIST 05531	Colloquium in Global History I	3
HIST 05533	Colloquium in Global History II	3
HIST 05535	Colloquium in Global History III	3
HIST 05551	Graduate Independent Study	3

Required Thesis Courses (if thesis track is selected) 6s.h.

Course #	Course Title	S.H.
HIST 05601	Master's Thesis in History I	3
HIST 05602	Master's Thesis in History II	3

Total Required Credits for the Program 30 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

If thesis track is chosen, students must successfully complete and defend Master's Thesis.

Program Coordinator/Advisor Contact Information
Scott Morschauser, Ph.D.
Robinson Hall
856-256-4500 ext. 3993
morschauser@rowan.edu

Certificates of Graduate Study (Non-degree)

Certificate of Graduate Study in Global History (COGS)

The COGS in Global History offers an opportunity to study on a graduate level for professional or personal development. The courses will range from topics in Latin American, Russian, Asian, African and Middle Eastern history. Each offering will familiarize students with relevant primary and secondary sources, as well as up-do-date historical interpretations and methodologies in the respective fields.

Program Requirements

12 s.h. must be in areas other than United States history

Required Courses 9 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.

HIST 05511	Colloquium in American History	3
HIST 05522	Colloquium in European History	3
HIST 05531	Colloquium in Global History	3

Elective Courses 6 s.h.

Select two courses jointly approved by the applicant and the graduate advisor.

Total Required Credits for the Program 15 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

None

Program Coordinator/Advisor Contact Information
Scott Morschauser, Ph.D.
Robinson Hall
856-256-4500 ext. 3993
morschauser@rowan.edu

Certificate of Graduate Study in History (COGS)

The Certificate of Graduate Study in History offers an opportunity to study history on a graduate level for professional or personal development. The courses will familiarize students with relevant primary and scholarly sources as well as up to date historical interpretations and methodologies in the field.

Program Requirements

Required Courses 9 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
HIST 05511	Colloquium in American History	3
HIST 05522	Colloquium in European History	3
HIST 05531	Colloquium in Global History	3

Elective Courses 6 s.h.

Select two courses jointly approved by the applicant and the graduate advisor.

Total Required Credits for the Program 15 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

None

Program Coordinator/Advisor Contact Information
Scott Morschauser, Ph.D.
Robinson Hall
856-256-4500 ext. 3993
morschauser@rowan.edu

Dual Degree (4+1 Programs)

Overview

The dual degree 4+1 program is designed to be completed in five years. Students typically apply during their junior year. If admitted, the senior year (fourth year) marks the official start of the dual degree 4+1 program. During this year, students will be matriculated as undergraduate 4+1 students and will usually enroll in up to 12 graduate credits while also completing any remaining undergraduate and general education course requirements. The 12 graduate credits double-count towards both the undergraduate and graduate degrees. If approved to officially continue in the graduate portion of the program, during year five students will be matriculated as graduate 4+1 students and their coursework will include the remaining graduate credits required for the Master's degree. (Students in this program must satisfy all the requirements for the undergraduate degree before proceeding to the +1 year [or graduate year] of the program.)

Master of Arts/Bachelor of Arts in History – 4+1 Program (M.A./B.A.)

See Overview. This program allows students to earn a Bachelor of Arts in History and a Master of Arts in History in five years.

4+1 Undergraduate Program Requirements

Required Major Courses 30 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
HIST 05100	Western Civilization to 1660	3
HIST 05101	Western Civilization since 1660	3
or HIST 05120	World History since 1550	3
HIST 05150	United States to 1865	3
or HIST 05151	United States since 1865	3
or	Any Level History Elective	3
HIST 05306	Historical Methods (WI)	3
	Five Upper Level (300/400) History Courses	15
HIST 05492	Seminar	3

Other Required Courses 18 s.h.

Course #	Course Title	S.H.
	Any Economics course from the SBS bank	3
	Any Political Science course from the SBS bank	3
	Any General Education Multicultural/Global (M/G) course	3
ENGL 02116	Readings in Non-Western Literature	3
	Foreign Language I	3
	Foreign Language II (Foreign Language I and II must be in the same language.)	3

General Education, Rowan Experience, and Free Elective Courses 72 s.h.

(Any approved graduate level History course may substitute for any of the free elective courses. No more than 12 graduate credits total may be used to replace undergraduate coursework. Please discuss course options with your Academic Advisor and 4+1 Coordinator.)

Total Required Credits for the Undergraduate Portion of the Program 120 or 108** s.h.

*(**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 4th/senior year and count for both the undergraduate and graduate degrees.)*

4+1 Graduate Program Requirements

Required Graduate Courses taken while an *undergraduate* 4+1 student 12 s.h.

(s.h.: semester hours/credit hours)

(Any approved graduate level History course may substitute for any of the free elective courses. No more than 12 graduate credits total may be used to replace undergraduate coursework. Please discuss course options with your Academic Advisor and 4+1 Coordinator.)

Required Graduate Courses taken while a *graduate* 4+1 student 6-12 s.h.

Course #	Course Title	S.H.
Thesis Track		
HIST 05510	Readings & Research in History I	3
HIST 05512	Readings & Research in History II	3
HIST 05601	Master's Thesis in History I	3
HIST 05602	Master's Thesis in History II	3
Non-Thesis Track		
HIST 05510	Readings & Research in History I	3
HIST 05512	Readings & Research in History II	3

Required Graduate Elective Courses taken while a *graduate* 4+1 student 18-24 s.h.

Course #	Course Title	S.H.
Thesis Track		
	Choose six (6) from the "Approved Graduate Elective Course Listing"	18
Non-Thesis Track		
	Choose eight (8) from the "Approved Graduate Elective Course Listing"	24

Approved Graduate Elective Course Listing

Course #	Course Title	S.H.
HIST 05511	Colloquium in American History I	3
HIST 05514	Colloquium in American History II	3
HIST 05516	Colloquium in American History III	3
HIST 05522	Colloquium in European History I	3
HIST 05523	Colloquium in European History II	3
HIST 05524	Colloquium in European History III	3
HIST 05531	Colloquium in Global History I	3
HIST 05533	Colloquium in Global History II	3
HIST 05535	Colloquium in Global History III	3
HIST 05551	Graduate Independent Study	3

Total Required Credits for the Graduate Portion of the Program 30 s.h.
(This number includes the 12 graduate credits that will double-count for the graduate and undergraduate portions of the program.)

Total Required Credits for the Entire 4+1 Program 138 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

Thesis is required for those who select the thesis track.

Program Coordinator/Advisor Contact Information
Scott Morschauser, Ph.D.
Robinson Hall
856-256-4500 ext. 3993
morschauser@rowan.edu

Master of Arts in Criminal Justice/Bachelor of Arts in Law and Justice – 4+1 Program (M.A./B.A.)

See Overview. This program allows students to earn both a Bachelor of Arts in Law and Justice Studies and a Master of Arts in Criminal Justice in five years.

4+1 Undergraduate Program Requirements

Required Major Courses 24 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
LAWJ 05175	Survey of Criminal Justice	3
LAWJ 05255	Criminal Law	3
LAWJ 05356	Criminal Justice Internship I	3
LAWJ 05369	Theories of Crime & Criminality	3
LAWJ 05380	Criminal Justice Research	3
LAWJ 05401	Law and Human Rights	3
LAWJ 05469	Seminar WI	3
LAWJ 05202	American Police	3
or LAWJ 05201	Intro Courts	3
or LAWJ 05200	Intro Corrections	3

Required Elective Courses 12 s.h.

Choose four (4) from the following options. (Any course from the "Approved Graduate Elective Course Listing" may substitute for any of these required elective courses. No more than 12 graduate credits total may be used to replace undergraduate coursework. Discuss with your Academic Advisor.)

Course #	Course Title	S.H.
LAWJ 05120	Intro to Security	3
LAWJ 05205	Minorities, Crime and Criminal Justice	3
LAWJ 05210	Restorative Justice	3
LAWJ 05220	Victimology	3
LAWJ 05274	Criminal Justice and Community Relations	3
LAWJ 05276	Parole, Probation and Community Corrections	3
LAWJ 05285	Criminal Investigation	3
LAWJ 05290	Forensic Law	3
LAWJ 05305	Law and Evidence	3
LAWJ 05310	Criminal Jurisprudence	3
LAWJ 05335	Criminal Procedure I	3
LAWJ 05315	Criminal Justice and Social Conflict	3
LAWJ 05320	Civil Aspects of Law Enforcement	3
LAWJ 05322	Drugs and Crime in America	3
LAWJ 05324	Sentencing and the Rights of the Convicted	3
LAWJ 05325	Comparative Criminal Justice	3
LAWJ 05330	Problems of World Justice	3
LAWJ 05312	Criminal Procedure II	3
LAWJ 05337	Treatment of the Offender	3
LAWJ 05342	Counseling and Guidance of the Offender	3
LAWJ 05346	Women, Crime and Criminal Justice	3
LAWJ 05356	Criminal Justice Internship II	3
LAWJ 05361	Intro to Juvenile Justice	3
LAWJ 05379	Political Prisoner	3
LAWJ 05392	Criminal Justice Administration	3
LAWJ 05395	Incarceration Experience	3
LAWJ 05415	Selected Topics in Criminal Justice	3

Other Required Courses 12 s.h.

Course #	Course Title	S.H.
SOC 08221	Social Problems	3
POSC 07110	American Government	3
or POSC 07100	Introduction to Government and Politics	3
PHIL 09110	The Logic of Everyday Reasoning	3
or PHIL 09241	Philosophy and Society	3
PSY 01107	Essentials of Psychology	3
or PSY 01106	Psychology of Scientific Thinking	3

General Education, Rowan Experience, and Free Elective Courses 72 s.h.

(Any course from the "Approved Graduate Elective Course Listing" may substitute for any of the free elective courses. No more than 12 graduate credits total may be used to replace undergraduate coursework. Please discuss course options with your Academic Advisor and 4+1 Coordinator.)

Total Required Credits for the Undergraduate Portion of the Program 120 or 108** s.h.

*(**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 4th/senior year and count for both the undergraduate and graduate degrees.)*

4+1 Graduate Program Requirements

Required Graduate Courses taken while an *undergraduate* 4+1 student 12 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
CJ 09511	Research Methods I	3
CJ 09512	Research Methods II	3

AND

Choose two (2) from the "Required Graduate Course Listing" to complete while an undergraduate student. (Course selection dependent upon departmental schedule of graduate course offerings)

Required Graduate Courses taken while a *graduate* 4+1 student 6 s.h.

Choose two (2) from the "Required Graduate Course Listing" to complete while a graduate student. (Course selection dependent upon departmental schedule of graduate course offerings)

Required Graduate Elective Courses taken while a *graduate* 4+1 student 12 s.h.

Choose four (4) from the "Approved Graduate Elective Course Listing" to complete while a graduate student.

Required Graduate Course Listing

Course #	Course Title	S.H.
CJ 09510	Contemporary Issues in Criminal Justice	3
CJ 09518	Contemporary Developments in Theory	3
CJ 09515	Law and Society	3
CJ 09517	Criminal Justice Policy Analysis	3

Approved Graduate Elective Course Listing

Course #	Course Title	S.H.
CJ 09516	Administrative Law/Ethics	3
CJ 09519	Seminar in Criminal Justice Planning	3
CJ 09520	Courts and Supportive Agencies	3
CJ 09521	Prevention and Rehabilitation	3
CJ 09522	Seminar in Violence	3
CJ 09524	Police and Society	3
CJ 09525	Altruism, Cooperation, and Criminal Justice	3
CJ 09526	Management of Criminal Justice Organizations	3
CJ 09528	Seminar in Juvenile Justice and Delinquency	3
CJ 09529	Community Justice	3
CJ 09530	International Criminal Law Seminar	3
CJ 09532	Race, Ethnicity, Class & Justice	3
	Other approved graduate-level courses as approved by Academic Advisor	3

Total Required Credits for the Graduate Portion of the Program 30 s.h.

(This number includes the 12 graduate credits that will double-count for the graduate and undergraduate portions of the program.)

Total Required Credits for the Entire 4+1 Program 138 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

- Successful completion of comprehensive exam is required for those who select the non-thesis track.
- If thesis track is selected, students must successfully complete and defend Master's Thesis.

Program Coordinator/Advisor Contact Information

Wanda D. Foglia, J.D., Ph.D.
Wilson Hall
856-256-4399
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Undergraduate Degree Completion Programs

(These programs lead to Bachelor's degrees. They are offered through the College of Graduate & Continuing Education but official course descriptions and more about the program as a whole are included in Rowan's Undergraduate Catalog: www.rowan.edu/catalogs .)

Bachelor of Arts in Liberal Studies: Humanities/Social Science (B.A.)

The B.A. in Liberal Studies: Humanities/Social Science program is designed for those who possess at least 24 college credits and want to complete a bachelor's degree in a convenient setting. This quality liberal studies program offers students solid academic preparation and is ideal for working adults who need a bachelor's degree in order to pursue a career or advance in their current position.

Rowan University requires the completion of 120 semester hours of approved general education and major coursework in order to graduate with a bachelor's degree. The B.A. in Liberal Studies: Humanities/Social Science program is a part-time, accelerated program that provides students with 39-42 of the required semester hours in approximately eight consecutive semesters. Students will work with a Program Coordinator to evaluate eligible transfer credits, and determine their entire degree program and mode-of- delivery options.

Focus Area Options

Through the College of Graduate & Continuing Education (CGCE), the following focus area option is possible:

- Philosophy & Religion and Public Relations (PR) in the Workplace (offered 100% online and in an accelerated format)
- Rowan's on-campus Liberal Studies programs offer additional focus areas. Please consult the Undergraduate Catalog for details: www.rowan.edu/catalogs .

Program Requirements for the Focus Area/Sequence in Philosophy & Religion and PR in the Workplace

Required Liberal Studies Online Core Courses 39 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
PHIL 09120	Introduction to Philosophy	3
PHIL 09241	Philosophy & Society	3
REL 10200	Religions of the World	3
PHIL 09328	Philosophy & Gender	3
PHIL 09325	American Philosophy	3
REL 10210	Religion in America	3
PHRE 11490	Senior Seminar in Philosophy & Religion	3
ADV 04330	Introduction to Advertising	3
PR 06350	Introduction to PR	3
PR 06301	Basic PR Writing	3
ADV 04360	Integrated Marketing Communication	3
PR 06310	Intro to PR/Advertising Research	3
PR 99362	Public Opinion	3

General Education and Elective Courses 81 s.h.

Total Required Credits for the Program 120 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

None

Program Coordinator/Advisor Contact Information

Christine Larsen-Britt
Edgar F. Bunce Hall
856.256.4796
larsen-britt@rowan.edu

College of Science and Mathematics

Parviz Ansari, Ph.D., Dean
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Ieva Zake, Ph.D., Associate Dean for Academic Affairs
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856.256.4853
zake@rowan.edu

Tricia Yurak, Ph.D., Assistant Dean for Undergraduate and Graduate Students
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Greg Caputo, Ph.D., Assistant Dean for Research and Grants
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856.256.5453
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Introduction and Mission

The College of Science and Mathematics builds on the foundation of a liberal education to provide graduate programs that prepare students for professional positions, enhance skills needed in current careers, and provide training needed for continuing study in doctoral programs. Committed to excellence in instruction and scholarship, its disciplines promote rigorous inquiry, analytical and integrative reasoning and decision making skills.

In addition to the programs listed below, the College supports graduate programs in the college of Education. The various curricula in the College combine the richness of science and mathematical theories and traditions with applications for the workplace in the new millennium.

The College of Science and Mathematics affirms the natural sciences, behavioral sciences and mathematics as core components of liberal education and the foundation of professional preparation. As the one of the newest units of Rowan University, 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 College of Science and Mathematics houses the following academic departments: Biological Sciences; Chemistry and Biochemistry; Computer Science; Mathematics; Physics and Astronomy; and Psychology. (Not all departments offer programs through the College of Graduate & Continuing Education.)

Department of Biological Sciences
Terry O'Brien, Chair
Science Hall
856.256.4834
obrien@rowan.edu

Department of Chemistry and Biochemistry
Catherine Yang, Chair
Science Hall
856.256.5455
yang@rowan.edu

Department of Computer Science
Stephen J. Hartley, Chair
Robinson Hall
856.256.4806
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Department of Mathematics
Dexter Whittinghill, Chair
Robinson Hall
856.256.4500, ext. 3879
whittinghill@rowan.edu

Department of Physics and Astronomy
Karen Magee-Sauer, Chair
Science Hall
856.256.4395
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Department of Psychology
MaryLou Kerwin, Chair
Robinson Hall
856.256.4500 ext. 3521
kerwin@rowan.edu

Department of Nursing
Dawn Specht, Interim Director
Shpeen Hall
856.256.5127
specht@rowan.edu

Programs Offered

All programs offered are listed below in order of degree/program type and then in alphabetical order by program name. Details about each program are then listed within the catalog in the same order.

MASTER'S DEGREES

Program Name	Format/location	Program/Major Codes	Avail FT/PT	Total credits
Master of Arts in Applied Behavior Analysis	Face-to-face at Glassboro campus	MA-APPLBEHAV/G222	Both, (however, no more than 9 credits/semester)	36
Master of Arts in Clinical Mental Health Counseling	Face-to-face at Glassboro campus	MA-MENTLHLTH/G824	Full-time	60
Master of Arts in Mathematics	Face-to-face at Glassboro campus	MA-MATH/G701	Both	30
Master of Science in Computer Science	Face-to-face at Glassboro campus	MS-CS/G704	Both	30
Master of Science in Nursing	Blended	.CXMSN-NURS/G265	Part-time	35-38

CERTIFICATES OF ADVANCED GRADUATE STUDY (NON-DEGREE)

Program Name	Format/location	Program/Major Codes	Avail FT/PT	Total credits
Certificate of Advanced Graduate Study in Applied Behavioral Analysis	Face-to-face at Glassboro campus	CAG-APPLBEH/G212	Both, (however, no more than 9 credits/semester)	18
Certificate of Advanced Graduate Study in Clinical Mental Health Counseling	Face-to-face at Glassboro campus	CAG- MNTHLTH/G211	Part-time	12

CERTIFICATES OF GRADUATE STUDY (NON-DEGREE)

Program Name	Format/location	Program/Major Codes	Avail FT/PT	Total credits
Certificate of Graduate Study in Middle Grades Science Education*	Face-to-face at Glassboro campus	COG-MIDSCI/G123	Full-time	15
Certificate of Graduate Study in Middle School Mathematics	Face-to-face at Glassboro campus	COG-MIDMATH/G119	Part-time	18

Education*				
Certificate of Graduate Study in Networks	Face-to-face at Glassboro campus	COG-NETWORKS/G128	Both	12
Certificate of Graduate Study in Secondary Mathematics*	Face-to-face at Glassboro campus	COG-SECMATH/G118	Both	15
Certificate of Graduate Study in Software Engineering	Face-to-face at Glassboro campus	COG-SFTWRENG/G129	Both	12
Certificate of Graduate Study in Web Development	Face-to-face at Glassboro campus	COG-WEBDEV/G130	Both	12

POST-BACCALAUREATE PROGRAMS (NON-DEGREE)

Program Name	Format/location	Program/Major Codes	Avail FT/PT	Total credits
Post-Baccalaureate Certificate in Applied Behavior Analysis	Face-to-face at Glassboro campus	CRT-APPLBEH/A122	Both	12

DUAL DEGREE (4+1 PROGRAMS)

Program Name	Format/location	Program/Major Codes	Avail FT/PT	Total credits
Master of Arts/ Bachelor of Science in Mathematics	Face-to-face at Glassboro campus	MABS-MATH/G703	Both	138
Master of Science/ Bachelor of Science in Computer Science	Face-to-face at Glassboro campus with some accelerated/online course options	MSBS-CS/G700	Both	138

UNDERGRADUATE DEGREE COMPLETION PROGRAMS

(These programs lead to Bachelor's degrees. They are offered through the College of Graduate & Continuing Education but official course descriptions and more about the program as a whole are included in Rowan's Undergraduate Catalog: www.rowan.edu/catalogs .)

Program Name	Format/location	Program/Major Codes	Avail FT/PT	Total credits
Bachelor of Science in Nursing	Hybrid- Combination of some face to face courses and some fully online courses	.BXBSN-NUR/1203	Part-time	121

* courses in this program may count toward the M.Ed. in Teacher Leadership.

A note about mode of delivery: We are always doing all we can to offer our courses and programs to students in the ways that best meet their needs – whether online, off-site, in a blended/hybrid format, accelerated, or some combination of these. For the most up-to-date information regarding mode of delivery options for your program of interest, please visit www.rowancgce.com/programs .

Admissions

For the most up-to-date information regarding admission requirements, entry points, and application deadlines, please visit www.rowancgce.com/programs. Click on your program of interest to be connected to program and admission details.

Master's Degrees

Master of Arts in Applied Behavior Analysis (M.A.)

Applied behavior analysis (ABA) is one of the most effective and frequently utilized treatment approaches for individuals with special needs including those with developmental disabilities and autism. ABA involves the use of well-established and empirically supported principles to assess and treat problem behavior, and to facilitate skill acquisition. In southern NJ, over 20,000 children in special education programs have been classified with conditions that behavior analysts regularly treat; however, there are not enough qualified behavior analysts in the region to meet these needs. The Behavior Analyst Certification Board, Inc.(BACB) certifies two levels of behavior analysts: Board Certified assistant Behavior Analysts (BCaBA) for individuals with a Bachelors degree and Board Certified Behavior Analysts (BCBA) for individuals with a Masters degree. The Master of Arts in Applied Behavior Analysis meets both the degree and coursework requirements for certification as a BCBA. To be eligible to become a BCBA, the BACB also requires 1500 hours of practice in ABA

supervised by a BCBA. For more information, see the BACB standards at www.bacb.com.

Program Requirements

Required Courses 36 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
I. Fundamental Behavioral Analytic Knowledge and Skill (9 credits)		
PSY 02500	Basic Principles of Behavior	3
PSY 02610	Applied Behavior Analysis	3
PSY 02620	Behavioral Assessment and Functional Analysis	3
II. Understanding Populations & Contexts (6 credits)		
PSY 03624	Psychopathology of Childhood and Adolescence	3
SELN 10590	Introduction to Autism Spectrum Disorders	3
or PSY 02661	Special Topics in ABA (decision for course substitution made in consultation with program advisor)	3
III. Advanced Applied Behavior Analysis (12 credits)		
PSY 02670	Ethical and Legal Issues in ABA	3
PSY 02661	Special Topics in ABA	6
PSY 02680	Advanced Practice in ABA	3
IV. Experience (3 credits)		
PSY 01660	Practicum in Applied Behavior Analysis	3
V. Research (6 credits)		
PSY 02510	Research Methods in Behavior Analysis	3
PSY 02660	Research Project in ABA	3

Total Required Credits for the Program 36 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

- Successful completion of oral and written comprehensive exams
- Successful completion of written research project

Benchmarks: *Successful completion of all benchmarks is required for continuation in and graduation from the program. Details regarding benchmarks' timing and assessments will be shared with the student throughout the program by the Academic Advisor.*

Benchmark I:

- *Timing*: Occurs after the completion of 12 prescribed credits (Phase I)
- *Requirements*: Candidates must successfully complete all Phase I courses by as evidenced by grades in courses and passing comprehensive written and oral examinations with a score of 70 or better in each section before taking any additional coursework.
- *Options*: If the student does not successfully pass the benchmark, then the student is invited to re-take any necessary coursework and/or the written/oral examination once more. If still unsuccessful, student will be dismissed from the program.

Benchmark II:

- *Timing*: Occurs after the completion of 30 prescribed credits (Phase II)
- *Requirements*: Candidates must submit a manuscript of an original research study to their research advisor within the timeframe specified by the program advisor (no later than 12 months following the completion of 30 credits) in the evaluation letter sent to the student each semester, and the research advisor must approve the final manuscript.
- *Options*: If the student does not successfully pass the benchmark, then the student may be provided an opportunity to re-take the research project course, complete another research project or or may be dismissed from the program.

Benchmark III:

- *Timing*: Occurs at the conclusion of each semester
- *Requirements*: Candidates must meet all the requirements of the profession in terms of professional demeanor, client interaction, and ethical behavior as determined by the faculty members and off-site clinical supervisors.
- *Options*: If the student does not successfully pass the benchmark, then the may be provided a remediation plan for professional behavior by the faculty, or they may be dismissed from the program .

Program Coordinator/Advisor Contact Information
Michelle Ennis Soreth, Ph.D., BCBA-D
Robinson Hall
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soreth@rowan.edu

Master of Arts in Clinical Mental Health Counseling (M.A.)

The CMHC program is highly valued by candidates that wish to fulfill the educational requirements necessary to sit for the National Counselor Exam (NCE) become a Licensed Professional Counselor (LPC), as well as those seeking research positions, those planning to pursue a doctoral degree, those seeking human service positions in a variety of settings, and more.

Students in Rowan's CMHC program will receive a comprehensive background in counseling theories, empirical research findings, counseling skills, and treatment approaches necessary for the effective delivery of services in a variety of mental health settings. The program places a particular emphasis upon developing strong skills in differential diagnosis, conceptualization, development of treatment plans and the use of evidence based practices. Students are also required to complete at least 600 hours of supervised practice in a mental health setting. The master's program consists of 60 credit hours of graduate work.

Program Requirements

Required Courses 57 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
PSY 09595	Introduction to Counseling: Development of Basic Skills	3
PSY 01623	Psychopathology I: Diagnosis and Epidemiology	3
PSY 01624	Psychopathology II: Conceptualization and Etiology	3
PSY 01564	Counseling Theory and Techniques I	3
PSY 01566	Counseling Theory and Techniques II	3
PSY 06625	Assessment I: Psychometrics, Evaluation, & Treatment Planning	3
PSY 06626	Assessment II: Assessment of Career/Vocational Interests, Treatments, & Programs	3
PSY 01572	Research Methods and Statistics in Counseling Psychology I: Basics	3
PSY 01574	Research Methods and Statistics in Counseling Psychology II: Applied	3
PSY 01612	Group Counseling and Psychotherapy	3
PSY 05610	Social and Cultural Diversity	3
PSY 09560	Lifespan Development	3
PSY 10610	Psychopharmacology and Biological Bases of Behavior	3
PSY 01620	Legal, Ethical & Professional Issues in Counseling Psychology	3
PSY 01615	Professional Pro-seminar	1
PSY 01650	Practicum in Counseling	8
PSY 01685	Masters Thesis I	3
PSY 01687	Masters Thesis II	3
PSY 05652	Advanced Seminar in Clinical Practice	3

Total Required Credits for the Program 60 s.h.

Foundation Courses

Students must have successfully completed at least 12 credits of undergraduate-level Psychology courses at an accredited institution, including one course in Abnormal Psychology, one course in Statistics, and one course in Research Methods.

Graduation/Exit, Benchmark, and/or Thesis Requirements

- Students must successfully complete and defend master's thesis.

Benchmarks: *Successful completion of all benchmarks is required for continuation in and graduation from the program. Details regarding benchmarks' timing and assessments will be shared with the student throughout the program by the Program Coordinator.*

Benchmark I:

- *Timing*: Occurs after the completion of 28 prescribed credits (Year I-including Summer)
- *Requirements*: Candidates must successfully complete all Year I courses (including Summer) and begin formulating a thesis topic and securing a practicum location. Discuss details with Program Coordinator.

- *Options*: If the student does not successfully pass the benchmark, the student maybe invited to re-take any necessary coursework, dependent upon review of overall academic achievement and personal conduct. The student may be advised on the possibility of extensions regarding timing of thesis formulation and practicum placement, dependent upon overall progress and movement toward these goals.

Benchmark II:

- *Timing*: Occurs after the completion of 60 prescribed credits (Year II)
- *Requirements*: Candidates must successfully defend their Master's theses (including Masters II course) and complete 600 hours of practicum experience with satisfactory supervisory evaluations.
- *Options*: If the student does not successfully pass the benchmark, the student is invited to re-take any necessary coursework (including Practicum), and/or resubmit the master's thesis and defense. If remedial efforts are still unsuccessful, a student may be dismissed from the program.

Program Coordinator/Advisor Contact Information
Ginean Crawford, MFT, LPC, NCC
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crawford@rowan.edu

Master of Arts in Mathematics (M.A.)

The Master of Arts in Mathematics program will provide an opportunity for individuals to pursue advanced study in mathematics and to develop skills that can lead to success in today's technologically oriented society. Whether the goal involves applying mathematics to solve problems in business and industry, teaching in higher education or preparing for further graduate study in mathematics or related fields, this program enables each student to pursue a course of study that is appropriate for his or her interests.

The program has been of special interest to high school teachers seeking to enrich their knowledge of mathematics. The graduate course work will fill gaps and broaden and extend the undergraduate mathematics background of each student. There is sufficient flexibility in the program for students to tailor the curriculum to meet their needs.

Rowan University undergraduates majoring in the Bachelor of Science in Mathematics program can apply to the accelerated B.S./M.A. dual degree (4+1) program allowing them to earn both the B.S. and M.A. degrees in five years.

Program Requirements

Required Courses 15 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
MATH 01502	Linear Algebra and Matrix Theory	3
MATH 01510	Real Analysis I	3
MATH 01512	Complex Analysis I	3
MATH 01524	Abstract Algebra I	3
MATH 01533	Mathematics Seminar	3

Required Restrictive Elective Courses 3 s.h.

Choose at least one (1) from the following:

Course #	Course Title	S.H.
MATH 01511	Real Analysis II	3
MATH 01513	Complex Analysis II	3
MATH 01527	Abstract Algebra II	3

Elective Courses 12 s.h.

Choose 12 s.h. in conjunction with the Academic Advisor.

Course #	Course Title	S.H.
MATH 01500	Foundations of Mathematics	3
MATH 01503	Number Theory	3
MATH 01504	Mathematical Logic	3
MATH 01505	Probability & Statistics	3
MATH 01507	Differential Geometry	3
MATH 01515	Engineering Applications of Analysis	3
MATH 01520	Topics-Applied Mathematics	3

MATH 01521	Non-Linear Differential Equations	3
MATH 01522	History of Mathematics	3
MATH 01525	Modern Geometry	3
MATH 01526	Point Set Topology	3
MATH 01529	Numerical Analysis	3
MATH 03511	Operations Research I	3
MATH 03512	Operations Research II	3
MATH 03550	Topics-Discrete Mathematics	3

Total Required Credits for the Program 30 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

Successful completion of comprehensive exam.

Program Coordinator/Advisor Contact Information
Ming-Sun Li, Ph.D.
Robinson Hall
856-256-4500 ext. 3889
sun@rowan.edu

Master of Science in Computer Science (M.S.)

The Master of Science in Computer Science will provide individuals with the opportunity to acquire an excellent graduate level education in Computer Science that prepares them to work in a variety of computer related fields, including education, industry, research, business and government

The MS in Computer Science is a 30 credit-hour program with an optional thesis track. All students must complete a 12-credit core of required courses.

Tracks

The program includes two tracks. Each has different course and graduation exit requirements which are outlined in the chart.

- **Thesis Track:**Students in the thesis track must take 12 additional credits of restricted electives and the 6-credit thesis sequence or 9 additional credits of restricted electives and the 9-credit thesis sequence.
- **Non-Thesis Track:** Students choosing the non-thesis track must take 18 additional credits of restricted electives, 6 credits of which must be classified as project intensive.

Rowan University undergraduates majoring in the Bachelor of Science in Computer Science program can apply to the accelerated B.S./M.S. dual degree (4+1) program allowing them to earn both the B.S. and M.S. degrees in five years.

Program Requirements

Required Courses 12 s.h.

(s.h.: semester hours/credit hours)

Choose four (4) from the following:

Course #	Course Title	S.H.
CS 07522	Advanced Theory of Computing	3
CS 07540	Advanced Design and Analysis of Algorithms	3
CS 04548	Programming Languages: Theory, Implementation and Application	3
CS 07523	Advanced Software Engineering	3
CS 04560	Design and Implementation of Operating Systems	3
CS 06520	Topics in Computer Architecture	3
CS 06510	Computer Networks	3
CS 04530	Advanced Database Systems: Theory and Programming	3
CS 04564	Compiler Design Theory	3

Elective Courses 9-18 s.h.

Choose from the following and see "Note."

Course #	Course Title	S.H.
CS 06512	Network Security	3
CS 04565	System Programming	3
CS 04570	Advanced Object Oriented Design	3
CS 06505	Wireless Networks and Systems	3
CS 06515	Embedded Systems Programming	3
CS 06520	Topics in Computer Architecture	3
CS 07545	Advanced Robotics	3
CS 07550	Concepts in Artificial Intelligence	3
CS 07555	Natural Language Processing	3
CS 07556	Machine Learning	3
CS 07560	Computer Graphics	3
CS 07565	Computer Vision	3
CS 07570	Information Visualization	3
CS 07575	Advanced TCP/IP and Internet Protocols and Technologies	3
CS 07580	Computer Animation	3
CS 07595	Advanced Topics in Computer Science	3
CS 07590	Game Design and Development	3
CS 04505	Advanced Web Programming	3

Note: The courses above are just some of the electives available. Any core course (not already satisfying the 12 required credits) can also be taken as an elective. In addition, students can choose no more than 6 credits of approved graduate electives from the Department of Electrical and Computer Engineering and the Department of Mathematics. Students in the non-thesis track must take 18 credit hours of restricted electives. Students in the thesis track must take 12 credits of restricted electives and the 6-credit thesis sequence or 9 credits of restricted electives and the 9-credit thesis sequence. Please discuss and confirm all choices with your Academic Advisor.

Required Thesis Track Courses 6-9 s.h.

Choose from the following and see above "Note."

Course #	Course Title	S.H.
CS 07530	Computer Science Thesis I	3
CS 07531	Computer Science Thesis II	3
CS 07532	Computer Science Thesis III	3

Total Required Credits for the Program 30 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

If thesis track is chosen, students must successfully complete and defend Master's Thesis.

Program Coordinator/Advisor Contact Information
Khaled Amer, Ph.D.
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856-256-4500 ext. 3624
amer@rowan.edu

Master of Science in Nursing (M.S.N.)

The Master of Science in Nursing (M.S.N.) program at Rowan University was established to provide Registered Nurses in the greater Philadelphia/ tri-state area with the skills to assume leadership roles in their respective organizations.

Specializations

The MSN program requires students to select a specialization. Each has different course requirements which are outlined in the chart. All students must successfully complete the MSN core prior to being approved by the department to continue on to their specialty track. Additional information/requirements regarding this can be found in the students Personalized Course Sequence and Department of Nursing Student Handbook.

- **Clinical Nurse Leader:** The Clinical Nurse Leader track will prepare RNs to become a Clinical Nurse Leader (CNL). "In practice, the CNL oversees the care coordination of a distinct group of patients and actively provides direct patient care in complex situations. This master's degree-prepared clinician puts evidence-based practice into action to ensure that patients benefit from the latest innovations in care delivery. The CNL evaluates patient outcomes, assesses cohort risk, and has the decision-making authority to change care plans when necessary. The CNL is a leader in the health care delivery system, and the implementation of this role will vary across settings" (accessed at http://www.aacn.nche.edu/cnl/CNLFactSheet.pdf).
- **Nurse Practitioner-Adult Gerontology Acute Care:** The Nurse Practitioner program prepares Registered Nurses (RN) to sit for the specialty certification exam. The certifying agency determines eligibility for the exam.
- **Nurse Practitioner-Family:** The Nurse Practitioner program prepares Registered Nurses (RN) to sit for the specialty certification exam. The certifying agency determines eligibility for the exam.

Program Requirements

Required Core Courses 22 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
NURS 05504	Advanced Pathophysiology	3
NURS 05505	Advanced Pharmacology	3
NURS 05503	Nursing Research	4
NURS 05501	Advanced Health Assessment (45 clinical hours)	3
AHI 05501	Integrated Information Technology (45 clinical hours)	3
NURS 05507	Leadership & Care Environment Management (25 clinical hours)	3
NURS 05508	Special Issues & Trends in Nursing	3

Required Specialization Courses

Students select one specialization area from the options below.

Clinical Nurse Leader (CNL) 13 s.h.

Course #	Course Title	S.H.
NURS 05509	Clinical Nurse Leader Role	3
NURS 05510	Evidence Based Practice in Illness/Disease Management	3
NURS 05511	Clinical Nurse Leader Practicum I (100 clinical hours)	3
NURS 05512	Clinical Nurse Leader Practicum II (100 clinical hours)	4

Adult Gerontology Acute Care Nurse Practitioner (AGACNP) 16 s.h.

Course #	Course Title	S.H.
NURS 05516	Epidemiology Health Promotion & Disease Management	2
NURS 05517	Nurse Practitioner Role: History, Practice Regulation, Reimbursement, and Ethics	2
NURS 05518	Assessment, Diagnosis, & Differential Disease Management (25 clinical hours)	1
NURS 05519	AGACNP I: Evidence Based Clinical Care for Adult Gerontology Acute Care (100 clinical hours)	3
NURS 05520	AGACNP II: Evidence Based Clinical Care for Adult Gerontology Acute Care (200 clinical hours)	4
NURS 05521	AGACNP III: Evidence Based Clinical Care for Adult Gerontology Acute Care (200 clinical hours)	4

Nurse Practitioner-Family (Family NP) 18 s.h.

Course #	Course Title	S.H.
NURS 05522	Family Nurse Practitioner I: Primary Care Management of the Adult & Older Adult Client (100 clinical hours)	3
NURS 05523	Family Nurse Practitioner II: Primary Care of the Adult & Older Adult (100 clinical hours)	3
NURS 05524	Family Nurse Practitioner III: Primary Care Management of the Female Patient (150 clinical hours)	4
NURS 05525	Family Nurse Practitioner IV: Primary Care Management of Children & Adolescents (150 clinical hours)	4
NURS 05526	Family Nurse Practitioner V: Practicum in Family Care (150 clinical hours)	4

Total Required Credits for the Program 35-40 s.h.

Foundation Courses

Students must successfully complete the following courses at an accredited institution:

- FC-1.Comprehensive Health Assessment (NURS 03404)
- FC-2. Research Applications in Nursing Practice (NURS 03303)

Graduation/Exit, Benchmark, and/or Thesis Requirements

None

Program Coordinator/Advisor Contact Information
Department of Nursing
Shpeen Hall
856-256-5124
nursing@rowan.edu

Certificates of Advanced Graduate Study (Non-degree)

Certificate of Advanced Graduate Study in Applied Behavior Analysis (CAGS)

Applied behavior analysis is one of the most frequently utilized treatment approaches for children and adults with special needs, such as autism and developmental disabilities. The scope of practice of behavior analysts is the use of behavioral principles for the assessment and treatment of problems. As such, behavior analysts do not conduct psychotherapy.

The Behavior Analyst Certification Board, Inc. certifies two levels of behavior analysts: Board Certified assistant Behavior Analysts (BCaBA) for individuals with a bachelor's degree and Board Certified Behavior Analysts (BCBA) for individuals with a master's degree. The Certificate of Advanced Graduate Study in Applied Behavior Analysis meets the coursework requirements for certification as a BCBA. Students applying to this program must possess a minimum of a master's degree from an accredited university that was conferred in behavior analysis, education, or psychology. To be eligible to be a BCBA, the BACB also requires 1500 clock hours of practice in ABA supervised by a BCBA. For more information, please visit the Behavior Analyst Board Certification, Inc. standards at www.bacb.com.

Program Requirements

Required Courses 18 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
PSY 02500	Basic Principles of Behavior	3
PSY 02510	Research Methods in Behavior Analysis	3
PSY 02610	Applied Behavior Analysis	3
PSY 02620	Behavioral Assessment & Functional Analysis	3
PSY 02670	Ethical and Legal Issues in ABA	3
PSY 02680	Advanced Practice in ABA	3

Total Required Credits for the Program 18 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

- Successful completion of oral and written comprehensive exams

Benchmarks: *Successful completion of all benchmarks is required for continuation in and graduation from the program. Details regarding benchmarks' timing and assessments will be shared with the student throughout the program by the Academic Advisor.*

Benchmark I:

- *Timing*: Occurs after the completion of 12 prescribed credits
- *Requirements*: Candidates must take and successfully pass the written and oral comprehensive exams with a score of 70 or better in each section.
- *Options*: If the student does not successfully pass the benchmark, then the student is able to re-take the exam once more. If still unsuccessful, student will be dismissed from the program.

Benchmark II:

- *Timing*: Occurs at the conclusion of each semester
- *Requirements*: Candidates must meet all the requirements of the profession in terms of professional demeanor, client interaction, and ethical behavior as determined by the faculty members and off-site clinical supervisors.
- *Options*: If the student does not successfully pass the benchmark, then the student may be provided a remediation plan for professional behavior by the faculty or they may be dismissed from the program.

Program Coordinator/Advisor Contact Information
Michelle Ennis Soreth, Ph.D., BCBA-D
Robinson Hall
856-256-4500 ext. 3115
soreth@rowan.edu

Certificate of Advanced Graduate Study in Mental Health Counseling (CAGS)

The Certificate of Advanced Graduate Studies (CAGS) in Mental Health Counseling is intended for individuals who have already completed a masters degree in counseling (or related field) and need additional graduate course work in order to have the sixty credits required for state licensure (LPC) and national certification. Additionally, the program is available for mental health professionals in the community seeking to enhance their professional development. The courses within the certificate program are intended to be advanced courses within the profession that will allow students to improve their practical knowledge and skills.

Students typically complete 12 semester hours of graduate credits in classes taught by the Department of Psychology in order to bring their total credits to the state requirement of 60. The 12 semester hours may be completed by taking a combination of courses within the program. However, individual courses may have prerequisites associated with them. Given that some degrees total more or less than 48 credits, we occasionally accept individuals who request more (or less) than 12 semester hours and/or specific courses that are normally part of our own master's degree program. Any exceptions should be discussed with the Program Coordinator.

Students who simply need particular coursework (e.g., to obtain the sixty credits required for state licensure (LPC) and national certification/ personal growth, etc.) may register for up to 9 graduate credits as non-matriculated students to meet their own individual needs. If additional credits are needed, students should matriculate in the program. (Please contact cgceenrollment@rowan.edu to register as a non-matriculant.)

Students matriculated (applied and admitted) must follow the program requirements as outlined; however, they may also choose to enroll in additional credits/courses to meet their own individual needs (e.g., obtain the sixty credits required for state licensure (LPC) and national certification/ personal growth, etc.).

Please consult with a Program Coordinator to discuss your enrollment needs.

Program Requirements

Required Courses 12 s.h.

(s.h.: semester hours/credit hours)

Please meet with CAGS Program Coordinator to develop a course sequence from the following potential courses (dependent on availability and prerequisites).

Course #	Course Title	S.H.
PSY 09595	Introduction to Counseling: Development of Basic Skills	3
PSY 01623	Psychopathology I: Diagnosis and Epidemiology	3
PSY 01624	Psychopathology II: Conceptualization and Etiology	3
PSY 01564	Counseling Theory and Techniques I	3
PSY 01566	Counseling Theory and Techniques II	3
PSY 06625	Assessment I: Psychometrics, Evaluation, & Treatment Planning	3
PSY 06626	Assessment II: Assessment of Career/Vocational Interests, Treatments, & Programs	3
PSY 01572	Research Methods and Statistics in Counseling Psychology I: Basics	3
PSY 01612	Group Counseling and Psychotherapy	3
PSY 05610	Social and Cultural Diversity	3
PSY 09560	Lifespan Development	3
PSY 10610	Psychopharmacology and Biological Bases of Behavior	3
PSY 01620	Legal, Ethical & Professional Issues in Counseling Psychology	3
PSY 03624	Psychopathology of Children and Adolescents	3
PSY 01630	Family Systems and Family Treatment	3

PSY 03620	Cognitive Behavioral Treatment Strategies	3
PSY 05652	Advanced Seminar in Clinical Practice	3

Total Required Credits for the Program 12 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

None

Program Coordinator/Advisor Contact Information
Ginean Crawford, MFT, LPC, NCC
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crawford@rowan.edu

Certificates of Graduate Study (Non-degree)

Certificate of Graduate Study in Middle School Mathematics Education (COGS)

This program prepares elementary-certified teachers for the middle school subject area endorsement in mathematics. It provides an opportunity for teachers to deepen and extend their understanding of mathematics in the areas of number sense and numerical operations, geometry and measurement, algebra, data analysis, probability, and discrete mathematics. At the same time, they continue their professional development by exploring issues and innovations in mathematics education. Emphasis is placed on developing a thorough understanding of the content of state and national standards.

The program is appropriate for elementary math coaches or teacher leaders as well as teachers currently teaching mathematics in grades 4-8 who wish to enhance their skills and knowledge, those certified in secondary mathematics who wish to gain a deeper understanding of middle school mathematics, and those responsible for the development and articulation of curriculum and instruction in mathematics in the middle grades.

Program Requirements

Required Courses 12 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
MATH 03600	Topics in Elementary Mathematics	3
MATH 01528	Math Modeling/Algebraic Reasoning	3
ELEM 02552	Research on Children's Math Learning	3
SMED 33502	Processes and Principles of School Mathematics	3
MATH 01523	Selected Topics in Math	3 (*2)

Total Required Credits for the Program 18 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

None

Program Coordinator/Advisor Contact Information
Janet Caldwell, Ph.D.
Robinson Hall
856-256-4827
caldwell@rowan.edu

Certificate of Graduate Study in Networks (COGS)

This certificate is designed for computer scientists or computer engineers who wish to understand network organization, major network protocols and the principles behind them, wireless networks, network security, and the simulation and performance of network applications. Prospective students may be recent graduates of a bachelor's degree program, or they may be older professionals seeking to update their skills. The certificate may be earned on its own, or it can be credited towards the Master of Science in Computer Science degree.

Program Requirements

Required Courses 12 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
CS 06510	Computer Networks	3
CS 06505	Wireless Networks and System	3
CS 07575	Advanced TCP/IP and Internet Protocols and Technologies	3
CS 06512	Network Security	3

Total Required Credits for the Program 12 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

None

Program Coordinator/Advisor Contact Information
Khaled Amer, Ph.D.
Robinson Hall
856-256-4500 ext. 3624
amer@rowan.edu

Certificate of Graduate Study in Secondary Mathematics (COGS)

The Certificate of Graduate Study (COGS) in Secondary Mathematics will provide an opportunity for mathematics teachers to pursue advanced study in both mathematics and mathematics education. Goals will include: increasing teachers' mathematics content knowledge, increasing teachers' pedagogical knowledge, and increasing teachers' familiarity with current and historical research in mathematics education.

Program Requirements

Required Courses 9 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
MATH 01561	School Mathematics from an Advanced Standpoint	3
SMED 33502	Processes and Principles of School Mathematics	3
SMED 33600	Problems in Math Ed I	3

Elective Courses 6 s.h.

Choose two (2) from the following:

Course #	Course Title	S.H.
MATH 01500	Foundations of Mathematics	3
MATH 01522	History of Mathematics	3
MATH 03550	Topics in Discrete Mathematics	3
MATH 01503	Number Theory	3
MATH 01502	Linear Algebra & Matrix Theory	3

Total Required Credits for the Program 15 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements
None

Program Coordinator/Advisor Contact Information
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milou@rowan.edu

Certificate of Graduate Study in Software Engineering (COGS)

This certificate is intended for computer scientists or computer engineers who wish to update their skills and make themselves more marketable in the workplace. These students may be recent graduates from a computer science or computer engineering program, or they may more senior computing professionals wishing to keep current in their field by learning the newest technologies. The certificate may be earned on its own, or it can be credited towards the Master of Science in Computer Science degree.

Program Requirements

Required Courses 12 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
CS 07523	Advanced Software Engineering	3
CS 04570	Advanced Object Oriented Design	3
CS 04548	Programming Languages: Theory, Implementation, and Application	3
CS 07570	Information Visualization	3

Total Required Credits for the Program 12 s.h.

Foundation Courses
None

Graduation/Exit, Benchmark, and/or Thesis Requirements
None

Program Coordinator/Advisor Contact Information
Khaled Amer, Ph.D.
Robinson Hall
856-256-4500 ext. 3624
amer@rowan.edu

Certificate of Graduate Study in Web Development (COGS)

This certificate is intended for computer scientists who wish to update their skills and make themselves more marketable in the workplace. These students may be recent graduates from a computer science program, or they may be older computer science professionals wishing to keep current in their field by learning the newest technologies. The certificate may be earned on its own, or it can be credited towards the Master of Science in Computer Science degree.

Program Requirements

Required Courses 12 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
CS 04505	Advanced Web Programming	3
CS 04530	Advanced Database Systems: Theory and Programming	3
CS 07523	Advanced Software Engineering	3

CS 06510	Computer Networks	3

Total Required Credits for the Program 12 s.h.

Foundation Courses
None

Graduation/Exit, Benchmark, and/or Thesis Requirements
None

Program Coordinator/Advisor Contact Information
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Post-Baccalaureate Programs (Non-degree)

Post-baccalaureate Certificate in Applied Behavior Analysis

Applied behavior analysis is one of the most frequently utilized treatment approaches for children and adults with special needs, such as autism and developmental disabilities. The scope of practice of behavior analysts is the use of behavioral principles for the assessment and treatment of problem behavior. The Post-Baccalaureate Certificate Program is designed to provide students with the necessary coursework required to apply for certification as a Board Certified assistant Behavior Analyst (BCaBA). In addition to coursework, the BCaBA certification requires a bachelor's degree conferred in behavior analysis, psychology, or education, and 1000 hours of supervised practice. For more information please see Behavior Analyst Board Certification, Inc. standards at www.bacb.com.

A note about BCaBA Certification

While the Behavior Analyst Certification Board, Inc. has approved the courses in the Post-Baccalaureate in ABA as meeting the coursework requirements for the Board Certified assistant Behavior Analyst (BCaBA) certification, applicants will have to meet additional requirements to qualify for the BCaBA certification including:

- a bachelor's degree in behavior analysis, psychology, or education from an accredited university
- 1000 hours of supervised practice in the field

The Behavior Analyst Certification Board has ultimate responsibility for determining eligibility for certification as a BCaBA. For more information please see Behavior Analyst Board Certification, Inc. standards at www.bacb.com.

Program Requirements

Required Courses 12 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
PSY 02310	Learning and Behavior	3
PSY 01316	Behavioral Assessment and Measurement	3
PSY 02305	Applied Behavior Analysis	3
PSY 01424	Professional Issues in Applied Behavior Analysis	3

Total Required Credits for the Program 12 s.h.

Foundation Courses
None

Graduation/Exit, Benchmark, and/or Thesis Requirements
None

Program Coordinator/Advisor Contact Information
Michelle Ennis Soreth, Ph.D., BCBA-D
Robinson Hall
856-256-4500 ext. 3115
soreth@rowan.edu

Dual Degree (4+1 Programs)

Overview

The dual degree 4+1 program is designed to be completed in five years. Students typically apply during their junior year. If admitted, the senior year (fourth year) marks the official start of the dual degree 4+1 program. During this year, students will be matriculated as undergraduate 4+1 students and will usually enroll in up to 12 graduate credits while also completing any remaining undergraduate and general education course requirements. The 12 graduate credits double-count towards both the undergraduate and graduate degrees. If approved to officially continue in the graduate portion of the program, during year five students will be matriculated as graduate 4+1 students and their coursework will include the remaining graduate credits required for the Master's degree. (Students in this program must satisfy all the requirements for the undergraduate degree before proceeding to the +1 year (or graduate year) of the program.)

Master of Arts/Bachelor of Science in Mathematics – 4+1 Program (M.A./B.S.)

See Overview. This program allows students to earn a Bachelor of Science in Mathematics and a Master of Arts in Mathematics in five years.

The dual degree program provides an opportunity for individuals to pursue advanced study in mathematics and to develop skills that can lead to success in today's technologically oriented society. Whether the goal involves applying mathematics to solve problems in business and industry, teaching in higher education, or preparing for further graduate study in mathematics or related fields, this program enables each student to pursue a course of study that is appropriate for his or her interests.

Program Requirements

4+1 Undergraduate Program Requirements

Required Courses 33 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
MATH 01130	Calculus I	4
MATH 01131	Calculus II	4
MATH 01230	Calculus III	4
MATH 01210	Linear Algebra	3
MATH 01231	Ordinary Differential Equations	3
MATH 01330	Introduction to Real Analysis I	3
MATH 01340	Modern Algebra I	3
STAT 02360	Probability and Random Variables	3
MATH 01430	Introduction to Complex Analysis	3
MATH 01498	Mathematics Seminar (WI)	3

Required Restricted Elective Courses 27 s.h.

Choose twenty-seven (27) s.h. from the following. (A graduate-level course must be substituted for 4 courses (12 s.h.) in this list. No more than 12 graduate credits total may be used to replace undergraduate coursework. Discuss with your Academic Advisor):

Course #	Course Title	S.H.
MATH 01205	Technological Tools for Discovering Math	2
MATH 01310	College Geometry	4
MATH 01331	Introduction to Real Analysis II	3
MATH 01332	Numerical Analysis	3
MATH 01341	Modern Algebra II	3
MATH 01352	Theory of Numbers	3
MATH 01354	Introduction to Topology	3
MATH 01386	Introduction to Partial Differential Equations	3
MATH 01410	History of Mathematics	3
MATH 01421	Mathematics Field Experience	3
STAT 02361	Introduction to Mathematical Statistics	3
STAT 02371	Design of Experiments: Analysis of Variance	3
MATH 03400	Applications of Mathematics	3
MATH 03411	Deterministic Models of Operations Research	3
MATH 03412	Stochastic Models in Operations Research	3

A maximum of two (2) courses from the following list can be counted as restricted electives toward the BS in Mathematics:

CHEM 08400	Physical Chemistry I	3
CHEM 08401	Physical Chemistry II	3
CS 07340	Design and Analysis of Algorithms	3
CS 07422	Theory of Computing	3
PHYS 00310	Analytical Mechanics	4
PHYS 00320	Electricity and Magnetism I	4
PHYS 00330	Mathematical Physics	3
PHYS 00410	Quantum Mechanics I	4
PHYS 00430	Statistical Physics	3

Other Required Courses 17 s.h.

MATH 03150	Discrete Mathematics	3
PHYS 00220	Introductory Mechanics	4
PHYS 00222	Introduction to Electricity and Magnetism	4
or PHYS 00221	Introduction to Thermodynamics, Fluids, Waves and Optics	4
CS 01104	Introduction to Scientific Programming	3
PHIL 09130	Introduction to Symbolic Logic	3

General Education, Rowan Experience, Restricted Elective, and Free Elective Courses 39 s.h.
Please discuss course options with your Academic Advisor and 4+1 Coordinator.

Total Required Credits for the Undergraduate Portion of the Program 120 or 108** s.h.

*(**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 4th/senior year and count for both the undergraduate and graduate degrees.)*

4+1 Graduate Program Requirements

Required Graduate Courses taken while an *undergraduate* 4+1 student 6 s.h.

(s.h.: semester hours/credit hours)

Choose six (6) s.h. from the following or discuss options with your Academic Advisor.

Course #	Course Title	S.H.
MATH 01502	Linear Algebra and Matrix Theory (offered fall term - even years)	3
MATH 01510	Real Analysis I (offered fall term - even years)	3
MATH 01512	Complex Analysis I (offered fall term - odd years)	3
MATH 01524	Abstract Algebra I (offered fall term – odd years)	3

Suggested Graduate Elective Courses taken while an *undergraduate* 4+1 student 6 s.h.

Choose six (6) s.h. from the following or discuss options with your Academic Advisor.

Course #	Course Title	S.H.
MATH 01511	Real Analysis II (offered spring term - odd years)	3
MATH 01513	Complex Analysis II (offered spring term - even years)	3
MATH 01527	Abstract Algebra II (offered spring term - even years)	3

Required Graduate Courses taken while a *graduate* 4+1 student 9 s.h.

Choose nine (9) s.h. from the following or discuss options with your Academic Advisor.

Course #	Course Title	S.H.
MATH 01502	Linear Algebra and Matrix Theory	3
MATH 01510	Real Analysis I	3
MATH 01512	Complex Analysis I	3
MATH 01524	Abstract Algebra I	3
MATH 01533	Mathematics Seminar	3

Required Graduate Elective Courses taken while a *graduate* 4+1 student 9 s.h.

Choose nine (9) s.h. from the following or discuss options with your Academic Advisor.

Course #	Course Title	S.H.
MATH 01511	Real Analysis II	3
MATH 01513	Complex Analysis II	3
MATH 01527	Abstract Algebra II	3

Total Required Credits for the Graduate Portion of the Program 30 s.h.

(This number includes the 12 graduate credits that will double-count for the graduate and undergraduate portions of the program.)

Total Required Credits for the Entire 4+1 Program 138 s.h.

Foundation Courses
None

Graduation/Exit, Benchmark, and/or Thesis Requirements
Successful completion of Comprehensive Exam

Program Coordinator/Advisor Contact Information
Ronald J. Czochor, Ph.D.
Robinson Hall
856-256-4844
czochor@rowan.edu

Master of Science/Bachelor of Science in Computer Science – 4+1 Program (M.S./B.S.)

See Overview. This program allows students to earn a Bachelor of Science in Computer Science and a Master of Science in Computer Science in five years.

The dual degree program provides individuals with the opportunity to acquire an excellent graduate level education in Computer Science that prepares them to work in a variety of computer-related fields, including education, industry, research, business and government. Both a thesis and a non-thesis track are available.

Program Requirements

4+1 Undergraduate Program Requirements

Required Courses 57 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
MATH 03160	Discrete Structures	3
MATH 01130	Calculus I	4
MATH 01131	Calculus II	4
MATH 01210	Linear Algebra	3
STAT 02290	Probability and Statistical Inference for Computing Systems	3
CS 04113	Intro to Object Oriented Prog.	3
CS 04114	Ob Oriented Prog./Data Abstr	3
CS 04222	Data Structures and Algorithms	3
CS 06205	Computer Organization	3
CS 07210	Foundations of Comp Sci	3
CS 07321	Software Engineering I	3
CS 04315	Programming Languages	3
CS 06310	Prin. of Digital Computers	3
CS 06311	Digital Computer Lab	1
CS 07340	Design & Analysis of Algorithms	3
CS 04390	Operating Systems	3
CS 04400	Senior Project	3
INTR 01265	Computers and Society	3

Required Lab Sciences 12 s.h.

Choose three (3) from the following options.

Course #	Course Title	S.H.
BIOL 01104	Diversity, Evolutions & Adaption	4
BIOL 01106	Concepts in Genetics	4
BIOL 01203	Introduction to Cell Biology	4
CHEM 06100	Chemistry I	4

CHEM 06101	Chemistry II	4
CHEM 09250	Quantitative Analysis	4
CHEM 07200	Organic Chemistry	4
PHYS 00220	Introductory Mechanics	4
PHYS 00222	Intro to Electricity & Magnetism	4
PHYS 00221	Intro Thermo, Fluid, Waves, Optics	4
PHYS 00300	Modern Physics	4
PHYS 00340	Optics and Light	4
PHYS 00310	Analytical Mechanics	4
PHYS 00320	Electricity and Magnetism	4
BIOL 01100	Biology I (transferred only)	4
BIOL 01202	Biological Skills and Methods (only when Biology I was transferred)	4
PHYS 02200	Physics I w/ Calc (transferred only)	4

Note:A graduate-level course must be substituted for up to 12 s.h. of undergraduate coursework. No more than 12 graduate credits total may be used to replace undergraduate coursework. Discuss your options with your Academic Advisor.

General Education, Rowan Experience, Restricted Electives, and Free Elective Courses 51 s.h.

Please discuss course options with your Academic Advisor and 4+1 Coordinator.

Total Required Credits for the Undergraduate Portion of the Program 120 or 108** s.h.

*(**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 4th/senior year and count for both the undergraduate and graduate degrees.)*

4+1 Graduate Program Requirements

Required Graduate Courses taken while an *undergraduate* 4+1 student 12 s.h.

Please choose twelve (12) s.h. from the approved set of graduate-level courses offered for the Master of Science in Computer Science Program and see "Note." No more than 12 graduate credits total may be used to replace undergraduate coursework. Your choices will depend upon whether or not you have selected the thesis track. Please discuss course options with your Academic Advisor and 4+1 Coordinator.

Required Graduate Courses taken while a *graduate* 4+1 student 12 s.h.

(s.h.: semester hours/credit hours)

Choose four (4) from the following:

Course #	Course Title	S.H.
CS 07522	Advanced Theory of Computing	3
CS 07540	Advanced Design and Analysis of Algorithms	3
CS 04548	Programming Languages: Theory, Implementation and Application	3
CS 07523	Advanced Software Engineering	3
CS 04560	Design and Implementation of Operating Systems	3
CS 06520	Topics in Computer Architecture	3
CS 06510	Computer Networks	3
CS 04530	Advanced Database Systems: Theory and Programming	3
CS 04564	Compiler Design Theory	3

Required Graduate Elective Courses taken while a *graduate* 4+1 student 0-6 s.h.

Please choose 0-6 s.h. from "Approved Graduate Elective Course Listing" and see "Note." Your choices will depend upon whether or not you have selected the thesis track. Please discuss course options with your Academic Advisor and 4+1 Coordinator.

Approved Graduate Elective Course Listing 0-6 s.h.

Course #	Course Title	S.H.
CS 06512	Network Security	3
CS 04565	System Programming	3
CS 04570	Advanced Object Oriented Design	3
CS 06505	Wireless Networks and Systems	3
CS 06515	Embedded Systems Programming	3
CS 06520	Topics in Computer Architecture	3

CS 07545	Advanced Robotics	3
CS 07550	Concepts in Artificial Intelligence	3
CS 07555	Natural Language Processing	3
CS 07556	Machine Learning	3
CS 07560	Computer Graphics	3
CS 07565	Computer Vision	3
CS 07570	Information Visualization	3
CS 07575	Advanced TCP/IP and Internet Protocols and Technologies	3
CS 07580	Computer Animation	3
CS 07595	Advanced Topics in Computer Science	3
CS 07590	Game Design and Development	3

Note: The courses above are just some of the electives available. Any core course (not already satisfying the 12 required credits) can also be taken as an elective. In addition, students can choose no more than 6 credits of approved graduate electives from the Department of Electrical and Computer Engineering and the Department of Mathematics.

Total Required Credits for the Graduate Portion of the Program 30 s.h.

(This number includes the 12 graduate credits that will double-count for the graduate and undergraduate portions of the program.)

Total Required Credits for the Entire 4+1 Program 138 s.h.

Foundation Courses

None

Graduation/Exit, Benchmark, and/or Thesis Requirements

Thesis is required for those who select the thesis track

Program Coordinator/Advisor Contact Information
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Undergraduate Degree Completion Programs

(These programs lead to Bachelor's degrees. They are offered through the College of Graduate & Continuing Education but official course descriptions and more about the program as a whole are included in Rowan's Undergraduate Catalog: www.rowan.edu/catalogs .)

Bachelor of Science in Nursing (B.S.N.)

The Bachelor of Science Degree in Nursing is offered jointly by Rowan University College of Science and Mathematics and the College of Graduate & Continuing Education (CGCE). 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 bachelors degree program. Students graduating from a National League for Nursing Accrediting Commission (NLNAC) 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. The BSN program will incorporate available minors into the program to give students additional opportunities for career advancement.

- Students may transfer up to 90 credits in general education requirements
- Students may transfer up to 6 credits towards the RN to BSN major pending approval by the department.
- 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.
- Rowan University does not allow transfer credit to meet their Writing Intensive general education requirement. This course must be completed at 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 (9 courses) 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 RN to BSN Program

Program Requirements

Required Nursing Concentration Courses 31 s.h.

(s.h.: semester hours/credit hours)

Course #	Course Title	S.H.
NURS 03303	Comprehensive Health Assessment	3
NURS 03304	Nursing Informatics	3
NURS 03309	Ethics in Healthcare	3
NURS 03404	Research, Applications in Nursing Practice	3
NURS 03401	Community Health Nursing	6
NURS 03405	Healthcare Policy & Finance	3
NURS 03403	Nursing Care Delivery Systems	4
NURS 03504	Advanced Pathophysiology	3
NURS 03505	Advanced Pharmacology	3

* Matriculated students must submit a copy of their current personal malpractice insurance before the start of the following course: NURS 03 401

Total Required Credits for the RN to BSN Major 31 s.h.

RN to BSN Prerequisite Courses

Statistics and English Composition I & II must be completed within 7 years of being matriculated into the RN to BSN Program. These courses are a direct prerequisite for Research, Applications in Nursing Practice. If Statistics was completed longer than 7 years from matriculating into the RN to BSN Program this this course will need to be completed with a grade of "C" or better before NUSR 03404 can be completed.

Graduation/Exit, Benchmark, and/or Thesis Requirements

Program exit includes successful completion of all required coursework totaling 121 credits, including a "C" or better in all major RN to BSN courses. Student will receive a Bachelor of Science in Nursing degree, awarded by Rowan University.

Program Coordinator/Advisor Contact Information

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Faculty List

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Chen, Hanmei(2008) Assistant Professor
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Chung, Shifei(1997) Professor
B.S., National Taiwan University; M.S., University of Wisconsin-Madison; CPA; Ph.D., University of Memphis

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

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Wang, Jia(2007) Assistant Professor
B.S., Tsinghua University: M.S., Ph.D., University of Massachusetts-Amherst

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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

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B.F.A., Layton School of Art and Design; M.F.A., Pratt Institute

Thomas, Skeffington N.(1997) Professor
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Holbrook, Luke T.(1999) Professor
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Ramachandran, Ravi Prakash(1997) — Professor
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Schmalzel, John L.(1995) — Professor
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Tang, Ying (Gina)(2002) — Professor
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Viator, Timothy J.(1994) — Professor
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Howell, Jordan(2013) — Assistant Professor
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Reiser, John(2008) — Instructor
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Department of Health and Exercise Science

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Buhrer, Nancy(1973) — Assistant Professor
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Spencer, Leslie S.(1995) — Professor
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Department of History

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Carrigan, William D.(1996) — Professor
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B.A., Trenton State College; M.Ed., University of Delaware; Ed.D., Temple University

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B.S., State U of NJ Geneseo; M.A., New York University; Ph,D., U Maryland College Park

Kuder, Sydney (1984) Professor
B.A. Trinity College; M.Ed., Temple University; Ed.D., Boston University

Lee, Jiyeon(2010) Assistant Professor
B.F.A.; Sookmyung Women's University; M.S. Pennsylvania State University; Ph.D. Purdue University

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B.A., Glassboro State College; M.Ed., Temple University; Ph.D., State University of New York, Albany

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Sheppard, Mary(2012) Assistant Professor
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Willett, Holly G.(1997) Associate Professor
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Department of Law and Justice Studies

Davey, Joseph P.(1998) Professor
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Jiao, Allan(1995) Professor
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Johnson, Joseph D.(2010) Assistant Professor
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Samsel, Tiffany(2013) Instructor
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Schell-Busey, Natalie(2010) Assistant Professor
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Byrd, Kimble(1984) Professor
A.B., Villanova University; J.D., University of Pennsylvania

D'Intino, Robert(2004) Professor
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Fleming, Robert S.(1989) Professor
B.S., Philadelphia College of Textiles & Science; M.A.R.,Eastern Baptist Theological Seminary; M.G.A., University of Pennsylvania; M.B.A., M.S., Ed.D., Temple University

Lee, Jooh(1988) Professor
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Mirchandani, Dilip(1989) Professor
B.S., M.B.A., University of Bombay, India; Ph.D., Temple University

Pati, Niranjan(2008) Professor
B.Tech., Ranchi University, India; M.Tech, Indian Institute of Technology, India; M.S., Ph.D., Northwestern University

Pereles, Kathleen L.(2000) Associate Professor
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Phelan, Steven E.(2010) Professor
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Ross, Linda Wabschall(1974) Professor
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Rudin, Joel P.(1999) Professor
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Schoen, Edward J.(1999) Professor
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Zhu, Faye X.(2000) Professor
B.S., Shanghai Institute of Mechanical Engineering; M.B.A., Ashland University; D.B.A., Cleveland State University

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Guner, Berrin D.(1997) Professor
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Hand, John Jeffrey(2011) Associate Professor

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Nicholson, Darren(2005) Associate Professor
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Caldwell, Janet(1983) — Professor
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Czochor, Ronald(1983) — Professor
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Stieber, Marian(1998) Professor
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Miller, Ellen M.(2001) Associate Professor
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Hu, Xiao(2012) Assistant Professor

Klassen, David R.(1998) Associate Professor
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Lim, Michael Jay Young(2003) Associate Professor
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Ling, Hong(1992) Professor
B.S., Jiaxin Teacher's College; M.S., Xian Institute of Optics and Fine Mechanics; Ph.D., Drexel University

Lofland, Samuel E.(1998) Professor
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Butler, R. Lawrence(2001) Associate Professor
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B.A., University of Chicago; M.C.P., University of Pennsylvania; Ph.D., Rutgers University

Gougon, Danielle(2013) Instructor
B.A., Bloomsburg University, M.A., New School University, Ph.D., Rutgers University

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Markowitz, Lawrence(2009) Assistant Professor
B.A., State University of New York; M.A., The American University; Ph.D. University of Wisconsin

Reaves, Natalie D.(1998) Associate Professor
B.S., Rutgers University; M.S., University of North Carolina; Ph.D., Wayne State University

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Angelone, Bonnie(2004) Associate Professor
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Greco, Monica A.(1990) Associate Professor
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Haugh, Jim(2001) Associate Professor
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Kerwin, Mary Louise E.(1996) Professor
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McElwee, Rory(2005) — Associate Professor
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Basso, Joseph(2003) — Associate Professor
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Brand, Keith M.(2002) Associate Professor
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David Bianculli(2009) Associate Professor
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Donovan, Mike(1972) Professor
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Lancioni, Judith(1993) Associate Professor
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Abbott, James R.(1990) Professor
B.A., University of San Diego; M.A., Ph.D., University of Pennsylvania

Carter, Allison(1988) Instructor
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Gallant, Mary J.(1992) Associate Professor
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Jones, Sandra J.(2003) Associate Professor
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Rosado, Maria(1993) Professor
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Department of Teacher Education (Early Childhood, Elementary Education, Subject Matter)

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DeJarnette, Nancy (2010) Assistant Professor
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Graziano, Jane E.(1999) Professor
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Holder, Kit K.(1993) Assistant Professor
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Levinowitz, Lili(1989) Professor
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McGinn, Kathryn(2013) Assistant Professor
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B.A., New York University; M.A., Rutgers University at Newark; Ph.D., Temple University

Course Descriptions

ACC 03210: Principles of Accounting I 3 s.h.
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 3 s.h.
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 03500: Managerial Accounting 3 s.h.
This course takes a managerial approach with emphasis on decision-making. It includes financial statement analysis and topics on determination of cost behavior using regression analysis and learning curves, activity based costing, cost allocation, performance measurement, and the decision-making process.

ACC 03502: Advanced Managerial Accounting 3 s.h.
Taking a managerial approach, this course examines decision making by management. It includes topics on activity-based cost allocation, determination of cost behavior using regression analysis and learning curves, cost allocation, the decision-making process and decision models under uncertainty, performance measurement and executive compensation.

ACC 03503: Corporate and Partnership Taxes 3 s.h.
This course presents an overview of the Federal Tax System relating to various business forms including corporations, partnerships and exempt entities. Students will examine major tax legislation and judicial precedents with a focus on current and pending legislation. Topics will include corporate organization, accumulations and liquidation, partnership formation, S corporations, exempt organizations, estate and gift taxation, including trusts. Research and preparation software will be used throughout the course.

ACC 03504: Seminar in Auditing 3 s.h.
Students will develop an understanding of the judgmental issues faced in providing audit and assurance services. Further emphasis will be the application of underlying accounting concepts to solve these judgmental issues. In addition, an emphasis will be on the auditor's decision-making process and the nature and amount of evidence the auditor should accumulate given engagement circumstances.

ACC 03505: Seminar in Business Law 3 s.h.
In this course, students study the legal aspects of sales, liability, secured transactions, commercial paper and consumer credit. In addition, the course will emphasize legal analysis and research.

ACC 03506: Advanced Domestic & International Accounting 3 s.h.
This financial accounting course focuses on the accounting for corporate mergers and acquisitions, and the accounting and financial reporting requirements of corporations with both domestic and international subsidiaries. It includes coverage of international financial reporting comparability.

ACC 03507: Government and Non-for-Profit Accounting 3 s.h.
This financial accounting course focuses on the contemporary accounting issues of governmental and non-profit organizations. It includes: financial reporting, budgeting, forecasting and strategic planning in the environments of local, state, federal government, colleges and universities, hospitals, and voluntary health and welfare organizations.

ACC 03508: Seminar and Research in Accounting 3 s.h.
This seminar provides the opportunity for students to improve their professional research skills and advance their own scholarly development in the accounting field. Taken after five graduate accounting and busienss law courses, it provides a synthesis of prior learning. Students will work collaboratively with the professor and other enrolled students to develop and complete a major research project and other assignments. Topics may include financial, not-for-profit, managerial, auditing, or tax accounting.

ACC 03509: Intermediate Financial Accounting 3 s.h.
This course will include a review of the accounting process, the conceptual framework, the preparation of financial statements and specific principles related to the accounting for current assets, property, plant and equipment, liabilities, leases, income taxes, pensions, and shareholders' equity. Research and empirical evidence will be emphasized. This course is restricted to students who have not taken Intermediate Accounting I and II at the undergraduate level.

ACC 03510: Financial Statement Analysis 3 s.h.
Prerequisites: ACC 03500 or ACC 03311
This course will take an expanded study of financial statement analysis from the point of view of the primary users of financial statements: equity and credit analysts. The analysis and use of financial statements will also emphasize the properties of numbers derived from these statements, and the features of the environment in which key decisions are made in using financial statement information. Research and empirical evidence will be emphasized.

ACC 03511: Introduction to Federal Taxation 3 s.h.
Prerequisite: Admission into MBA program or Admission into Certficate of Advanced Graduate Study in Accounting program.
Federal income tax concepts, including gross income, deductions, credits, gains and losses from dispositions of property, deferred and tax exempt transactions, assignment of income, tax accounting, and other special topics. Emphasis will be placed on interpreting the Internal Revenue Code and Regulations as well as case law. Students will be required to show evidence of scholarly research through a major writing assignment on an emerging tax issue.

FIN 04500: Financial Decision Making 3 s.h.
Prerequisites: ACC 03500 and MGT 07500
Students in this course will learn valuation techniques including adjusted present value, equity cash flows, and real-option valuation. In addition to comparing alternative valuation techniques and the assumptions and limitations underlying each, students explore the technical difficulties and incentive effects caused by high leverage, the relation between capital structure and capital costs, the interaction between a firm's financial structure and its business strategies, the conditions contributing to potential under or over-valuation of a firm's prospects by the market, and the managerial consequences of such mis-valuation.

FIN 04505: Advanced Financial Planning 3 s.h.
Financial planning is the process of meeting life goals through the proper management of finances. Life goals can include buying a home, saving for your child's education or planning for retirement. Through sound financial planning individuals can make decisions that will produce their desired results. In this course, students will learn foundations of financial planning, managing basic assets, managing credit, managing insurance needs, managing investments and prepqring for retirement and estate planning.

FIN 04510: INDEPENDENT STUDY:FINANCE 1 to 6 s.h.

FIN 04512: Capital Budgeting 3 s.h.
This course includes the following topics: estimation of project cash flows, interest, annuity, and present value calculations, evaluation of projects under conditions of certainty and risk, strategic planning in capital budgeting, and leasing. This course may not be offered annually.

FIN 04516: Issues in Finance 3 s.h.
This course includes the following topics: mergers and acquisitions, financial structure analysis, cost of capital analysis, capital budgeting, portfolio management, financial institutions, money and capital markets, and international finance. This course may not be offered annually.

FIN 04518: Financial Engineering 3 s.h.
In this course, students will learn forward, future, option and swap contracts, and hedging, arbitrage, and derivatives-pricing models. In addition, securitization and risk managment concepts will be covered. Students will learn how to model and evaluate derivative instruments and their applications to corporate strategy and risk management.

FIN 04600: Investments/Portfolio Analysis 3 s.h.
Students will analyze and develop an ability to deal with the following topics: investment values and market price with regard to risk, return, portfolio diversification, taxes and inflation. They will also examine the role of fixed income securities versus common stock prices, yields, returns and valuations; warrants, options and future contracts, U.S. and foreign securities markets, and the rapidly developing science of portfolio management as it applies to both the firm and the individual. This course may not be offered annually.

ARHS 03520: Art Since 1945 3 s.h.

ART 02523: Graduate Painting I 3 s.h.
Advanced graduate work in concepts, techniques and media appropriate to contemporary painting and individual expression.

ART 02524: Graduate Painting II 3 s.h.
Further advanced work in painting.

ART 02532: Graduate Printmaking I 3 s.h.
Advanced graduate work in concepts, techniques and media appropriate to contemporary printmaking and individual expression. Permission of the instructor is strongly advised.

ART 02533: Graduate Printmaking II 3 s.h.
Further advanced work in printmaking.

ART 02535: Advanced Graduate Problems in Art 2 to 6 s.h.
Extensive in-depth work at the third or fourth graduate course level in a studies, art education or art history area arranged with permission of the appropriate professor, the graduate advisor and department chairperson.

ART 02560: INDEP STUDY-ART 3 to 6 s.h.

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 09520: Jewelry I 3 s.h.
Emphasis is on original metal design and construction, involving techniques and processes in the designing, forming and finishing of utilitarian and decorative hand-wrought products.

ART 09521: Jewelry II 3 s.h.
Further advanced work. This course may not be offered annually.

ART 09529: CERAMICS I 3 s.h.

ART 09530: CERAMICS II 3 s.h.

SMED 31350: Elementary Art Methods: Teaching and Learning Art A 3 s.h.
Prerequisites: C- or better in EDUC 01282 andREAD 30319 and SMED 33420Corequisite: 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.

SMED 31360: Secondary Art Methods: Teaching and Learning Art B 3 s.h.
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.

SMED 31507: GRAD PROBS 3 s.h.

AH 05501: Integrated Information Technology in Health Care 3 s.h.
Prerequisite: BSN, BS or BA (in health care related field) and evidence of successful completion of an undergraduate computer course that contained content in healthcare informatics.
The delivery of efficient health care requires the integration of information technology. This course builds on basic informatics knowledge and challenges the learner to apply these principles to the health care setting. The student will consider emerging technology and creatively investigate ways to improve patient care.

BIOL 01100: Biology I 4 s.h.
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 01104: Biology 1: Diversity, Evolution, and Adaptation 4 s.h.
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.

BIOL 01106: Biology 2: Concepts in genetics 4 s.h.
Prerequisites: BIOL 01104
This course is designed for first year biology majors and builds on skills and knowledge gained by the students from Biology 1. The course focuses on the study of genetic factors in bacteria, viruses, higher plants and animals. The principles of mendelian, molecular and population genetics will be introduced. Discussion of genetic applications in agriculture, biotechnology, and medicine will be an integral part of the course. The laboratory projects will provide the students with the opportunity to gain hands-on experience with the most common classical and molecular genetics methods. Credit will not be given for both Biology 2 (BIOL01.104) and Biology II (BIOL01.101).

BIOL 01202: Biology 3t: Biological Skills and Methods 4 s.h.
Prerequisites: BIOL 01100 and BIOL 01101
This laboratory course is designed for students transferring into the Biology major after having completed Biology I and Biology II at another institution. This course will review key topics covered in Biology 1, 2, and 3 (BIOL01.103, BIOL01.104, and BIOL01.203) while introducing students to a variety of scientific skills covered in those courses. Examples of skills include critical thinking, experimental design, reading of primary literature, data collection, analysis, and interpretation, and oral and written scientific presentations. Credit will not be given for both Biology 3 (BIOL01.203) and 3t (BIOL01.202).

BIOL 01203: Biology 3: Introduction to Cell Biology 4 s.h.
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 01599: INDEP STUDY 1 to 3 s.h.

BIOL 14540: Introduction to Biochemistry I 3 s.h.
This course is concerned with the chemical compounds and chemical reactions which are of paramount importance to the functioning of biological systems. The major metabolic pathways for energy production and biosynthesis are examined. The requirements include a research paper or individual project. Admission to the course is at the discretion of the Graduate Advisor. This course may not be offered annually.

BIOL 27503: Concepts of Comparative Embryology 4 s.h.
This graduate 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.

NURS 03303: Comprehensive Health Assessment 3 s.h.
This course focuses on total health assessment with differentiation between normal and abnormal findings. The total health assessment content focuses on individuals across the life span. Emphasis is placed on data collection and analysis through history and physical exam.

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 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 03401: Community Health Nursing 6 s.h.
Prerequisite: NURS 03303
This course will explore how community health nurses use concepts from nursing and public health to provide comprehensive, continuous, preventive healthcare thereby promoting health for communities, populations at risk, aggregates, families, and individuals. Students will use critical thinking skills to formulate healthcare strategies which consider the biopsychosocial, cultural, ethical, legal and economic issues impacting the community as a client. The clinical practicum focuses on clients with diverse needs in a variety of settings.

NURS 03403: Nursing Care Delivery Systems 4 s.h.
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 as a manager. This course prepares students to function as change agents in the health care delivery system.

NURS 03404: Research Applications in Nursing Practice - WI 3 s.h.
Prerequisites: STAT 02100 and COMP 01112
Knowledge obtained from this course will prepare students to critically analyze nursing issues from an applied research perspective. Students are provided with the skills needed to manage and interpret nursing data while learning the basics of American Psychological Association (APA) format, which sets standards for the content and organization of a scholarly written paper for the discipline of nursing.

NURS 03405: Health Care Policy and Finance 3 s.h.
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 03503: Nursing Research 4 s.h.
Prerequisites: STAT 02100 or the equivalentandenrollment in the UMDNJ/Rowan JointR.N. to B.S.N. Program and NURS 03404
Students focus on the theoretical and scientific underpinnings for evidence-based advanced nursing practice. In-depth critical analysis of scientific research and methods for systemic review, as relevant to patient care and health policy outcomes, are emphasized. Ethical, legal, economic, and cultural issues surrounding the conduct and utilization of research practice are examined. Students obtain skills in using bibliographic databases. The roles of the advanced practice nurse in research are explored.

NURS 03504: Advanced Pathophysiology 3 s.h.
Prerequisites: NURS 03303and enrollment in the UMDNJ/RowanJoint R.N. to B.S.N. Program
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.

NURS 03505: Clinical Pharmacology 3 s.h.
Prerequisites: NURS 03303and enrollment in the UMDNJ/Rowan JointR.N. to B.S.N. Program
This course expands students' knowledge of clinical pharmacology to provide a sound basis from which to engage in prescriptive drug management. Pharmacodynamics, pharmacokinetics and pharmacotherapeutics 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.

NURS 05501: Advanced Health Assessment 3 s.h.
Prerequisites: Licensed as a Registered Nurse (R.N.)AND BSN OR BA (If student has BA then NURS03303 AND NURS 03404 AND NURS 03405)
Advanced Health Assessment prepqres the graduate nurse to identify abnormal findings and critically analyze these findings. Critical analysis will result in problem identification and planning. This course will serve as a core requirement for completion of a graduate nursing degree.

NURS 05503: Nursing Research 4 s.h.
Prerequisites: STAT 02100 AND Licensure as a registered nurse
Students focus on the theoretical and scientific underpinnings for evidence-based advanced nursing practice. In-depth critical analysis of scientific research and methods for systemic review, as relevant to patient care and health policy outcomes, are emphasized. Ethical, legal, economic, and cultural issues surrounding the conduct and utilization of research practice are examined. Students utlilize sills in searching bibliographic databases. The roles of the master's prepared nurse in research are explored.

NURS 05504: Advanced Pathophysiology 3 s.h.
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.

NURS 05505: Clinical Pharmacology 3 s.h.
Prerequisite: Licensure as a registered nurse and NURS 03303 and NURS 05504
This course expands students' knowledge of clinical pharmacology to provide a sound basis from which to engage in prescriptive drug management. Pharmacodynamics, pharmacokinetics and pharmacotherapeutics 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.

NURS 05507: Leadership & Care Delivery Environment 3 s.h.
Prerequisites: Licensed as a Registered Nurse (R.N.)AND BSN OR BA (If BA then NURS 03303 ANDNURS 03404 AND NURS 03405)
This course is focuses on the analysis, integration and application of principles of leadership and management to health care organizations and to population-based efforts across the health care delivery system. The concepts of leadership and stewardship are explored from a historical and contemporary perspective with particular application to the health professions. The course fosters self awareness as a necessary condition for effective self management and self development, and a prerequisite for leading others. Special emphasis is placed on the practical skills needed for nurses to succeed as leaders and managers in today's local, state, national and international health care environment.

NURS 05508: Special Issues & Trends in Nursing 3 s.h.
Prerequisites: Licensed as a Registered Nurse (R.N.)AND BSN OR BA (if BA then NURS 03303 ANDNURS 03404 AND NURS 03405)
This course focuses on current trends and issues in professional nursing and health care delivery. The course is individually tailored to meet each student's educational goals and area of special interest in nursing and healthcare delivery in the twenty-first century. The topic will vary dependent on the student's interests, goals and objectives as discussed with faculty. Students under the direction of an instructor complete individually designed projects addressing major trends and issues in their emphasis area of nursing and health care delivery.

NURS 05509: Clinical Nurse Leader Role 3 s.h.
Prerequisites: Minimum GPA of 3.0: NURS 03504 ANDNURS 03505 AND NURS 03503 AND NURS 05501 ANDAH 05501 AND NURS 05507 AND NURS 05508 ANDLICENSED AS A REGISTERED NURSE (R.N.) AND BSN
This course immerses the student in the role of the Clinical Nurse Leader. The Clinical Nurse Leader (CNL) is a master's prepared nurse who delivers expertise in care as a generalist. The CNL manages care for patients, individuals, families, and communities. The CNL functions as a provider and manager for care at the point of system entry and strives to produce quality based outcomes. This course discusses the role of the clinical nurse leader as leader, outcomes manager and care environment manager. The graduate student, through participatory learning, will master the key concepts that are imperative to the successful transition into the CNL role.

NURS 05510: Evidence Based Practice in Illness/Disease Management 3 s.h.
Prerequisites: Minimum GPA of 3.0: NURS 03504 ANDNURS 03505 AND NURS 03503 AND NURS 05501 ANDAH 05501 AND NURS 05507 AND NURS 05508 ANDLICENSED AS A REGISTERED NURSE (R.N.) AND BSN
Evidence based practice in illness and disease management is a requirement for quality care delivery. This course serves as one of the mandatory courses in the clinical nurse leader track. This course discusses care management, client outcomes, application of assessment, pharmacology, and pathophysiology to specific disease states, and evidence-based practice.

NURS 05511: Clinical Nurse Leader Practicum I 3 s.h.
Prerequisites: NURS 05509 AND NURS 05510
This course prepares the graduate nursing student for the full clinical implementation of the Clinical Nurse Leader role. Concepts of care environment management are discussed and explored in the clinical setting. Through and interwoven marriage of didactic and clinical experience, the registered nurse will begin to experience the role of the Clincal Nurse Leader. 100 Clinical Hours Required

NURS 05512: Clinical Nurse Leader Practicum II 4 s.h.
Prerequisite: NURS 05511
The Clinical Nurse Leader (CNL) is a master's prepared nurse who delivers expertise in care as a generalist. The CNL manages care for patients, individuals, families, and communities. The CNL functions as a provider and manager for care at the point of system entry and strives to produce quality based outcomes. This course prepares the graduate nursing student for the full clinical implementation of the Clinical Nurse Leader role. Through an interwoven marriage of didactic and clinical experience, the registered nurse will experience the role of the Clinical Nurse Leader. 200 Clinical Hourse Required

CHE 06502: Special Topics in Chemical Engineering 3 to 6 s.h.
This course presents chemical engineering topics related to recent developments in industrial practice or research. May be repeated.

CHE 06506: Process Heat Transfer 3 s.h.
Application of heat transfer to the process industries. Mechanisms of heat transfer; conduction, convection and radiation; Selection and design of heat exchanging equipment, e.g., double-pipe, shell and tube, plate and frame, extended fin heat exchangers. Design parameters for heat transfer with phase change.

CHE 06508: Membrane Process Technology 3 s.h.
Principles of membrane processes: reverse osmosis, ultrafiltration, microfiltration, electrodialysis, pervaporation, 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 06510: Biochemical Engineering 3 s.h.
The fundamentals and engineering of bioprocess engineering with emphasis on applying biotechnology to industrial processes. Essential aspects of biochemistry, microbiology and kinetics. Discussion of bioreactor engineering, and recovery and purification processes. Processing applications of engineering kinetics and enzyme technology. Laboratory experiments and demonstrations will be integrated throughout the course.

CHE 06512: Safety in the Process Industries 3 s.h.
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.

CHE 06514: Transport Phenomena for Engineers 3 s.h.
This course will present the analogies among heat, mass, and momentum transfer. Governing differential equations and their uses in steady-state and unsteady-state systems will be described. Applications will be discussed for mass transfer coupled with heat transfer and/or chemical reaction. Numerical methods and computer applications will be integrated throughout the course.

CHE 06515: Advanced Reactor Design 3 s.h.
Overview of chemical reaction types and ideal reactors. 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 06516: Advanced Separation Process Technology 3 s.h.
This course describes advanced separation processes such as: crystallization and precipitation; adsorption, chromatography and ion exchange; reverse osmosis, ultrafiltration, gas permeation and pervaporation. Commercial system design parameters and laboratory demonstrations will be included. An overview of other novel separation processes will be done.

CHE 06518: Polymer Engineering 3 s.h.
This 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 06520: Green Engineering Design in the Chemical Industry 3 s.h.
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 steam renovation, material reuse and recycling methods. Case studies of industrial applications are utilized.

CHE 06528: Fluid Flow Applications in Processing and Manufacturing 3 s.h.
This course will cover the foundation principles of applied fluid mechanics with an emphasis on industrial applications. Topics in mixing, multi-phase fluid flow and processing, and fluidization will be covered. Key technologies from chemical, civil, and mechanical engineering applications will be used to illustrate concepts. The course will provide a strong background in the application of fluid mechanics principles to industrial processing and manufacturing operations.

CHE 06568: Electrochemical Engineering 3 s.h.
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 06570: Air Pollution Control 3 s.h.
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 06572: Biomedical Process Engineering 3 s.h.
This course introduces students to applications of chemical engineering fundamentals to biomedical systems. Students analyze and design biomedical processes. The basic biochemistry and physiology required for understanding of biomedical systems are presented. Advanced 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 06574: Advances in Particle Technology 3 s.h.
This course introduces students to application of chemical engineering fundamentals in the particle processing industry. Processes involving particles are an important part of the chemical process industry. These processes range from fluidized catalytic cracking of oils to coating processes in the pharmaceutical industry. Students will use advanced principles in fluid flow, heat and mass transport, and kinetics to analyze and design particle manufacturing processes and chemical industry processes involving particles. Novel processes will also be discussed and analyzed.

CHE 06576: 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 06577: Advanced Engineering Process Analysis and Experiemental 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 06579: Industrial Process Pathways 3 s.h.
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 06580: Optimization of Engineering Projects 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 06581: 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 06582: Food Engineering Systems 3 s.h.
This course introduces students to the application of fundamental and advanced chemical engineering fundamentals applied to food processing systems. Students analyze and design food engineering processes. The basic and advanced chemistry and biochemistry required for an in-depth 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.

CHEM 05501: PRINC OF CHEMISTRY 3 s.h.

CHEM 05544: INTRO TO RESEARCH 3 s.h.

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 07200: Organic Chemistry I (Lecture and Lab) 4 s.h.
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) 4 s.h.
Prerequisites: CHEM 07200
This course is a continuation of CHEM07.200. Required for science majors.

CHEM 07548: Biochemistry 4 s.h.
This course is concerned about Chemical compounds and chemical reactions which are of paramount importance to the functioning of biochemical systems. The major metabolic pathways for energy production and biosynthesis are examined. Laboratory experiments reinforce and expand the lecture material. The requirements of this course include a graduate laboratory project and/or research paper. Admission to the course will be at the discretion of the Graduate Advisor. This course is taught in the Chemistry and Biochemistry Department.

CHEM 07557: Chemical Biology 3 s.h.
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 07558: Advanced Biochemistry 4 s.h.
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 structure, function and mechanism will be presented. The overall strategy of living systems will be illustrated. Laboratory experiments will provide exposure to representative procedures and some important modern techniques. Students are encouraged to design their own molecular biology experiments using the facilities provided. A term project is incorporated into this course. Students are required to conduct an in-depth review of the literature regarding a topic.

CHEM 07560: Advanced Biochemistry Lecture 3 s.h.
Prerequisites: CHEM 07348 or CHEM 07548
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 07561: Advanced Biochemistry Laboratory 2 s.h.
Prerequisite: CHEM 07560 (may be takenconcurrently)
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 07564: Advanced Organic Synthesis 3 s.h.
Prerequisite: CHEM 07201 OR CHEM 07202
This course will provide and in-depth overview of several synthetically useful chemical methodologies, reagents, and reactions that are essential in synthesis of organic pharmaceuticals. Some of the general categories of reactions to be discussed in this course include reduction, oxidation, protecting groups, and carbon-carbon bond forming reactions. This course will survey a broad and diverse range of enantioselective, diastereoselective, chemoselective, and/or regioselective chemical transformations critical for the preparation of medicinal compounds. This course would suit the needs of graduate and senior undergraduate students who intend to pursue careers in the field of pharmaceutical sciences.

CHEM 07565: Organic Reactions and Mechanisms 3 s.h.
An advanced presentation of the major classes of organic chemical reactions, with the major emphasis being placed upon the detailed mechanisms of such reactions. Modern organic theory is included. The requirements of this course include a research paper or individual project. Admission to the course will be at the discretion of the graduate adviser. This course may not be offered annually.

CHEM 07567: ADV ORGANIC PREPARTN 3 s.h.

CHEM 07568: Medicinal Chemistry 3 s.h.
This course describes various topics related to 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 for 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. A term project is incorporated into this course. Students are required to conduct an in-depth review of the literature regarding a topic.

CHEM 07570: Organic Spectroscopy 3 s.h.
This is a laboratory course with class discussion on the separation and identification of organic compounds. Both classical and instrumental techniques are used in compound structure determination. Lecture emphasis is placed on interpreting IR, NMR, and mass spectra. The requirements of this course include a graduate laboratory project and/or research paper. Admission to the course will be at the discretion of the graduate adviser. This course may not be offered annually.

CHEM 07572: Advanced Organometallic Chemistry 3 s.h.
Prerequisite: CHEM 07201 OR CHEM 07202
This course covers the chemistry of organometallic compounds and their applications in organic synthesis, and pharmaceutical industry. Some of the topics discussed in this course include the study of physical and chemical properties, characterization, analysis, and preparation of organometallic compounds, along with advanced organometallic reaction mechanisms such as substitution, addition, elimination, and insertion, etc. The course is designed for pharmaceutical sciences students and includes submission of a written report on original research literature in organometallic chemistry.

CHEM 07575: POLYMER CHEMISTRY 3 s.h.

CHEM 07590: General Aspects of Pharmacology 3 s.h.
Prerequisite: CHEM 07201 OR CHEM 07202
This course attempts to provide an understanding of the basic principles and mechanism in pharmacology. Some of the topics discussed include pharmacodynamics and pharmacokinetics of drugs, and their interactions with the living tissues. It also provides a fundamental knowledge about the mechanism of action, structure-activity relationships, and interaction of therapeutics with physiological system and metabolism of drugs.

CHEM 07592: Advanced Pharmaceutical Chemistry 3 s.h.
Prerequisite: CHEM 07201 OR CHEM 07202
This course covers the structure, properties, preparation, and analysis of organic and inorganic pharmaceutical drugs. Some of the topics that will be discussed include pharmacognosy, organic and inorganic pharmaceuticals, solubility characteristics and properties of these compounds under biological conditions, etc. The course is designed for pharmaceutical sciences students and includes submissions of a written report on original research literature in pharmaceutical chemistry.

CHEM 07595: Bioinformatics - Biochemical Applications 3 s.h.
Prerequisites: CHEM 07348 or CHEM 07548 or BIOL 14440
This introductory course in the biochemical applications of 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, phylogenic 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. Students will be required to do a literature based research project.

CHEM 08400: Physical Chemistry I (Lecture) 3 s.h.
Prerequisites: (MATH 01131 OR MATH 01141) AND(PHYS 02201 OR PHYS 00222 OR PHYS 02203 ORPHYS 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. MATH01.230 recommended.

CHEM 08401: Physical Chemistry II (Lecture) 3 s.h.
Prerequisites: PHYS 08400 or CHEM 08400
This is a continuation of CHEM08.400

CHEM 08505: Advanced Biophysical Chemistry 3 s.h.
Prerequisites: (CHEM 07201 OR CHEM 07202) AND (MATH 01130 OR MATH 01140)
This is a graduate-level Biophysical Chemistry cousre, which focuses on applications of physical chemistry concepts and methods to biological systems. Topics cover the basic concepts of thermodynamics, reactions kinetics and spectroscopyk, etc. Additionally, various specific biophysical chemistry topics and experimental techniques are to be discussed. The course will equip students with a strong theoretical background to understand advanced topics covered in other courses. Students will be additionally required to complete an independent literature report as directed by the instructor.

CHEM 08510: Advanced Survey of Molecular Modeling Methods 3 s.h.
Prerequisites: (CHEM 07201 OR CHEM 07202) AND (MATH 01130 OR MATH 01140)
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. The topics will include quantum chemistry calculations, molecular mechanics, molecular dynamics simulations, in silico drug design, etc. This course is ideal for Chemistry, Biochemistry, Bioinformatics, and Pharmaceutical Science students.

CHEM 09250: Quantitative Analysis (Lecture and Lab) 4 s.h.
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 spectroscopic analyses.

CHEM 09510: Instrumental Analysis 4 s.h.
The theoretical basis, construction, and data interpretation of most instruments used by chemist are studied. Among the instruments considered are visible, UV, IR, NMR, AA, fluorescence, flame emission, and mass spectrometers. Electroanalytical, potentiometric, conductometric, electrogravimetric, and voltametric methods of analysis are used. Laboratory experiments allow "hands-on" use of representative instruments. The requirements of this course include a graduate laboratory project. Admission to the course will be at the discretion of the graduate adviser. This course may not be offered annually.

CHEM 09522: Advanced Bioanalytical Chemistry 3 s.h.
Prerequisites: CHEM 09250 AND CHEM 07348
This course will focus on the details of analysis of biomolecules using a variety of analytical techniques including liquid chromatography, electrophoresis and capillary electrophoresis. A thorough discussion of mass spectometry technique, as applied to biomolecules, will be conducted. This course will also introduce students to different DNA analysis techniques and electrochemical biosensors in biology and medicine. This also includes the analytical centrifugation methods as used in determination of molecular weight of biomolecules. This course prepares students for graduate school, careers in pharmacy, medical, and forensic among others.

CHEM 09596: MS Thesis Research I 3 s.h.
Prerequisite: CHEM 07201 OR CHEM 07202
This course provides individual laboratory research exploration of a topic beyond the scope of the existing courses. The research performed would be instructor/advisor specific and is based on the current research being performed in the department. The students would be expected to (a) conduct basic and applied research in pharmaceutical sciences, (b) retrieve and review research literature, (c) provide periodic updates and project reports, and (d) write manuscripts for publication in scientific journals or presentations at conferences and meetings.

CHEM 09597: MS Thesis Research II 3 s.h.
Prerequisite: CHEM 09596
This is a continuation course for MS Thesis Research I. The students in this course would either expand upon existing research projects from their earlier course, or start newer research projects, which will be determined on an individual case by case basis. The students would be expected to (a) conduct basic and applied research in pharmaceutical sciences, (b) retrieve and review research literature, (c) provide periodic updates and scientific project reports, and (d) write manuscripts for publication in journals or scientific presentations at conferences and meeetings.

CHEM 09598: MS Thesis Research III 3 s.h.
Prerequisite: CHEM 09597
This is a continuation course for MS Thesis Research II. The students in this course would either expand upon existing research projects from their earlier course, or start newer research projects, which will be determined on an individual case by case basis. The students would be expected to (a) conduct basic and applied research in pharmaceutical sciences, (b) retrieve and review research literature, (c) provide periodic updates and scientific project reports, and (d) write manuscripts for publication in journals or scientific presentations at conferences and meetings.

CHEM 09599: MS Thesis Research IV 3 s.h.
Prerequisite: CHEM 09598
This is a continuation course for MS Thesis Research III. The students in this course would either expand upon existing research projects from their earlier course, or start newer research projects, which will be determined on an individual case by case basis. The students would be expected to (a) conduct basic and applied research in pharmaceutical sciences, (b) retrieve and review research literature, (c) provide periodic updates and scientific project reports, and (d) write manuscripts for publication in journals or scientific presentations at conferences and meetings.

CEE 08503: Special Topics Civil Engineering 1 to 3 s.h.
Civil engineering topics related to recent developments in industrial practice or engineering research. May be repeated.

CEE 08504: Engineering Estimating 3 s.h.
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 cofferdams, 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 08507: Prestressed Concrete 3 s.h.

CEE 08512: Advanced Environmental Treatment Process Principles 3 s.h.
Topics in Fundamentals of Physicochemical Processes in Environmental Engineering such as Adsorption, Coagulation/Flocculation, Filtration, Sedimentation, Disinfection, Ion Exchange, Chemical Oxidation, Corrosion and Membranes.

CEE 08513: 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. The course will culminate in an original research project and presentation.

CEE 08522: Site Remediation Engineering 3 s.h.
Topics in site remediation engineering, including 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, phytoremediation, oxidation, soil flushing, and soil vapor extraction.

CEE 08531: 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 08532: Pollutant Fate and Transport 3 s.h.
Topics include Characteristics and Properties of Organic Pollutants, Aquatic Chemistry, Transport Mechanisms for Pollutants (Adsorption, Retardation, Attenuation, Volatilization, Biodegradation), Groundwater (Properties, Flow Equations, Transport in Porous Media) and Mathematical Modeling.

CEE 08533: 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 08543: Advanced Water Resources Engineering 3 s.h.
This course covers advanced topics in water resources engineering including the analysis and design of advanced hydraulic structures, hydraulic similitude and modeling, wave action, and advanced hydrology.

CEE 08544: Hydraulic Design 3 s.h.
The course focuses on 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 08545: Environmental Fluid Mechanics 3 s.h.
The course focuses on 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.

CEE 08546: River Engineering 3 s.h.
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. The course will culminate in an original research project and presentation.

CEE 08547: Watershed Engineering 3 s.h.
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. The course will culminate in an original research project and presentation.

CEE 08552: Foundation Engineering 3 s.h.
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 computer applications.

CEE 08553: Earth Retaining Systems 3 s.h.
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 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 08562: Advanced Transportation Engineering 3 s.h.
The fundamental theme of the course is the study of advanced topics in transportation engineering including advanced highway engineering and advanced mass transit systems. These advanced topics include the impact and interaction of sociological, economic, geographic and environmental factors on transportation systems. The course includes appropriate field measurements and computer applications.

CEE 08563: Advanced Pavement Analysis and Evaluation 3 s.h.
The fundamental theme of the course is the engineering study of pavement response. The topics covered include non-linear behavior of pavement materials and interaction between tires and pavements. Modeling and analysis of pavement behavior will also be taught, with content varying based upon instructor and student interests. The course includes field experiments and computer applications.

CEE 08564: Advanced Design of Elements of Transportation Engineering 3 s.h.
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 08573: Advanced Structural Analysis 3 s.h.
The course deals with the matrix method of structural analysis. The topics covered include structural members, member joints, member end conditions, local and global coordinate systems, coordinate transformation, member structural matrices, global structural matrices, condensation of global structural matrices, static structural analysis, and dynamic structural analysis. The course will include appropriate computer applications.

CEE 08574: ADV STRUCTURAL MECHANICS 3 s.h.

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.

CEE 08583: Advanced Steel Design 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 bracing. Historic and current research that is the foundation of code requirements will be discussed.

CEE 08584: Prestressed Concrete 3 s.h.
The course focuses on 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 08585: Advanced Reinforced Concrete 3 s.h.
The emphasis is the design of advanced reinforced concrete structures and structural components not covered in an introductory reinforced concrete design course. Topics include columns in bending, slender columns, slab systems, and other advanced topics in reinforced concrete.

CEE 08586: Bridge Engineering 3 s.h.
The analysis and design of modern steel highway bridges utilizing the bridge code of the American Association of State Highway and Transportation Officials is emphasized. 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.

EM 01501: ENGINEERING ECONOMICS 3 s.h.
This course covers a variety of topics in engineering economics including the following: making economics decisions, equivalence and the time value of money, spreadsheets and economic analysis, present worth and equivalent annual worth, internal rate of return, benefit?cost ratios and breakeven analysis, replacement analysis, depreciation and income taxes, inflation, value engineering, and decision-making tools.

EM 01511: Strategic Risk Management 3 s.h.
This course deals with a range of topics related to risk management including the following: risk terminology, tools for quantitative analysis of environmental and technological risks, social risk issues, risk in modern life, statistical analysis, data presentation, dose-response models for carcinogens, model limitations, models of risk aversion, psychological and community perceptions of risk, risk communication, environmental and health risk issues in the media, and case studies of accidents and incidents.

EM 01512: Quality in Engineering Management 3 s.h.
This course covers a range of topics related to quality in engineering management including the following: concepts and philosophy of engineering quality management, leading engineers, data analysis, engineering quality assurance and results, engineering quality methods and tools, continuous process improvement, total quality management within engineering, six-sigma, quality costs, customer satisfaction in relation to engineering design and quality, vendor relationships and quality, benchmarking engineering practices and products, statistical process control, quality function development, and case studies of quality in engineering management.

EM 01513: Engineering Decision Making 3 s.h.
This course covers the following topics related to engineering decision making: mathematical decision tree equations, mathematical programming for optimization of engineering problems, the theory behind methods and models, advanced statistical models for engineering analysis, advanced linear and non-linear models for engineering analysis, practical applications of decision methods and models to engineering problems, and identifying and balancing risk associated with technology development. Case studies dealing with real engineering projects and problems are included.

EM 01521: Construction Management 3 s.h.
This course covers the following topics related to construction management: project managers, developers, designers, contractors, and subcontractors; project startup, construction, and closeout; project financing; control of costs and schedule; construction contract types, bidding, delivery methods, and changes; bonds and insurance; inspection of work; claims, disputes, and arbitration; and case studies in construction management.

EM 01522: Construction Scheduling 3 s.h.
This course deals with the following topics in construction scheduling: scheduling terminology and history; time and duration of activities; relationships between project activities; critical path method (CPM); program evaluation and review technique (PERT); delays and other constraints; schedule development, analysis, and updating; and case studies of project construction schedules.

EM 01523: Cost Engineering 3 s.h.
This course covers a wide variety of topics related to cost engineering including the following: measuring work progress using costs, manhours, and schedule; earned value; cost and schedule performance; productivity; quantity adjusted budgets; budget and schedule baselines; control account baselines; cost control versus financial control; analysis, trending, and forecasting; cost and schedule performance curves; index and other tracking; elements of complete cost; and case studies in cost engineering.

EM 01541: Engineering Law and Ethics 3 s.h.
This course introduces students to law and ethics as it applies to engineering and engineering management. Topics covered in the area of law include the following: legal responsibilities of owners, designers, and contractors: risk management via insurance, surety bonds, and contracts; legal implications of the common activities of design professionals; liens; expert testimony; and patent law. Topics covered in the area of ethics include the following: ethical codes of professionals; derivation of ethical structures; and the role of the engineer in assuring public safety, health, and welfare. Case studies dealing with law and ethics are included.

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 04215: Fiction to Film 3 s.h.
Prereequisites: 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 04225: Semantics 3 s.h.
Prerequisites: 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 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 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 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 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 04575: Advanced Special Topics in Communication Studies 3 s.h.
Advanced Special Topics in Communication Studies allows students the opportunity to study a specific area of the field of communication studies with great depth. 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. Permission of instructor is required for undergraduate enrollment so that adequate preparation for course topic can be ascertained. This course is not offered annually.

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 (MATH01.195) 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 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 04113: Introduction to Object Oriented Programming 4 s.h.
Prerequisites: MATH 01122 or MATH 01123 or MATH 01130
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.

CS 04114: Object Oriented Programming and Data Abstraction 4 s.h.
Prerequisites: CS 04113 or (CS 04103 and CS 04112)
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.

CS 04222: Data Structures and Algorithms 4 s.h.
Prerequisites: CS 04.114 (C- or better) and MATH 03.160
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

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 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, deadlocking and recovery and design principles. The course discusses one or more operating systems for small computers, such as UNIX.

CS 04400: Computer Science - Senior Project 3 s.h.
Prerequisites: CS 04315 and CS 07340
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.

CS 04505: ADVANCED WEB PROGRAMMING 3 s.h.
Prerequisites: CS 04530 or CS 04430
This course teaches students to create and modify sophisticated data-driven web pages using client-server architecture. Topics covered include non-text information such as video, images, sound, custom web applications, asynchronous communication, accessibility, searching, security, and web server configuration.

CS 04530: Advanced Database Systems: Theory and Programming 3 s.h.
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).

CS 04548: Programming Languages: Theory, Implementation and Application 3 s.h.
An intermediate course intended to acquaint the student with the major categories of programming languages and to familiarize the student with one or two languages in each category. The student will complete programming projects in the languages studied. In addition, the student will learn formal mechanisms for specifying the syntax and semantics of languages and techniques for implementing data and control structures.

CS 04560: DESGN/IMPLEMENT OPER SYSTEMS 3 s.h.
Design choices and implementation (algorithms and data structures) of the capabilities of a modern operating system, including processes, concurrency, multithreading, synchronization, multiprocessors, CPU scheduling, interrupt handling, deadlocks, memory management, secondary storage management, file systems, I/O, protection and security. Issues include simplicity, efficiency, abstraction, microkernel, monolithic, client-server, mechanism vs. policy, caching.

CS 04564: Compiler Design Theory 3 s.h.
Prerequisites: Acceptance into the Computer ScienceMS or BS/MS program
This course centers on the design and use of compilers, the sophisticated computer programs whose function is to translate high-level code to machine language. The following topics are covered: Compiler models, finite state machines, the lexical box, context free grammars, translation grammars, pushdown machines, the syntax box, and the code generator.

CS 04565: System Programming 3 s.h.
This course covers the internal structures and algorithms of the system kernel of a modern operating system as well as the system call interface to the kernel. Students will gain hands-on experience in system level programming in a modern operating system environment. The emphasis will be on interprocess communications and concurrency. The concept of distributed and client/server computing will also be introduced.

CS 04570: Advanced Object Oriented Design 3 s.h.
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 06205: Computer Organization 3 s.h.
Prerequisites: (CS 04113 and MATH 03160) or (CS 04103 and MATH 03160)
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. This course is not open to students who have taken CS04.204 Assembly Language Programming.

CS 06310: Principles of Digital Computers 3 s.h.
Corequisites: CS 06311 Prerequisites: CS 06205
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.

CS 06311: Digital Computer Laboratory 1 s.h.
Corequisites: CS 06310 Prerequisites: CS 06205
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.

CS 06505: Wireless Networks and Systems 3 s.h.
Prerequisites: Acceptance into the Computer ScienceMS or BS/MS program
This course prepares students to understand wireless networks and systems, and the underlying communications technologies that make them possible. The course covers descriptive material on wireless communications technologies, and important deployed and proposed 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 06510: Computer Networks 3 s.h.
Prerequisites: Acceptance into the Computer ScienceMS or BS/MS program
Students in this course study how computer networks work and why they have been designed as we know them. The course covers descriptive material on network architectures and protocols, as well as network performance evaluation and protocol implementation. The course topics include important examples of local, metropolitan and wide area networks; telephone, cellular and wireless networks; the Internet; network security; and design tradeoffs in network systems and their implementations.

CS 06512: Network Security 3 s.h.
This is a graduate level course that covers the fundamentals of network security and cryptology. The course will cover 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. Students will prepare and deliver technical presentations on state-of-the-art research topics in network security.

CS 06515: Embedded Systems Programming 3 s.h.
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 debuggers. These concepts will be applied to design and implement embedded software for one or more modest-sized embedded systems.

CS 06520: Topics in Computer Architecture 3 s.h.
Students in this course will study the various performance enhancement techniques and more advanced architectural features of modern computer systems. The topics include DMA, I/O processor, RAID, cache memory, virtual memory, pipelining, RISC, superscalar processors and various advanced parallel architectures such as array processors, vector processors, shared-memory multiprocessors, and message-passing multicomputers. Students will complete independent research projects that may include detailed examination of one or two contemporary computers.

CS 07210: Foundations of Computer Science 3 s.h.
Prerequisites: C- or better in MATH 03160 and any 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 07321: Software Engineering I-Writing Intensive 3 s.h.
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 07340: Design and Analysis of Algorithms 3 s.h.
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 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 07522: Advanced Theory of Computing 3 s.h.
This course builds on the introduction to the theory of computing provided in the course Foundations of Computer Science. It discusses finite automata, formal languages, Turing Machines, and computability theory at an advanced level.

CS 07523: ADV SOFTWARE ENGINEERING 3 s.h.
Prerequisites: Acceptance into the Computer ScienceMS or BS/MS program
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. Students will be required to complete in-depth assignments involving conference or journal papers from the software engineering literature.

CS 07530: Computer Science Thesis I 3 s.h.
In consultation with the instructor, students will identify and research a specific area of computer science or computer science education. Students will define a thesis project and develop a formal specification of their intended project for completion in Computer Science Thesis II.

CS 07531: Computer Science Thesis II 3 s.h.
Students will follow their formal project specification developed in Computer Science Thesis I to research a specific area of computer science or computer science education and produce a written thesis.

CS 07532: Computer Science Thesis III 3 s.h.
Prerequisite: CS 07530 AND CS 07531
Students will continue scholarly research that was being done in Computer Science Thesis II and produce a written thesis.

CS 07540: Advanced Design and Analysis of Algorithms 3 s.h.
Students in this course will study efficient algorithms for sorting, searching, graphs, sets, matrices, and other applications, and will learn to design and analyze new algorithms. Students will also learn to recognize and prove NP-Completeness.

CS 07545: Advanced Robotics 3 s.h.
This course provides an introduction to the fundamentals of robotics. Students 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. Familiarity with matrix multiplication and inversion is expected for this course.

CS 07550: Concepts in Artificial Intelligence 3 s.h.
Prerequisites: Acceptance into the Computer ScienceMS or MS/MS program
This course surveys methods for programming computers to behave intelligently. Topics include knowledge representation methods, heuristic search, theorem-proving, puzzle-solving, game-playing, natural language processing, and expert systems.

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 07556: Machine Learning 3 s.h.
This course presents problems and solution methods for machine learning in a variety of contexts, such as inductive inference, statistical learning, explanation-based learning, genetic algorithms, and neural networks, and prepares the student to do research in this field.

CS 07560: Computer Graphics 3 s.h.
Prerequisites: Acceptance into the Computer ScienceMS or BS/MS program
This is a graduate level course in Computer Graphics. Students will study the use and implementation of graphics packages. Techniques and algorithms for implementing graphics systems will be covered. They include drawing of 2-D primitives; 2- and 3-D transformation and viewing; representing curves and surfaces; hidden line and surface removal; illumination and shading. Substantial programming projects on writing graphics applications and implementing graphics algorithms will be assigned. Students are encouraged to devise new techniques, implement them, and determine their effectiveness. Students will be required to complete in-depth assignments involving conference or journal papers from the computer graphics literature.

CS 07565: Computer Vision 3 s.h.
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, and object recognition. More advanced topics such as camera calibration, stereopsis, dynamic vision, and computer architectures for vision will also be covered. Independent projects on these advanced topics will be required.

CS 07570: INFORMATION VISUALIZATION 3 s.h.
This is a graduate level course in Information Visualization. Topics covered include graphics programming, information visualization general principles, visualization techniques for 1-dimensional, 2-dimensional, and N-dimensional information, graph visualization, visualization techniques for image and digital libraries, as well as for the World Wide Web, interactivity, theories behind information visualization, and focus+context techniques. This course also 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 complete in-depth assignments, read, summarize, and present recent journal papers from the information visualization literature, and prepare term papers with regard to an information visualization research topic. Students will also be required to specify, design, implement, and document a semester-long software project

related to information visualization.

CS 07575: Advanced TCP/IP and Internet Protocols and Technologies 3 s.h.
Prerequisites: Acceptance into the Computer ScienceMS or BS/MS program
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 routing, 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 07580: COMPUTER ANIMATION 3 s.h.
Prerequisites: Acceptance into the Computer ScienceMS or BS/MS program
This is a graduate level course in Computer Animation that takes a look at Computer Animation from a programmer's 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. Students will be required to complete in-depth assignments, read, summarize, and present recent journal papers from the computer animation literature, and prepare term papers with regard to a computer animation research topic. Students will also be required to specify, design, implement, and document a semester-long software project related to computer animation.

CS 07590: Computer Game Design and Development 3 s.h.
Prerequisites: Acceptance into the Computer ScienceMS or BS/MS program
This is a graduate level course that investigates advances in technology, science, art, and culture involved in the creation of computer games. Games wil be examined in a systems context to understand gaming and game design fundamentals. Students will be required to complete in-depth assignments and present recent conference or journal papers from the computer gaming and game design fundamentals. Students will be required to complete in-depth assignments and present recent conference or journal papers from the computer gaming literature. Extensive study of past and current games will be used to illustrate course concepts. Students will also be required to specify, design, implement, and document a semester-long software project related to computer animation.

CS 07595: Advanced 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.

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.

COUN 26501: Introduction to Counseling and Guidance 3 s.h.
This course provides a comprehensive, introductory overview of the profession of school counseling. It provides students with the philosophical and historical perspectives that serve as a foundation for the school counseling profession. The course also addresses current professional issues such as legislation, associations, certification, licensure, and accreditation. In addition, information will be provided as to the diversity of roles, job outlook, and specializations within the counseling field.

COUN 26509: Group Counseling in Educational Settings 3 s.h.
Emphasis is placed in the design, planning and facilitation of a group. The focus of the class is experiential whereby students learn group facilitation skills while being part of a group process. The course covers basic skills for group leaders, introducing, conducting and processing exercises, kinds of counseling and therapy groups, dealing with problem situations, and multicultural considerations.

COUN 26520: Design and Administration of Developmental Counseling Programs 3 s.h.
This course provides a thorough exploration of developmental counseling programs, and of how such programs are integral to school educational programs collectively. Topics include: design and administration, consultation skills, comprehensive program components, developmental curriculum, program evaluation, and counselor orientation.

COUN 26523: Counseling Interviewing Skills and Techniques 3 s.h.
The course explores the nature of counseling and its relationships to theoretical concepts. The course also teaches fundamental counseling skills such as relationship building, basic assessment, goal setting, selection of interventions, and evaluation of client outcomes.

COUN 26524: Assessment and Appraisal Procedures in Counseling in Educational Settings 3 s.h.
An overview of formal and informal assessment and appraisal methods for evaluating student trends in academic, behavioral, socio-emotional and career development and performance in educational settings (K-16). Topics include: psychometric statistics, factors related to the assessment and evaluation of individuals, groups and special populations, case conceptualization, assessment, and diagnosis. The processes of selection, administration, scoring, interpretation, and reporting information from appraisal techniques are examined in relation to practical, legal, and ethical considerations.

COUN 26525: Multicultural Counseling and Advocacy in Educational Settings 3 s.h.
This course provides a thorough explanation of multicultural school counseling. It presents relevant skills in counseling culturally diverse populations, as well as current theories and trends in multiculturalism as they relate to K-12 and post-secondary educational settings. The course addresses current professional issues such as promoting academic achievement and student retention among diverse student groups, working with culturally diverse families, and recognizing cultural influences on student behavior.

COUN 26526: Individual Counseling Procedures 3 s.h.
Coverage of all major counseling theories is provided with an emphasis on developing one's personal counseling philosophy and an integrative approach. Using assigned readings, discussion, and interactive counseling situations, students are provided with opportunities to refine their counseling skills; the "theory to practice" approach is utilized.

COUN 26527: Practicum in Counseling in Educational Settings 3 s.h.
Prerequisites: COUN 26509 and COUN 26526
The purpose of this course is to help each student develop effective individual counseling skills which can be used in a multiplicity of settings. Students enrolled in this course will study and apply various contemporary theoretical approaches to counseling through role playing and video taping tecnhiques. A field-based experience of 100 clock hours is required.

COUN 26582: Career Counseling in Educational Settings 3 s.h.
This course seeks to develop a conceptual framework of the career development process throughout the life span as well as practical knowledge of the information system in counseling and career counseling procedures. The course covers the major theories of career development, the structure of the world of work, testing and assessment, computer assisted career guidance systems and systematic career development programming.

COUN 26597: Relations of the Public School with the Institutions and Agencies of New Jersey 3 s.h.
Particular attention is directed to the problem of caring for atypical children, the work of prevention of delinquency and maladjustment and the methods which may be used by administrators, supervisors, and teachers to avail themselves of greater assistance with problems surrounding the teaching of atypical students.

COUN 26601: Internship in Counseling in Educational Settings 3 s.h.
Prerequisites: COUN 26520 and COUN 26509and COUN 26526 and COUN 26501 andCOUN 26527 and COUN 26582
Internship I in Counseling/Student Personnel Services is one of the culminating field-based experiences for matriculated students taken during the final Fall semester of one's program. Students spend a minimum of 300 clock hours throughout each semester at their selected internship site for a maximum of 600 clock hours in one academic year. Emphasis is placed upon gaining direct experiences and actually participating in all phases of student services. Internship students work under the direction of an on-site mentor, and a college-faculty supervisor. Internship students attend topical seminars on campus.

COUN 26603: Research and Evaluation Procedures in Counseling in Educational Settings 3 s.h.
Prerequisites: COUN 26520 and COUN 26509 andCOUN 26526 and COUN 26501 and COUN 26527and COUN 26582
Research and Evaluation Procedures in Educational Settings will provide opportunities for students to conduct focused inquiry and to generate knowledge around those factors germane to the field of counseling. During this course, students will begin an action research thesis project focusing on school-counseling program reform, with emphasis on systems change processes, needs assessment, goal setting, and data gathering processes.

COUN 26605: Advanced Workshop/Counseling in Educational Settings 1 s.h.
This course is a series of three 1 Semester Hour seminars designed to explore and discuss current issues in counseling. Selected topics include adventure learning, (ropes course), loss and bereavement, communicating for intimacy, and existential thought and spirituality.

CURR 29503: Teaching Adult Learners 3 s.h.
The general purpose of the course is to help participants become better instructors of adults. The course focuses on proven methods and techniques for teaching adults in a variety of settings. Special attention will be paid to the individualizing instruction process. Course participants will strengthen both theoretical and practical understandings of the adult learning process, study methods and techniques for teaching adults, and critically reflect on their own instructional efforts.

CURR 29504: Understanding Adult Learning and Development 3 s.h.
The general purpose of the course is to introduce participants to the processes of adult development and learning. The course examines the social, psychological, economic, and cultural dimensions of learning in adulthood as well as the application of theory and research findings to adult learning situations. Special attention will be paid to the concept of learning how to learn. Course participants will be invited to undergo a series of thinking style and learning style profile tests and then analyze the results in an effort to improve learning performance.

EDAM 27510: Change for School Improvement 3 s.h.
This advanced course in school leadership enables students to better understand the change process, further developing their analytic skills for improving the teaching and learning process. This course is offered annually and includes a field experience component.

EDAM 27521: Introduction to the Principalship 3 s.h.
The essence of school administration is the ability to supervise and manage the school organization, including its personnel, resources, and operations. In this course, students learn and demonstrate the supervisory and management skills necessary to use data-driven decision-making strategies to create an effective school culture and climate, supervise and manage school personnel and plant, supervise the application of instructional and informational technology, supervise scheduling and business procedures, and advocate for school resources among community and service agencies in ways that give priority to student learning, safety and security, and curriculum and instruction. Effective communications skills are emphasized.

EDAM 27535: School Finance and Records 3 s.h.
Students learn and demonstrate the ability to develop budgets, apply principles of financial management, budget management. Students study how schools are supported financially. This course includes a field experience component.

EDAM 27559: Law and Ethics for School Leadership 3 s.h.
Students study and understand and demonstrate the ability to identify legal issues involved in personnel administration, school district government and operation, state aid, handicapped children and student rights. Includes a study of the legal structure of the New Jersey school system.

EDAM 27600: Practicum/Seminar in Administration/Supervision I 3 s.h.
An administrative internship to reinforce and practice administrative and supervisory competencies, in cooperation with a school district, is required. Students apply human relations skills, apply decision-making skills, articulate ethical beliefs and values and apply various leadership theories. Students also demonstrate group process abilities such as shared decision-making, group motivation, conflict resolution, and planning and conducting effective meetings. A project report is required integrating research findings with selected field projects. Written and oral communication and community relations skills are emphasized.

EDAM 27601: Practicum/Seminar in Administration/Supervision II 3 s.h.
An administrative internship to reinforce and practice administrative and supervisory competencies, in cooperation with a school district, is required. Students apply human relations skills, apply decision-making skills, articulate ethical beliefs and values and apply various leadership theories. Students also demonstrate group process abilities such as shared decision-making, group motivation, conflict resolution, and planning and conducting effective meetings. A project report is required integrating research findings with selected field projects. Written and oral communication and community relations skills are emphasized.

EDAM 27620: Legal Issues in Higher Education 3 s.h.
This course examines the legal principles that guide the administration of higher education. Students will study current and emerging legal issues in higher education, focusing primarily on student rights, student life, and general administration legal concepts.

EDAM 27621: Student Services in Higher Education 3 s.h.
This course traces the historical development of student services and examines the philosophy and rationale for current student services. Reflecting upon the demographic trends affecting higher education, students consider the extent to which the nature, scope, and delivery of services should be changed to meet emerging needs.

EDAM 27622: Planning and Resource Allocation in Higher Education 3 s.h.
This course will teach students practical approaches to strategic and operational planning in higher education, as well as how to develop budgets that are driven by institutional mission and that support the institutional plan.

EDAM 27623: Diversity in Higher Education 3 s.h.
The purpose of this course is to provide students with an in-depth exploraton of diverse populations on college campuses. Students will utilize a broad view of diversity, including race, ethnicity, gender, religious and spiritual values, sexual orientation, socioeconomic status, disability status, and age, as well as unique characteristics of various ethnic and cultural groups that affect college students and campuses. This course will provide students with relevent skills and understanding of current theories, models, and issues within diverse populations and community building on diverse campuses. The readings, discussions, and assignments are intended to provide information for student affairs professionals, administrators, or faculty members.

EDAM 27624: College Admission and Transition 3 s.h.
Prerequisites: HIED 06605 OR EDAM 27737 OR COUN 26526 OR COUN 26520
This course provides an overview of admissions processes in higher education in the United States and incorporates service learning to assist high school students' college search/application processes. Through the service learning experience, students completing the course will have a fuller understanding of issues in admissions, including diversity and equity issues, and how these issues affect students applying to colleges. The topics covered include the admission process, stratification in postsecondary attendance patterns, college counseling, service learning, establishing and maintaining appropriate relationships, aw well as the role of reflection in service learning. Particular attention is paid to issues of campus diversity and equitable access to postsecondary education. The readings, discussions, and asignments are intended to provide information for student affairs professionals, school counselors, administrators, or faculty members. All students will be required to complete a fingerprinting and background check process.

EDAM 27625: Change in Higher Education 3 s.h.
This course will focus on the change process both theoretically and practically. Each student will undertake an action research project that will serve as the basis for the thesis. A complete first draft of the thesis will be required by the end of this course.

EDAM 27628: Seminar/Internship in Higher Education Administration I 3 s.h.
This course is the first of a two course sequence which is intended to serve as the capstone experience for the M.A. program in higher education. Students will utilize a workplace in a higher education setting as a laboratory to study the application of higher education administrative theory to practice and to begin work on a major capstone research project.

EDAM 27629: Seminar/Internship in Higher Education Administration II 3 s.h.
This course is the second of a two course sequence which is intended to serve as the capstone experience for the M.A. program in higher education. Students will utilize a workplace in a higher education setting as a laboratory to study the application of higher education administrative theory to practice and to complete work on a major capstone research project.

EDAM 27637: Higher Education Administration 3 s.h.
This course introduces students to the fundamentals of administration in the higher education setting. Topics include authority and power, implementation of institutional policy, decision-making in higher education, conflict resolution, staff supervision, and program assessment.

EDAM 27737: The College Student: Issues and Support Programs 3 s.h.
This course includes the study of student development and academic support in different types of institutions of higher education. Emphasizing the role of the leader, the course studies the rationale, goals, objectives, policies and organizations of selected programs of student services, as well as models for program development and assessment.

EDAM 27741: Current Issues in Higher Education 3 s.h.
This course will have a changing focus that will permit faculty to offer specialized seminars focusing on new developments in the field, on issues of significance where advanced specialization would be helpful to educational leaders, on areas of faculty research and scholarship, or in response to student requests. Multiple sections of this course, each focused on a different topic, may be offered during a semester. Students may take this course for elective credit more than once, as long as the theme of the course is different each time that the student enrolls.

EDAM 27742: The Curriculum of Higher Education 3 s.h.
This course will examine differences of mission and resulting curricular offerings between types of higher education institutions, external and internal influences that influence the curriculum, the components of curriculum, the curriculum development process, appropriate strategies for curriculum assessment, and contemporary curricular issues.

EDAM 27746: Higher Education Governance 3 s.h.
This course will examine the layered approach to institutional governance, focusing on existing federal higher education policy, the various models of state-level higher education coordination, the function of boards of trustees, and the process of campus decision-making. Students will analyze the role of federal, state, county (if applicable), and campus policy-makers on a specific campus program.

EDAM 27748: Human Resource Development 3 s.h.
This course focuses on improving the performance of the organization through a proactive human resource development effort. It will stress the responsibility of leaders to assist staff through coaching, appraising performance, providing advice, and eliminating barriers to development.

EDST 24501: Procedures and Evaluation in Research 3 s.h.
The course helps students develop an understanding of research and statistics sufficient to enable them to read and evaluate research, and develop and carry out full scale research projects.

EDST 24503: Quantitative Analysis in Educational Research 3 s.h.
This introductory course is designed to assist educators in the design and implementation of research projects using quantitative methods of analysis. Using a decidedly applied approach, educators will learn how to use computerized statistical analysis programs in conducting quantitative data analyses. Further, they will learn how to compute and interpret statistics of varying types, including t-tests, F tests, r tests, chi-square and other assorted parametric and non-parametric tests of significance.

EDST 24504: Action Research in Education 3 s.h.
This introductory course introduces students to the cyclical and recursive approaches to action research. Student will engage in reflective practice and will complete an action research project in an appropriate educational setting.

EDST 24707: Applied Analysis for Educational Leadership 3 s.h.
This is an intermediate course in quantitative (statistical) analysis with emphasis upon three broad areas: applying correct statistical procedures for data analysis; using automated approaches to hypothetical testing and quantitative analysis, and using intermediate-level statistical procedures in educational inquiry. The course is expected to provide practical knowledge for use by educational leaders to support administrative decisions.

EDST 24709: Issues in Survey Research 4 s.h.
This course teaches methods for designing and implementing survey research, including how to choose a valid sample, handcraft survey instrumentation, avoid non-response bias and other threats to the validity of the survey, and analyze and communicate survey results validly and effectively.

EDSU 28522: Instructional Leadership and Supervision 3 s.h.
In this course, students focus on the knowledge, skills, and dispositions essential for instructional leadership and the supervision of educational activities and programs. Topics include program planning, staff selection and mentoring, curriculum development and evaluation, analyzing teaching and interpersonal supervisory strategies, collaborative program development, practicing value-added leadership and supervision, reflective practice, understanding the need for diversity in teaching and learning, and communication. This course also includes a field experience component of approximately 25 clock hours in which students apply theory to practice.

EDSU 28523: Building Organizational Capacity Through Leadership and Supervision 3 s.h.
This advanced course in school leadership enables students to practice the cyclical and recursive approached to action research. Student will engage in reflective practice and will complete an action research project in an appropriate educational setting related to the teaching and learning process. This course is offered annually and includes a field experience component.

EDSU 28546: Educational Organizations and Leadership 3 s.h.
In this course, students will demonstrate an understanding of organizational theory that underlies effective leadership and supervisory behaviors in P-12 environments. Students will further demonstrate that they can analyze and supervise school and programmatic activities, nurture and supervise a vision for improvement in teaching and learning, lead and supervise change, support staff development, and use effective supervisory skills. Other topics include the history and philosophy of school leadership and supervision, effective schools, effective teaching, and the future of school leadership and supervision.

HIED 06603: Seminar/Internship in Higher Education Instruction 4 s.h.
The goal of this seminar is to prepare students to teach in a higher education setting in selected areas by engaging them in a comprehensive instructional internship in a cooperating institution of higher education. The seminar will provide the opportunity to explore best practices in instruction and to reflect on the internship experience.

HIED 06605: Higher Education in America 3 s.h.
This course focuses on issues and trends within higher education regarding institutional mission, the student body, curriculum, faculty, student services, governance, administration, finance, and community service (including economic development). The course will examine the challenges and opportunities confronting higher education.

HIED 06606: Selected Topics in Higher Education 3 s.h.
This course explores a topic of importance in the field of higher education. The focus will be different each time that the course is offered. Examples of courses that might be offered include: New Directions in Financial Aid; Outcomes Assessment; Distance Learning; State Higher Education Systems; Federal Policy and Higher Education; Student Activism.

PSY 06628: Individual Psychodiagnostics II 3 s.h.
This course will focus on cognitive and educational assessment based on the Cattell-Horn-Carroll (CHC) theory of intelligence. Administration and interpretation of the Stanford-Binet: Fifth Edition and the Woodcock-Johnson Assessment Battery: Third Edition will be the course competencies. Special assessment issues covered will include nondiscriminatory assessment, preschool assessment and the assessment of academic achievement, with particular emphasis on the assessment process as a link to classroom cognitive and instructional intervention.

PSY 06632: School Psychology: Consultation and Intervention 3 s.h.
The course is designed to help students become familiar with alternative frameworks for educational delivery systems including emerging skills in instructional and collaborative consultation, teaming strategies, curriculum based assessment and measurement, and intervention strategies in the academic, behavior and social areas. Emphasis is placed in viewing the problems children experience in schools from a systems or ecological perspective as opposed to residing within the child. The role of the school psychologist will be enlarged to permit their effective participation in transdisciplinary school based terms.

PSY 22623: COLLOQUIUM SCH PSYCH 3 s.h.

SCPY 22600: Applied Research Seminar I: School Psychology 3 s.h.
This course will concentrate on the latest developments in the field of school psychology, emphasizing evidence-based practice and research findings. Students will be expected to design an applied research project in the field of school psychology. In addition, students will participate in a school-based field experience to directly observe the role of the school psychology practitioner.

SCPY 22601: Applied Research Seminar II: School Psychology 3 s.h.
Prerequisite: SCPY 22601
This course will concentrate on the latest developments in the field of school psychology, emphasizing evidence-based practice and research findings. Students will conduct an applied research project in the field of school psychology. In addition, students will demonstrate their knowledge in school psychology through a comprehensive assessment.

SCPY 25516: Applied Tests and Measurements 3 s.h.
Emphasis is placed upon data-gathering, the evaluation of data and the use of data in educational measurement. Standardized tests, both gruop and individual, will be studied.

SNUR 92407: School and Family Issues for Children with Ongoing Health Care Needs 3 s.h.
This course explores various health care needs of the chronically ill school age child. There is an emphasis on the importance of collaboration between home and health care providers. Family dynamics and legal issues are discussed and resources are identified. The teacher's role in meeting both the educational and health care needs of children is stressed.

SNUR 92430: Methods and Materials in Health Teaching for School Nurses 3 s.h.
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.

SNUR 92444: Practicum in School Nursing 3 s.h.
Prerequisites: SNUR 92466
The purpose of this field experience is to provide an opportunity for the student to engage in a mentoring relationship with an expereiced, certified school nurse. The student will have the opportunity to observe and participate in the carious 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.

SNUR 92445: Internship in Health Teaching for School Nursing 3 s.h.
Corequisites: SNUR 92448 Prerequisites: SNUR 92430 andSNUR 92466
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 SNUR92.448. Pre-registration consultation with program advisor is required one semester prior.

SNUR 92466: School Health Services 3 s.h.
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. Particular emphasis eill be placed on the school and community activities relating to students, their families and other eductional personnel.

SNUR 92751: Institutional Design & Curriculum Development in Nursing Education 3 s.h.
Prerequisite: EDAM 27783
This course explores the developing role of the nurse as an educator and leader. The process from institutional design, curriculum development, methodologies, strategies and outcomes will be emphasized to facilitate the learning process.

SNUR 92752: Nursing Program Evaluation & Information Resources 3 s.h.
Prerequisites: EDAM 27783 and SNUR 92751
This course will explore how information technology and resources are transforming nursing education. The methodology of evaluating comprehensive nursing programs within the context of core competencies, technology, standards, and accreditation for quality management are reviewed.

SNUR 92753: Practicum in Nursing Education 3 s.h.
Prerequisites: EDAM 27783 and SNUR 92751and SNUR 92752
This practicum will provide the student with the opportunity to synthesize and apply acquired knowledge and skills in a planned and guided teaching-learning environment through the mentorship process.

SPSY 06627: Cognitive Assessment and Data-Based Decision Making 3 s.h.
This course will focus on an overview of theories of intelligence as well as the use, organization and interpretation of individual standardized tests. Specifically, administration and interpretation of the Wechsler Scales will be expected outcomes of the course. This includes training on the WPPSI-III, the WISC-IV, the WAIS-III and the WIAT-II, with particular emphasis on the assessment process as a link to classroom cognitive and instructional interventions.

SPSY 06628: Psychoeducational Assessment and Data-Based Decision Making 3 s.h.
This course will focus on cognitive and educational assessment based on the Cattell-Horn-Carroll (CHC) theory of intelligence. Administration and interpretation of the Stanford-Binet: Fifth Edition and the Woodcock-Johnson Assessment Battery: Third Edition will be the course competencies. Special assessment issues covered will include nondiscriminatory assessment, preschool assessment and the assessment of academic achievement, with particular emphasis on the assessment process as a link to classroom cognitive and instructional intervention.

SPSY 06629: Behavioral-Social Assessment and Data-Based Decision Making 3 s.h.
Prerequisites: SPSY 06628
This course will focus on an overview of personality and behavioral assessment. This will include instruments and techniques (standardized and clinical) for obtaining information regarding emotion, behavior, motivation, self concept, and interpersonal and attitude characteristics as distinguished from cognitive abilities. There will be an emphasis on interpreting data from multiple sources to achieve the goal of describing the personality and behavior.

SPSY 06632: School Psychology: Consultation, Collaboration and Intervention 3 s.h.
Prerequisite: SPSY 06629
The course is designed to help students become familiar with alternative frameworks for educational delivery systems including emerging skills in instructional and collaborative consultation, teaming strategies, curriculum based assessment and measurement, and intervention strategies in the academic, behavior and social areas. Emphasis is placed in viewing the problems children experience in schools from a systems or ecological perspective as opposed to residing within the child. The role of the school psychologist will be enlarged to permit their effective participation in transdisciplinary school based

terms.

SPSY 08545: Home/School/Community Collaboration 3 s.h.
This course is designed to promote students' knowledge, skills and dispositions regarding positive home-school and community collaborations. Topics include the study of families and schools as separate systems, ways in which family systems, theory, diversity, and disabilities affect both a student's learning and behavior, and the families' relationships with schools. The role of educational helping professionals and methods of collaboration between home, school, and community that will facilitate effective comprehensive services will be examined.

SPSY 08547: Professional School Psychology 3 s.h.
The purpose of this course is to introduce students to current theory, research, practices and issues in school psychology and to the code of ethics that guides the field. Particular emphases are conceptual, professional, legislative, legal and ethical issues, and emerging problems in school psychology. Students will apply these issues to their own training and professional development. The student will be introduced to the conceptualization of the school psychologist as a problem-solver who links assessment to intervention and provides both direct and indirect psychological services.

SPSY 22623: Internship in School Psychology 3 s.h.
Prerequisite: SPSY 22630
The 3-credit course entitled 'Internship in School Psychology' is a 300-hour experience completed on a half-time school week basis over four consecutive semesters in a school setting. Students are placed in approved sites for their internship experience where they are supervised by an appropriately credentialed school psychologist. Interns receive at least one hour of field-based supervision per week from a practicing school psychologist, who is responsible for no more than two interns at any given time. Interns are expected to attend scheduled Internship classes on the Rowan University campus. To complete the EdS in School Psychology and to be eligible for NJ Department of Education certification as a School Psychologist, students must complete 12 credits of Internship in School Psychology totaling 1200 hours of field experience.

SPSY 22630: Practicum in School Psychology 3 s.h.
This course emphasizes psychoeducational assessment, intervention, and strategies for the student with special needs. Practical experiences in psychoeducational assessment and consultation strategies with students are provided, as well as, with staff and parents. The practical experiences are provided within the Special Educational Services Clinic or other educational/mental health service programs. Instruction as well as supervision is provided as part of this pre-externship experience.

SPSY 22634: Internship in School Psychology 6 s.h.
This is a full school year internship in School Psychology with placement in a public school. Monthly meetings will focus on discussion of psychological diagnosis, educational remediations and research based upon consideration of case materials related to externship experiences; review of current theoretical and experimental developments in school psychology.

EDAM 27505: Selected Topics in Educational Leadership 1 to 6 s.h.
This course explores one or more topics of importance in the field of educational leadership. The focus will be different each time that the course is offered.

EDAM 27525: INDEP STUDY-ED LEADERSHIP 1 to 6 s.h.

EDAM 27536: Financial Accounting for School Systems 3 s.h.
This course will provide students with the knowledge and skills required to initiate and maintain a school district accounting program. The course will emphasize--but not be restricted to--the laws and procedures relative to New Jersey school accounting. This course includes a field experience component.

EDAM 27538: School Business Management 3 s.h.
This course is designed to provide graduate students with an introduction to the skills, concepts, and insights necessary for the school business administrators to manage, as members of the administrative team, increasingly complex schools to obtain the greatest educational return for each tax dollar expended. This course includes a field experience component.

EDAM 27610: Human Resources for School Systems 3 s.h.
Analyzes the legal developments and trends in collective negotiations in the public sector. Topics to be developed are the process of effective negotiations, organization rivalries, grievance procedures, the impasse and the comprehensive agreement. This course may not be offered annually. It includes a field experience component.

EDAM 27704: Changing Organizations 3 s.h.
This course focuses on the development of leadership skills that will provide students with the ability to implement change in schools and colleges. Specific topics will involve students in the study of organizational and social change, intervention theory, organizational design, group dynamics, interpersonal communication, and the use of self in leadership.

EDAM 27714: Planning and Negotiating 3 s.h.
This course teaches students to set organizational direction with specific goals and objectives to produce an integrated system of decisions regarding strategies, sub-strategies, programs and budgets that will accomplish the goals of the objectives. The course also focuses on the leadership role of creating mutual understanding and agreement among people and groups who may have fundamental differences of opinion.

EDAM 27719: Dissertation Seminar I 3 s.h.

EDAM 27720: Dissertation Seminar II 3 s.h.
Prerequisite: EDAM 27719
This course is intended to assist students as they develop their dissertation proposal and prepare for the Benchmark II, the dissertation proposal defense. Students will draft Chapters 1, 2, and 3 under the guidance of Educational Leadership Faculty members.

EDAM 27733: The Policy Environment 3 s.h.
Educational leaders must understand the policy environment within which they operate in order to equip them to resolve goal conflicts between education and its environment. This course teaches the skills to develop alternative choices to advance education. Topics include economic, political/legal, social, and science/technology policy, as well as cross-cutting issues such as entitlements, privatization, decentralization, deregulation, use of incentives, and funding of mandates.

EDAM 27735: Promoting Effective Learning 3 s.h.
In this course, students apply leadership skills through examination and analysis of learning and instruction in their school contexts. The course focuses on examining learning theories, identifying the ways in which certain patterns of activity and interaction promote learning, and applying theories to analyze learning environments. Students also use theoretical perspectives to consider the impact of educational reform and to understand how other social, political, economic, legal, and cultural factors can impact learning.

EDAM 27749: Issues in School Governance 3 s.h.
This course identifies current issues in school governance and provides students with the understanding of how the issue develops, those instrumental in promoting the issue, and the ramifications of the issue could have for the educational systems and its leader. It will focus in part on the relationships among the educational leader, the school, and state-level authorities. The course will help students to develop their understanding of the role of the educational leader as spokesperson seeking to influence the resolution of issues of school governance.

EDAM 27750: Applied Ethics of Educational Leadership 3 s.h.
This course will enable students to examine multiple thical paradigms, to understand the Professional Code of Ethics for educators, to determine one's own code of ethics, and to develop a model for ethical decision-making.

EDAM 27752: Advanced Leadership 3 s.h.
Prerequisite: minimum grade of B in EDST 24720
This course provides students enrolled in the doctoral program with a capstone seminar experience that is designed to synthesize the various facets of leadership, organizations and change in a way that will enable students to view issues related to these topics at a critical/deeper level of analysis while working on the dissertation. Specifically, students will be able to formulate, articulate and design a method to study their personal theory of leadership in action. The course will place special emphasis on issues of contemporary leadership in times of organizational and social turbulence.

EDAM 27780: Community College Leadership and Governance 3 s.h.
This course further develops topics taught in the overview course, The American Community College. It explores topics introduced in the first course such as community college governance and leadership in greater depth, paying particular attention to the governance activities that are the priority of community college presidents such as accountability, accreditation, the role of the federal government, the State and teh relationship with the county and the board of trustees.

EDAM 27781: Community College Budgeting and Finance 3 s.h.
Prerequisites: EDAM 27782 and EDAM 27780
This course will provide an overview of community college budgeting and finance. It will review the budgeting process in New Jersey and the economic and policy context of budgeting decisions for New Jersey community colleges. There will be a focus on recognizing the fiscal constraints in which community colleges function and the various sources of funding. Students will also gain an understanding of how planning and budgeting processes are related. This course will be applied in nature, drawing upon current community college budgets.

EDAM 27782: The American Community College 3 s.h.
This course provides an overview of the history of the American Community College movement and then examines current issues in light of that history. In addition, the course explores the mission and work of community colleges including current organizational, social, economic, educational, and political challenges and opportunities facing these uniquely American institutions.

EDAM 27783: Student Development and Adult Learning Theory 3 s.h.
Students enrolled in this course will trace the historical foundations of student development theory and adult learning and development theory in higher education with a focus on traditional student and non-traditional student populations. The course will also provide students with models and techniques that guide the practice of student services administration.

EDAM 27790: Instructional Leadership and the Curriculum 3 s.h.
This course provides students enrolled in the doctoral program with learning experiences related to Instructional Leadership. Examining in depth the current "best practices," candidates will analyze the role of Instructional Leadership and curriculum. Specifically, candidates will be able to align curriculum to standards, examine potential best practices, and use assessment data to improve learning. The course will place special emphasis on how instructional leadership contributes to student learning.

EDST 24721: Action Research in Educational Leadership 3 s.h.
Prerequisite: Matriculation into the EducationalLeadership Doctoral Program
This course introduces doctoral students to the action research design. Students will identify a problem in practice, research the problem and then develop and implement and action research design methodology to address the problem.

EDST 24722: Research Literature Analysis and Writing in Educational Leadership 3 s.h.
This course is designed to assist students in reading, interpreting, understanding and digesting research literature as well as to assist students in basic academic writing skills and APA style. Students will learn the function of a literature review in the research process and will learn to synthesize a body of research and write a cohesive literature review.

EDST 24724: Issues in Qualitative Analysis in Educational Research 3 s.h.
This course assists the student in preparing an acceptable dissertation proposal. Topics include alternative approaches to conducting dessertation research, designing an effective study, and recognizing and avoiding common difficulties encountered in dissertation research.

EDST 24725: Mixed Methods Research in Educational Leadership 3 s.h.
Prerequisite: EDST 24721 and EDST 24724
This course introduces students to mixed methods research approaches in education, a contemporary approach to the complex problems in the field of education today. Students will explore qualitative and quantitative methods and develop an understanding of how to read, design, conduct, and synthesize mixed methods research. Students will also practice understanding and evaluating data and research to support their decisions.

EDST 24795: Dissertation Research 1 to 12 s.h.
This is a 12 credit independent research project to be conducted in conformity with the student's dissertation proposal that has been approved by the student's doctoral committee. Students may register for all 12 credits at once or may register in four credit increments for three consecutive semesters including summer. Dissertations must be completed within three years of passage of the second benchmark.

EDSU 28602: Field Service in Supervision: District Internship 1 to 6 s.h.
This course is designed to respond to the needs of school administrators and supervisors for developing effective supervisory skills. The content for each course offering will be determined after a local analysis of needs has been conducted. Semester hour credit will be assigned prior to registration.

EDSU 28706: Diversity and Educational Leadership 3 s.h.
This course deals with diversity both among the student body and the workforce. It addresses the ways that people are alike and explores issues of difference. It focuses on the power that valuing difference can have in establishing quality interpersonal relations, in taking advantage of the cultural richness that can result from diversity, and in creating mutual respect among groups. It examines how the educational leader might overcome resistance to change in this regard.

EDSU 28715: Leadership Theory 3 s.h.
The course is the foundation course for the Doctoral Program in Educational Leadership. Leadership will be defined, demystified, and distinguished from management and administration. The roles and expectations of leaders will be explored, and the competencies required for leadership will be identified. Issues of power, authority, and ethics are studied.

ECE 09504: Special Topics in Electrical and Computer Engineering 1 to 3 s.h.
This course covers timely topics in electrical and computer engineering related to engineering practice and/or research.

ECE 09521: Fundamentals of 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 resutling 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. This graduate level course will also provide opportunities for team management and cultivation of leadership and communication skills.

ECE 09551: Digital Signal Processing 3 s.h.
This is a first level graduate course that covers the fundamentals of digital signals, systems, transforms and filters. Systems concepts taught include linearity, time-invariance, stability, causality, difference equation representation, impulse response and convolution. The issue of frequency response and sampling is covered. The z-transform is introduced. Design methods and structures of digital filters are discussed with the exposure to do software design. Random digital signals are also covered.

ECE 09552: Digital Image Processing 3 s.h.
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 09553: Digital Speech Processing 3 s.h.
This course covers the fundamentals of digital speech signals and processing and simultaneously stresses real-life engineering aspects from a systems perspective. An overview of the different branches of speech processing are covered, namely, speech production, vocal tract modeling, speech coding, speech recognition, speaker recognition and speech synthesis. The building blocks of such applications, namely, linear predictive analysis and quantization (scalar and vector) are taught.

ECE 09554: Theory and Engineering Applications of Wavelets 3 s.h.
The theory of wavelets gave rise to a substantial number of applications in many areas including various fields of engineering, making it one of the most popular research areas of all times. In this class, the theory of wavelets will be carefully developed from the ground up, with an emphasis on engineering applications. Starting with a review of Fourier based signal analysis methods, short time Fourier transform, continuous wavelet transform, discrete wavelet transform, fast wavelet algorithms, wavelet packets, wavelet networks will be discussed. Applications of wavelets such as image and audio compression, biological signal analysis, feature detection, signal denoising will also be explored.

ECE 09555: Advanced Topics in 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. 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. The topics discussed will include Bayes decision theory for optimum classifiers, parametric and nonparametric densityestimation techniques, discriminant analysis, basic optimization techniques, introduction to basic neural network structures, and unsupervised clustering techniques. As a graduate level course, several advanced and contemporary topics will also be covered, including fuzzy inference systems, support vector machines, adaptive resonance theory, incremental learning and online learning and particle swarm optimization. Students will be expected to conduct independent research for possible publications, as part of the class project.

ECE 09556: Embedded System Design 3 s.h.

ECE 09560: Artificial Neural Networks 3 s.h.
Artificial Neural Networks 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 09566: Advanced Topics in Systems, Devices and Algorithms in Bioinformatics 3 s.h.
Prerequisites:
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 on 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. This course will also provide students with a mechanism to conduct independent research to advance the field through development of novel algorithms and approaches.

ECE 09568: Discrete Event Systems 3 s.h.
Prerequisites: ECE Majors: ECE 09243 Non ECE Majors: Permission of Instructor
Thsi 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. As a graduate level course, it also provides students with a mechanism (a) to conduct independent research on advanced and contemporary DES topics, including higher-level Petri Nets, finite automata based supervisory control, and Petri Nets in job shop scheduling, etc; and (b) to develop novel models and algorithms for DES.

ECE 09569: System-on-Chip Verification 3 s.h.
Prerequisite: ECE Majors: ECE 09243 Non ECE majors: Permission of Instructor
This course introduces students to a variety of state-of-the-art hardware design verification methods, including traditional functional simulation, assertion-based verification and a subset of formal verification techniques. Topics covered include functional simulation, coverage metrics, testbench design and automation, assertion-based verification, and property specification language (PSL). As a graduate level course, students are expected to gain a solid foundation in current, practical chip verification techniques, underlying theory, and significant independent research experience applying the techniques, particularly formal verification methods, to a real problem of their own choice.

ECE 09571: Instrumentation 3 s.h.
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.

ECE 09572: Advanced Smart Grid 3 s.h.
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.

ECE 09573: Advanced 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 and provide opportunities for research in the field.

ENGR 01501: Special Topics in Engineering 1 to 3 s.h.
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 01510: Finite Element Analysis 3 s.h.
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 01511: Engineering Optimization 3 s.h.
The formulation and modeling aspects of engineering optimization problems are presented. These steps involve setting up of the objective function to be minimized and the resource and system constraints to be satisfied. Solution techniques using gradient based methods, zero order methods, and penalty techniques are discussed.

ENGR 01598: Engineering Graduate Research 1 to 3 s.h.
The objective of this course is for students to define and conduct graduate-level research with the supervision of their graduate advisor.

ENGR 01599: Masters Research 1 to 6 s.h.
This course will provide a meaningful one-on-one research experience under the direction of an engineering faculty advisor. The research topic will be chosen by mutual agreement of the student and his or her adviser. The course 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.

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 02605: Graduate Studies in Adolescent Literature 3 s.h.
This course will introduce students to a range of literature written for, read by, and/or taught to adolescents. Students will analyze the literary works from a variety of theoretical perspectives (including ecological, feminist, formalist, Marxist, post colonial, psychoanalytical and queer) to think about the cultural construction of adolescence and adolescents' relationship to power. This course may not be offered annually.

ENGL 02617: Teaching Shakespeare 3 s.h.
This course begins by examining representative plays by Shakespeare by using the approaches of "Understanding by Design." Next, it considers how to teach the plays with those approaches, especially "essential questions" and "backward design." This course may not be offered annually.

ENGL 02638: Teaching World Literature 3 s.h.
This course will mix theory and non-Western literature in order to provide the students with a critical vocabulary they can then employ in their own pedagogy. The course will explore a number of questions about nation, individual, community, time, space, language, and other topics through poetry, novels, drama, and short stories from Africa, Asia, and South America.

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.

ENGL 05501: Teaching American English Grammar 3 s.h.
Teaching American English Grammar provides an introduction to the history of the English language, including a short history of grammar instruction; a review of traditional grammar, along with an overview of other grammatical approaches to English; and the opportunity to explore strategies of teaching grammar to both native and non-native speakers of English, with attention to how grammatical choices affect rhetorical style and effectiveness.

AFRI 16540: Special Topics in Foreign Languages and Literatures 3 s.h.
This course brings new perspectives and themes to the established Foreign Languages and Literatures curriculum. Eash semester the instruction of this course rotates among faculty memebers who select topics according to their current scholarly interests. In this way, the course expands options for upper-level electives.

ARAB 12540: Special Topics in Foreign Languages and Literatures 3 s.h.
This course brings new perspectives and themes to the established Foreign Languages and Literatures curriculum. Eash semester the instruction of this course rotates among faculty memebers who select topics according to their current scholarly interests. In this way, the course expands options for upper-level electives.

CHIN 07540: Special Topics in Foreign Languages and Literatures 3 s.h.
This course brings new perspectives and themes to the established Foreign Languages and Literatures curriculum. Eash semester the instruction of this course rotates among faculty memebers who select topics according to their current scholarly interests. In this way, the course expands options for upper-level electives.

FREN 02540: Special Topics in Foreign Languages and Literatures 3 s.h.
This course brings new perspectives and themes to the established Foreign Languages and Literatures curriculum. Eash semester the instruction of this course rotates among faculty memebers who select topics according to their current scholarly interests. In this way, the course expands options for upper-level electives.

GERM 03540: Special Topics in Foreign Languages and Literatures 3 s.h.
This course brings new perspectives and themes to the established Foreign Languages and Literatures curriculum. Eash semester the instruction of this course rotates among faculty memebers who select topics according to their current scholarly interests. In this way, the course expands options for upper-level electives.

ITAL 04540: Special Topics in Foreign Languages and Literatures 3 s.h.
This course brings new perspectives and themes to the established Foreign Languages and Literatures curriculum. Eash semester the instruction of this course rotates among faculty memebers who select topics according to their current scholarly interests. In this way, the course expands options for upper-level electives.

LAT 09540: Special Topics in Foreign Languages and Literatures 3 s.h.
This course brings new perspectives and themes to the established Foreign Languages and Literatures curriculum. Eash semester the instruction of this course rotates among faculty memebers who select topics according to their current scholarly interests. In this way, the course expands options for upper-level electives.

RUSS 06540: Special Topics in Foreign Languages and Literatures 3 s.h.
This course brings new perspectives and themes to the established Foreign Languages and Literatures curriculum. Eash semester the instruction of this course rotates among faculty memebers who select topics according to their current scholarly interests. In this way, the course expands options for upper-level electives.

SPAN 05540: Special Topics in Foreign Languages and Literatures 3 s.h.
This course brings new perspectives and themes to the established Foreign Languages and Literatures curriculum. Eash semester the instruction of this course rotates among faculty memebers who select topics according to their current scholarly interests. In this way, the course expands options for upper-level electives.

GEOG 06100: 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 06102: 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 06111: 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 fund 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 06193: Introduction to the Mapping and Geographic Information Science 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 06360: Geographic Information Systems I 3 s.h.
Prerequisites: GEOG 06193
Geographic Information Systems I (GIS I) begins with a brief history of GIS. Students are then introduced to the hardware and software components of GIS through lecture, demonstration, and hands-on laboratory exercises. Students learn GIS analysis techniques through lecture and computer laboratory sessions. Student evaluation is based on performance on examinations and computer laboratory assignments.

GEOG 06501: INDEP STUDY GEOG 3 s.h.

GEOG 06553: Workshop in Geography 1 to 3 s.h.
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)

GEOG 06555: Geographic Information Systems (GIS) Topics and Applications 3 s.h.
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.

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 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 fund 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 the 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 16260: Geographic Information Systems I 3 s.h.
Prerequisites: GEOG 16160
Geographic Information Systems I (GIS I) begins with a brief history of GIS. Students are then introduced to the hardware and software components of GIS through lecture, demonstration, and hands-on laboratory exercises. Students learn GIS analysis techniques through lecture and computer laboratory sessions. Student evaluation is based on performance on examinations and computer laboratory assignments.

GEOG 16553: Workshop in Geography 1 to 3 s.h.
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)

GEOG 16565: Geographic Information Systems (GIS) Topics and Applications 3 s.h.
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.

GEOG 16591: INDEP STUDY GEOG 3 s.h.

PLAN 31386: Land Use and Conservation 3 s.h.
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.

HLTH 37512: Understanding and Applying the Professional Literature in HES 3 s.h.
This course provides an overview of the research methods used in the health and exercise science field with an emphasis on reading, interpreting and applying the research findings in practical settings. The course will include an overview of both quantitative and qualitative research methods, as well as the steps of the research process. Students will learn how to perform a literature review, conduct a program evaluation and other practical applications of the research process.

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.

HLTH 37518: Nutrition and Epidemiology 3 s.h.
This course is designed to explore nutrition¿s role in the prevention and rehabilitation of a variety of diseases including: hypertension, hypercholestolemia, cardiovascular disease, diabetes, obesity, arthritis, osteoporosis, and cancer. The course will explore the etiology and progression of these diseases and facilitate an understanding of how nutrition may be prescribed for the care of individuals with these diseases. A portion of the course will be devoted to analyzing case studies and guiding the student through the process of nutritional management. Students will be required to perform a review of literature on a specific disease, which they will then present to the class.

HLTH 37520: Exercise and Epidemiology 3 s.h.
This course examines the etiology and pathophysiology of certain diseases and specifically includes the role of exercise as a preventative measure in the onset of these diseases. Disease processes investigated are coronary artery and coronary heart disease, hypertension, Type 2 diabetes mellitus, obesity, osteoporosis, selected cancers and low back pain syndrome.

HLTH 37525: Curriculum Strategies in Substance Awareness Education 3 s.h.
This course provides students with the knowledge, resources and skills needed to plan and organize curricula in chemical health education which meet the needs of students in school and non-school based settings. Students evaluate the nature and scope of the substance abuse problem in order to make informed decisions in the development, organization, implementation and evaluation of substance abuse programs. Special attention is given to program and policy development, instructional strategies, program evaluation, staff development, and the dynamics of school culture.

HLTH 37530: Leadership and Management in Health Promotion Programs 3 s.h.

HLTH 37541: Wellness Coaching and Behavior Change 3 s.h.
This course will provide practitioners with the theoretical background and tools needed to effect positive lifestyle changes in individual clients and population groups. Students will learn to use a wellness coaching delivery model that is based on empirically-supported health behavior theories, such as Social Cognitive Theory and the Transtheoretical Model, to support and motivate lasting behavior change.

HLTH 37542: Program Planning in Health Promotion 3 s.h.
This course provides an overview of leading health program planning theories, including PRECEDE/PROCEED and Intervention Mapping, and the application of these theories in the most common health promotion settings. The program planning process will be discussed in detail and case studies will be used to demonstrate the successful application of this process.

HLTH 37550: Capstone Project 3 s.h.
Prerequisite: This course must be taken in the lastsemester of the program.
In this independent study course, students will work individually with a faculty advisor to complete a major project relevant to health promotion. Projects may include the development of curriculum, program development, program evaluation, a research thesis, or other project with the approval of the Wellness and Lifestyle Management faculty coordinator.

HLTH 37580: Obesity and Diabetes Prevention and Management 3 s.h.
Prerequisites: INAR 06200 and (BIOL 10211 orBIOL 10212)
The purpose of this course is to examine the most common diseases afflicting Americans which have exercise as one of its primary modes for prevention and rehabilitation. The course will thoroughly review the underlying causes for each disease and provide the student with a complete understanding of how exercise can be used in combating these diseases. The primary areas of focus will be cardiovascular, pulmonary and metabolic disorders.

HLTH 37590: Integrating Wellness into School Settings 3 s.h.
This course addresses teh growing demand for wellness initiatives for students, their families and staff in P through 12 school settings. Teachers, school nurses, school administrators and community helath promotion professionals will understand how to build wellness programming into the school community.

HLTH 37600: Wellness Through the Lifecycle 3 s.h.
This course is an overview of critical health and wellness issues specific to the lifecycle stages from birth to old age. Designed for health promotion practitioners, this course will provide a review of intervention guidelines, resources and program examples of wellness programs to meet the needs of clients and populations in each stage of life.

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 35555: Individual Study in Health and Physical Education 3 to 6 s.h.
This course is designed to give the student the opportunity to pursue an in-depth inquiry into a selected topic in health and physical education on an individualized basis. It provides flexibility for the student in increasing specialization in a selected area of interest. Offered in summer session only for matriculated students with a minimum of 25 S.H. completed. Students must submit a written proposal for individual study to the program advisor by March 15 prior to the summer session desired.

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 prcesses 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 ConcentratPrerequisites:
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 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 05492: Seminar 3 s.h.
Prerequisites: Senior Status and HIST 05306
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 05500: Colloquium in American History 3 s.h.
This course introduces students to in-depth historical analysis of a selected theme in American history, including work with historical sources, critical reading of historians' accounts, intensive research and writing, and class discussion. Proposed topics include American Immigration History, Colonial North America (1500-1775), The American Revolution and Early Republic (1763-1820), Comparative History of the Americas, and Modern American and European Women in Historical Perspective.

HIST 05510: Readings and Research in History I 3 s.h.
This course is on of two courses, along with Readings and Research in History II, designed to strengthen the skills of students in historical research, writing, and analysis. It will expose students to key recent theoretical influences on professional historians, cover key developments in historiography from ancient times through the beginning of the twentieth century, and provide students with brief surveys of the major issues, including both classic and contemporary debates, within regionalized subfields of European and Global history. The course will provide students with opportunities for peer presentations, discussion, and leadership not necessarily available in other graduate courses. This course is required for all students enrolled in the Master's program in History and is a prerequisite for 600 level graduate courses but not for other 500 level graduate courses, including Readings and Research in History II. This course is usually offered once a year.

HIST 05511: Colloquium in American History I 3 s.h.
This course is the first graduate colloquium on the topic of American history that students in this program will take. The course focuses on the in-depth historical analysis of a selected theme in American history, including work with historical sources, critical reading of historians' accounts, intensive research and writing, and class discussion. Proposed topics include American Immigration History, Colonial North America, 1500-1775, the American Revolution and Early Republic, 1775-1820, Comparative History of the Americas, and Modern American and European Women in Historical Perspective.

HIST 05512: Readings and Research in History II 3 s.h.
Prerequisite: Admission to BA/MA or MAprogram in History
This course is one of two courses, along with Readings and Research in History I (HIST 05.510), designed to strengthen the skills of students in historical research, writing, and analysis. It will expose students to key recent theoretical influences on professional historians, cover key developments in historiography during the twentieth century, and provide students with brief surveys of the major issues, including both classic and contemporary debates, within the regionalized subfields of United States history. The course will provide students with opportunities for peer presentations, discussion, and leadership not necessarily available in other graduate courses. This course is required for all students enrolled in the Master's program in History and is a prerequisite for 600 level graduate courses but not for other 500 level graduate courses, including Readings and Research in History I (HIST 05.510). This course is usually offered once a year.

HIST 05514: Colloquium in American History II 3 s.h.
Prerequisites: HIST 05511
This course is the second graduate colloquium on the topic of American history that students in this program will take. Otherwise the course is identical to Colloquium in American History I.

HIST 05516: Colloquium in American History III 3 s.h.
Prerequisites: HIST 05511 and HIST 05114
This course is the third graduate colloquium on the topic of American history that students in this program will take. Otherwise, the course is identical to Colloquium in American History I

HIST 05522: Colloquium in European History I 3 s.h.
This course is the first graduate colloquium on the topic of European history that students in this program will take. The course focuses on in-depth historical analysis of a selected theme in European history that students in this program will take. The course focuses on in-depth historical analysis of a selected theme in European history, including work with historical sources, critical reading of historians' accounts, intensive research and writing, and class discussion. Proposed topics include Ancient Historians, The French Revolution, The Holocaust in Europe, Popular Culture in Early Modern Europe, Social History of Early Modern Europe, 20th Century War and Society, Women in Early Modern Europe, and Modern American and European Women in Historical Perspective.

HIST 05523: Colloquium in European History II 3 s.h.
Prerequisites: HIST 05522
This course is the second graduate colloquium on the topic of European history that students in this program will take. Otherwise, it is identical to Colloquium in European History I.

HIST 05524: Colloquium in European History III 3 s.h.
Prerequisites: HIST 05523
This course is the third graduate colloquium on the topic of European history that students in this program will take. Otherwise, the course is identical to Colloquium in European History I.

HIST 05531: Colloquium in Global History I 3 s.h.
This course is the first graduate colloquium on the topic of global history that students in this program will take. The course focuses on in-depth historical analysis of a selected theme in global history, including work with historical sources, critical reading of historians' accounts, intensive research and writing, and class discussion. Proposed areas of specialization include Africa, Asia, Eastern Europe, and the Middle East.

HIST 05533: Colloquium in Global History II 3 s.h.
Prerequisites: HIST 05531
This course is the second graduate colloquium on the topic of global history students in this program will take. Otherwise, the course is identical to Colloquium in Global History I.

HIST 05535: Colloquium in Global History III 3 s.h.
Prerequisites: HIST 05533
This course is the third graduate colloquium on the topic of global history students in this program will take. Otherwise, the course is identical to Colloquium in Global History I.

HIST 05551: Graduate Independent Study 3 s.h.
Prerequisite: matriculation in the Master of Artsin History program
Students may complete up to 6 elective credits through the independent study option if they wish to pursue specialized knowledge not available through regular coursework. Students must take at least one colloquium related to the topic before engaging in independent study, then develop an individual study proposal with a full time professor in the History Department. The proposal must be approved by the graduate coordinator prior to enrollment in the course.

HIST 05601: Masters Thesis in History I 3 s.h.
Prerequisite: HIST 05510 and HIST 05512
This course requires students to design and begin implementing their own research project to be used to satisfy the program's thesis requirement. Under the guidance of a member of the History Department faculty who agrees to serve as Thesis Advisor, the student will develop a Research Prospectus for their thesis that will consist of an Introduction and Statement of the Problem, a Literature Review, and a brief summary of the proposed research. The student will defend the prospectus before at least two History Department faculty. Prerequisites are two courses in historiography and research methods, Readings and Research in History I (HIST 05.501) and Readings and Research in History II (HIST 05.502). The student will begin implementing the research after obtaining the Committee's approval.

HIST 05602: Masters Thesis in History II 3 s.h.
Prerequisite: HIST05510 and HIST 05512and HIST 05601
In Masters Thesis in History II, the student will write and complete a Masters Thesis. In Masters Thesis in History I (HIST 05.601), the student will have designed and begun implementing their own research project. In this course, under the guidance of a member of the History Department faculty who has agreed to serve as Thesis Advisor, the student will complete the writing of the Thesis. The thesis should, like other graduate courses, engage students in critical reading of historical accounts and provide them with opportunities to reconstruct historical events from original documents, conduct research that is based on primary sources and applies historical methodologies, and write coherent historical analysis. Prerequisites are two courses in historiography and research methods, Readings and Research in History I (HIST 05.510) and Readings and Research in History II (HIST 05.502); and Masters Thesis in History I (HIST 05.601).

BINF 07500: Bioinformatics Seminar 3 s.h.
Prerequisites: CHEM 07595 and BIOL 05555 and CS 07595
This advanced literature survey course in bioinformatics covers current and emerging topics in the field of Bioinformatics through the analysis of current primary literature. 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 real problems in biology and biochemistry. Students will engage in semester-long research projects culminating in a presentation of a topic from the primary literature.

BINF 07501: MS Thesis Research 1 3 s.h.
Prerequisites: CHEM 07595 and BIOL 05555 and CS 07595
This is the first semester of research in Bioinformatics for students pursuing a MS degree with thesis. Thesis project outline and thesis committee must be selected and approved PRIOR to the start of this course.

BINF 07502: MS Thesis Research 2 3 s.h.
Prerequisite: BINF 07501
This is the second semester of research in Bioinformatics for students pursuing a MS degree with thesis. Thesis project outline and thesis committee must be selected and approved PRIOR to the start of this course. This course is an extension of the project undertaken as part of MS Thesis Research 1 (BINF 07.501)

BINF 07503: MS Thesis Research 3 3 s.h.
This is the third semester of research in Bioinformatics for students pursuing a MS degree with thesis. Thesis project outline and thesis committee must be selected and approved PRIOR to the start of this course. This course is an extension of the project undertaken as part of MS Thesis Research 2 (BINF 07.502)

INTR 01503: Seminar on Integrating Mathematics and Science 3 s.h.
This interdisciplinary seminar is designed for advanced graduate students with some background in teaching mathematics and/or the sciences at the elementary and/or middle school level. Students in the course will examine a number of current scientific issues from the perspective of different sciences and develop and pilot instructional activities relating to those issues.

INTR 11511: Urban Teacher Residency 0 s.h.

SE 01501: Sustainable Engineering Fundamentals 3 s.h.
Sustainable Engineering incorporates development and implementation of products, processes, and systems that meet technical and cost objectives while protecting human health and welfare and elevating the protection of the biosphere as a criterion in engineering solutions. This course will introduce the role of engineers in sustainability and provide tools to measure sustainable systems.

SE 01502: Life Cycle Assessment 3 s.h.
This course will introduce students to the fundamental principles of Life Cycle Assessment. Students will apply the ISO 14000 standard methodology to perform a life cycle assessment of a product or process. Students will perform assessments using process-based analysis models, input-output and hybrid approaches of life cycle assessments. Critical Assessments of published life cycle assessments will be conducted. Extensive use of life cycle assessment software will be required for this course. Software programs will be used extensively in this course.

SE 01503: Environmental Policy 3 s.h.
This course is an introduction to the history, organization, goals, and ideals of environmental policy in America. It examines the shift in emphasis from nature protection to pollution control to sustainability over the twentieth century and develops critical tools to analyze changing conceptions of nature and the role of science in environmental policy formulation. Of central interest is the relationship between knowledge, uncertainty, and political or legal action. Theoretical approaches are combined with case studies of major episodes and controversies in environmental protection.

SE 01504: 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. The course will culminate in an original research project and presentation.

SE 01505: Sustainable Energy 3 s.h.
Sustainable Energy is an introduction to the characteristics of a sustainable source of energy. Numerous energy sources will be investigated to determine their role in a sustainable future. Technologies such as solar, wind, biomass, geothermal, hydropower and other emerging technologies will be studied. A fundamental concept of the course is that a sustainable energy source must be technically feasible, economically viable, protect human health and welfare, as well as protect teh biosphere.

JRN 02210: Journalistic Writing for Nonmajors 3 s.h.
Prerequisites: COMP 01112
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.

JRN 02313: Magazine Article Writing 3 s.h.
Prerequisites: JRN 02310 or JRN 02210 or PR 06301
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.

JRN 02314: Photojournalism 3 s.h.
Prerequisites: 45 credits required
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.

JRN 02317: Publication Layout and Design 3 s.h.
Prerequisites: 45 credits required
This course focuses on design, layout and make-up of brochures, magazine and newspaper pages, newsletters, and advertisements. It stresses 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 the QuarkXPress program on the Macintosh computers to achieve effective layout.

JRN 02321: Online Journalism I 3 s.h.
Prerequisites: JRN 02205 or PR 06301
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.

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.

MAWR 02510: Writing for Broadcast 3 s.h.
This course teaches students how to write scripts and script segments for radio, TV and documentary film. Exercises include use of broadcast style, writing for audio and video, dialogue, narrative, attribution, and structure. The goals of this class are to expose students to techniques common in all news and documentary writing and to integrate the use of cameras and microphones with the spoken word.

LDTC 18500: INDEPENDENT STUDY 1 to 6 s.h.

LDTC 18503: Foundations of Learning Disabilities 3 s.h.
A general introduction to learning disabilities, with emphasis upon remediation of basic skills and pedagogical rationale. Students will become familiar with the various types of disorders encountered in pupils with learning disabilities and with appropriate instructional techniques and materials.

LDTC 18504: Assessment of Learning Disabilities 3 s.h.
In this two semester sequence, emphasis will be on evaluation and remediation of learning disorders in school age children. A case study is required. Enrollment limited to students matriculated in the Learning Disabilities program. (LDTC18.504 is offered in the fall semester and LDTC18.505 is offered in the spring semester.)

LDTC 18505: Correction of Learning Disabilities 3 s.h.
In this two semester sequence, emphasis will be on evaluation and remediation of learning disorders in school age children. A case study is required. Enrollment limited to students matriculated in Learning Disabilities program. (LDTC18.504 is offered in the fall semester and LDTC18.505 is offered in the spring semester.)

LDTC 18510: Applied Theories of Learning 3 s.h.
Educators will develop and articulate their own theories of learning after examining carefully and critically the prevalently existing and competing theories of learning. The study of motivation and its effect on learning including the use of rewards and incentives will be covered as well.

LDTC 18516: Applied Tests and Measurements 3 s.h.
Emphasis is placed upon data-gathering, the evaluation of data and the use of data in educational measurement. Standardized tests, both group and individual, will be studied. Generally, enrollment is limited to those who have been formally admitted to the student personnel services, learning disabilities and school psychology programs.

LDTC 18520: Neurological Bases of Educational Disorders 3 s.h.
The student will study the nature of physiological readiness for learning with regard to the various disabilities. The varieties of physical, mental, and learning disabilities will be related to the neurophysiological basis for learning.

LDTC 18525: Advanced Assessment Techniques 3 s.h.
This course is designed for the advanced graduate student in learning disabilities. It provides for the development of competence in a variety of assessment instruments useful in differential diagnosis of complex learning problems. This course may not be offered annually.

LDTC 18540: Motor Development in Young Children with Disabilities 3 s.h.
The course investigates motor development resulting in disabling conditions in young children. Major theorists and research are an integral part of the course work. Assessment options and research-based interventions are explored. This course may not be offered annually.

LDTC 18545: Language Development in Young Children with Disabilities 3 s.h.
The course investigates language acquisition and the physiological, environmental and psychological factors which may influence that development in the young children. This course may not be offered annually.

LDTC 18550: Foundations in Early Childhood Special Education 3 s.h.
The course surveys the bases of disabilities in young children. Diagnostic techniques, materials and methods are explored. Classic studies and current research will be studied.

LDTC 18600: Seminar and Research in Learning Disabilities 3 s.h.
This course considers current issues, trends, problems, and research of significance to learning disabilities. Students complete a thesis/project which evidences capacity for research and independent thought. Registration by permission of the program advisor only. The comprehensive examination is taken during LDTC18.601.

LDTC 18601: Seminar and Research in Learning Disabilities 3 s.h.
This course considers current issues, trends, problems, and research of significance to learning disabilities. Students complete a project which evidences capacity for research and independent thought. Registration by permission of the program advisor only. The comprehensive examination is taken during LDTC18.601.

LDTC 18650: Clinical & Field Experiences in Learning Disabilities 3 to 6 s.h.
Students engage directly in supervised case work with children demonstrating learning disorders. Assessment and appropriate, research-based remediation of learning problems, consultation skills and in-service program design are required in a 120-clock hour clinical and field setting. Only matriculated students may register for this course.

LIBR 01502: Survey of Children's Literature 3 s.h.
The course surveys literature for children from birth to age 14, including genre study, major authors and illustrators, current trends in publishing, issues in criticism, electronic resources related to children's literature, methods of promoting reading, teaching children's literature to children, and using multicultural children's literature in classrooms and libraries.

LIBR 01503: Survey of Young Adult Literature 3 s.h.
Students will consider the reading and media interests of young people ages 12-18 in view of current information about adolescence in the United States. Topics covered include major genres, authors, literary qualities, criticism and reviewing, awards, selection principles, censorship, and promotional techniques for classrooms and libraries.

LIBR 01505: Reference Resources and Services I 3 s.h.
Students focus on the provision of reference services as well as the evaluation and use of reference sources in schools and libraries. Topics covered include characteristics and use of information sources and systems, policies and procedures, basic reference sources in both print and electronic formats, and skills and attitudes needed to assist diverse individuals in meeting their information needs.

LIBR 01506: Foundations of Librarianship 3 s.h.
This course introduces the field of librarianship and is the first course students should take in the program. Includes: the roles of libraries and librarians in society, the history of libraries and communications, models of library service, professional ethics, and contemporary issues in school and public libraries.

LIBR 01507: Managing Library Programs 3 s.h.
The management of school and public library services is the focus of this course. Students learn and apply principles of library organization, personnel administration, budgeting and finance, facilities and equipment, public relations, policies and procedures, accountability and evaluation.

LIBR 01510: Library Collections and Resources 3 s.h.
The course focus is on issues, practices, and policies in the selection of print, nonprint, and electronic resources in school and public libraries. Emphases include: intellectual freedom, effective communication through policies, technology applications, bibliographic aids and review practices, and collection evaluation and maintenance.

LIBR 01511: Organization of Library Resources 3 s.h.
The course studies the library's responsibility to provide physical and intellectual access to print, nonprint, and electronic resources. Topics include: cataloging and classifying resources according to national standards; use of current technology resources; evaluating commercial and network sources; and understanding of theories and issues related to the organization of knowledge.

LIBR 01516: School Media Centers for Teaching and Learning 3 s.h.
Focus is on the relationship of the library media program to the school curriculum with emphasis on library/media, information, and computer skills in the pre-K-12 instructional program. Students observe library media services in school settings.

LIBR 01521: Design and Production of Educational Media 3 s.h.
Focus is on new and emerging electronic technologies in libraries and media centers. Students use a variety of software to create such products as databases, library web pages, spreadsheets, presentations, and curriculum and public relations products. The course includes video technology, Internet searching, copyright and equity issues, and reflective writing.

LIBR 01530: Library Technology 3 s.h.
Focuses on planning for school and library technology, funding for technology, system selection, and current issues in school and library media technology. Study of the role of the library staff in the creation of information and its flow to users.

LIBR 01570: Selected Topics in Librarianship 1 to 6 s.h.
Designed for in-service school media specialists and public librarians, this course focuses on specific topics or issues affecting the profession and permits students to explore emerging thinking in the field. Topics vary each time the course is taught.

LIBR 01580: Practicum in Library Services 1 to 3 s.h.
Focus is on observation and participation in important aspects of library operations, including selection and organization of materials; reference and bibliographic services; curriculum development; and techniques of teaching library media use. This course must be pursued at an approved site under the supervision of an appropriately certified school or public librarian and a college supervisor.

LIBR 01601: Graduate Thesis in Library Services II 3 s.h.
Completion of the research project selected in Graduate Thesis in Library Services I.

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 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 acitivities and making curricular connections is highlighted.

READ 30320: Language Development, Emergent Literacy, and Reading in Young Children 4 s.h.
Corequisites: ECED 23320 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 phonic/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 3 s.h.
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 2 s.h.
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 4 s.h.
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 3 s.h.
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 30510: Teaching Elementary Reading 3 s.h.

READ 30515: Teaching Reading and Writing Across the Grades 3 s.h.
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: Teaching Reading in Content Areas 3 s.h.
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 3 s.h.
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.

READ 30535: Word Study: Phonics, Spelling, and Vocabulary Instruction 3 s.h.
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.

READ 30540: Administration and Supervision of School Reading Programs 3 s.h.
Prerequisites: READ 30515 and READ 30520 andREAD 30535, with minimum grade of B in each.
The purpose of this course is to examine the role of the reading specialist in planning, developing, supervising, and evaluating reading programs at all levels. Major topics include reading program budget planning, components of an overall reading program, subsystems, special provisions, evaluating teacher performance, planning and conducting in-service workshops, organizational patterns, planning and preparing district materials, and selection and evaluation of commercial materials.

READ 30545: Using Multicultural Literature in the K-12 Reading and Writing Classroom 3 s.h.
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.

READ 30550: Diagnosis of Remedial Reading Problems 3 s.h.
Prerequisites: READ 30515 and READ 30520 andREAD 30535 with a minimum grade of B in each.
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.

READ 30552: Selected Topics in Reading 3 s.h.
Such areas as the following are explored: methods and materials for teaching reading and determining reading levels; influencing factors in reading disability; and differences in teaching varied types of children. Demonstrations, hands-on experiences and group work are involved. May not be offered annually.

READ 30560: Corrections of Remedial Reading Problems 3 s.h.
Prerequisite: READ 30550 with minimum grade of B
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.

READ 30566: Researching Classroom Practice 3 s.h.
This course will provide opportunities for students to read and analyze various types of research for the purposes of improving practice. Students will focus on action research by designing a project that includes selecting the issue, determining the data to be collected, data analysis and interpretation, and change of teaching and learning behavior.

READ 30570: Clinical Experiences in Reading 6 s.h.
Prerequisite: READ 30560 or REED 30560
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.

READ 30600: Seminar and Research in Reading 3 s.h.
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.

SELN 10576: EFFECTIVE INCLUSIVE INSTRUCT 3 s.h.
This course is designed to begin developing the knowledge, skills, and dispositions necessary for general education teachers to understand and educate students in inclusive classrooms. Emphasis will be on: (a) understanding the legal foundations for inclusive instruction, (b) recognizing students' diverse strengths and needs, (c) designing, implementing, and assessing effectively differentiated lessons that feature research-based strategies, and (d) organizing and managing a flexible, student-centered classroom.

SELN 10577: Collaborative Instruction in Inclusive Classrooms 3 s.h.
Prerequisite: SPED 08555
This course will focus on instructional strategies in inclusive classrooms for students with and without disabilities. Collaborative and consultative skills for working with parents, regular education teachers, special education teachers, support personnel, and school administrators will be discussed and modeled, as well as role play for team teaching in such environments.

SELN 10578: Administration and Supervision in Special Education 3 s.h.
This course considers the problems in administering and supervising programs for students with disabilities between three and twenty-one years of age. Attention is given to organizing, financing and supervising such programs at federal, state and local levels.

SELN 10580: Teaching Students with Moderate and Severe Disabilities 3 s.h.
Through this course students acquire knowledge of the curriculum, assessment procedures, and intervention strategies required to effectively teach individuals with moderate and severe disabilities. Among the areas of emphasis are functional academics, personal care, recreation/leisure, vocational and community living skills. Research-based best practice in instruction for students with moderate and severe disabilities is stressed.

SELN 10581: Implementing Positive Behavior Supports 3 s.h.
This course provides the student with a comprehensive study of the goals of misbehavior in classrooms and in other settings. Specific theoretical techniques and methodology in channeling deviant behavior through the use of behavior modification and other management techniques will be explored. Curricula content, self-development, attitudes, and research finding will enable each student to acquire effective skills in working with learning resistant and deviant behaving children and adults.

SELN 10582: Communication Skills for Students with Disabilities 3 s.h.
This course provides an intensive study of the language needs of students with moderate and severe disabilities and includes individual assessment for the identification of initial communication and the development of acceptable language procedures. Finger spelling, basic American Sign Language, and using technology to develop alternative communication strategies will be covered.

SELN 10585: Educational Assessment in Special Education 3 s.h.
Prerequisite: SPED 08555
Trends, practices, problems and issues in educational assessment will be examined. The course is designed to enable the special education teacher to administer criterion-referenced, informal, or standardized tests and to plan individualized educational programs for students with special needs. Curriculum-based assessment is emphasized.

SELN 10586: Emotional and Behavioral Support Strategies 3 s.h.
This graduate course will discuss positive strategies, related laws and regulations, and services to support students with behavioral and emotional problems. Social and emotional factors that affect behavior and learning will be explored. Emphasis will be placed on appropriate academic and social skills instruction, and pro-social interventions to meet the needs of students with difficulties in social and emotional adjustments.

SELN 10590: Introduction to Autism Spectrum Disorders 3 s.h.
This course is designed to provide graduate level instruction in the salient issues involved in the education of students with autism spectrum disorders (including autism, Asperger's syndrome, Rett syndrome and other pervasive developmental disorders). It provides an overview to candidates about the characteristics, language development, social relationship development, and instructional interventions for children with autism spectrum disorders.

SELN 10591: Instructional Methods for Students with Autism Spectrum Disorders 3 s.h.
Prerequisites: SELN 10590
This course is designed to provide graduate level instruction in the assessment and instruction of students with autism spectrum disorders. Students will learn about evidence-based practices for enhancing the academic, social, behavioral, and communication skills of students with autism spectrrum disorders. They will apply their learning in both in-class case study activities and in field experiences. In addition to specialized practices, students will learn how to modify instruction in general education classes to meet the needs of students with autism spectrum disorders.

SELN 10592: Clinical Seminar in Special Education 2 s.h.
This seminar course is designed to be taken concurrently with the clinical field practice. Students meet throughout the semester to discuss teaching experiences, problem solving strategies, and their own reflections on working with children and youth with disabilities. A teaching portfolio and a report on student progress monitoring are also completed.

SELN 10593: Clinical Internship in Special Education 3 s.h.
This course will provide students an opportunity to apply research-based best practice in the field to teach children and youth with mild, moderate, or severe disabilities. Participants will be observed by both college supervisors and their mentor teachers, and will reflect on their instruction for improvement.

SELN 10600: Research Seminar in Special Education 3 s.h.
Students are expected to conduct an original research project. Guidance and assistance will be provided to help identify a problem, select appropriate research procedures, conduct a study, and write a comprehensive review of the results. Registration is by permission of the program advisor. During the Spring Semester students are required to pass a written comprehensive examination.

SELN 10601: RSRCH SEM IN SPCL ED 3 s.h.

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.

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 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 08316and 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 08445: Clinical Seminar in Special Education 1 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.

SPED 08515: Curriculum, Instruction, and Transition in Special Education 3 s.h.
Prerequisite: SPED 08555
This course will provide an overview of instructional strategies for teaching students with special needs. It will focus on research-based best practices of instruction to students with disabilities in the areas of academics, social interactions, and transition from school to adulthood and employment. Training and education to prepare individuals with disabilities for successful community living will also be emphasized. Field-based assignments are required.

SPED 08520: Clinical Experiences in Special Education 4 s.h.
This course provides the student with the opportunity to engage in a variety of field-based experiences with students with disabilities. Participants will be placed in self-contained, resource centers and inclusive settings to apply research-based best practices. A weekly seminar to discuss experiences and current issues in special education will be required.

SPED 08540: Technology for Students With Special Needs 3 s.h.
This course is designed to assist special and regular educators with effective instructional applications of hardware, software, Internet resources, and adaptives. Students will be required to design, implement and evaluate instructional program plans that incorporate examples of current technological materials/devices that foster independence in students with special needs in the regular or special education classroom. Prerequisites: Basic computer skills (e.g., ability to use word processing, email, and the WWW).

SPED 08555: Education & Psychology of Exceptional Learners 3 s.h.
The course provides an in-depth study of individuals who are so different that they require special social and educational programming. The course content develops an understanding of characteristics and problems of handicapped children and acquaints students with the basis for identifying, classifying and planning to effectively meet needs of children with physical, mental, emotional and social handicaps.

SPED 08595: INDEP STUDY-SP ED 1 to 6 s.h.

CJ 09510: Contemporary Issues in Criminal Justice 3 s.h.
This is a graduate level course focusing on understanding the criminal justice system both in terms of the uniqueness of each component (law enforcement, courts, and corrections) and in terms of the complementary nature of the whole, advances and emerging issues in each component of the criminal justice system and in the system as a whole, research related to contemporary issues and the practical applications of said research, and a critical assessment of both the research in the field and the issues facing the criminal justice system.

CJ 09511: Research Methods I 3 s.h.
This is a graduate level course focusing on understanding various research methods used in criminal justice, the advantages and disadvantages of different research methods (including the appropriateness for hypothesis testing), techniques for conducing research utilizing the appropriate method(s) given a particular question, the ability to critically assess research studies in the field, and the ability to conduct research for a Master's Thesis.

CJ 09512: Research Methods II 3 s.h.
This course will enable students to understand various statistics and statistical techniques used in criminal justice, to understand the advantages and disadvantages of different statistics, to be able to conduct research utilizing the appropriate statistic given a particular question and/or set of data, to be able to critically assess research studies in the field, and to be able to conduct research for a Master's Thesis.

CJ 09515: Law and Society 3 s.h.
This course will allow students to understand the basic process for law formation and the obvious and hidden influences on the creation of American law; to understand the role of laws in American society, in part as a reflection of needs, in part as a reflection of public/political desires, and in part as tools of the powerful; to understand how the complexities in law and its relationship to society impact on other aspects of the criminal justice system; and to be able to critically assess the formation of law, the interpretation of law, and the application of law in American socity.

CJ 09516: Administrative Law/Ethics 3 s.h.
This course focuses on the relevance of administrative law and ethics as they relate to the decision making process in criminal justice. Administrative actions and ethical issues permeate the criminal justice system. As such, students will be exposed to Administrative Law, including discussion of key principles of Administrative Law, limiting doctrines, and particular agency rules. Students will also spend time studying ethics. Discussions may include police corruption, prosecutorial misconduct, ethical issues in sentencing, prison corruption, and ethics in the creation and implementation of crime control policy.

CJ 09517: Criminal Justice Policy Analysis 3 s.h.
This course will enable students to understand the importance of program and policy evaluation, to understand how to evaluate programs and policies with several outcome measures, to be aware of the effectiveness of current criminal justice policies and procedures, and to be able to evaluate a current criminal justice policy or procedure using primary or secondary data.

CJ 09518: Contemporary Developments in Theory 3 s.h.
This course will allow students to understand the modern development of criminal justice theory, to understand current approaches in theory, including strengths and weaknesses of various theoretical perspectives, to be able to conduct research guided by theory, and to be able to critically assess research studies in the field.

CJ 09519: Seminar in Criminal Justice Planning 3 s.h.
This course focuses on the techniques of program and policy planning and evaluation. Students will focus on existing criminal justice programs and policies while at the same time learning the process of proper program and policy evaluation. Specifically, students will learn how to plan change through a series of steps: problem analysis, creating time-bound and measurable goals and objectives, designing a program or policy, developing action plans, developing a monitoring plan, developing an evaluation plan and instrument and finally how to initiate the program or policy. Where appropriate, students will conduct their analysis on existing and policies as well as creating their own plans as outlined above.

CJ 09520: Courts and Supportive Agencies 3 s.h.
This course deals with cases that come from both juvenile and adult courts and which often result in referrals to supportive social agencies. Included are an analysis of the services provided by supportive agencies, such as foster home services, substance abuse services or anger management services, as well as witness decorum while providing reports to a court, such as presentence investigation reports.

CJ 09521: Prevention and Rehabilitation 3 s.h.
This graduate seminar will include in-depth study of the theory and research on the causes of criminal behavior; the legal, ethical, and practical issues involved in working with offenders; and classification and treatment in the correctional context. Students will become familiar with the most widely used and effective correctional treatment approaches and empirical research evaluating programs and policies.

CJ 09522: Seminar in Violence 3 s.h.
This graduate seminar will include an in-depth study of current theory and research on the biological, psychological, and sociological causes of violent behavior. It will examine the various types of violent offenses and the impact of these crimes. Students will learn to critically assess the empirical research on the causes and impact of violence, and understand the practical applications of this research.

CJ 09523: White-Collar Crime 3 s.h.
This graduate course will include an in-depth study of white-collar crime. White-collar crime has generally been a neglected topic in criminology and criminal justice, but it has gained more prominence as scholars recognized the costs associated with white-collar crime and the importance of studying it for prevention purposes. The course will cover a range of topics from the definitional issues and the problems involved in measuring and collecting data on white-collar crime to theoretical explanations and the prevention of white-collar crime. Students will learn to critically assess significant research concerning white-collar crime and understand the practical applications of this research. This course will not be offered every semester.

CJ 09524: Police and Society 3 s.h.
This course will focus on the theories and scholarly studies in policing and apply this knowledge to understanding police functions in society. The objectives of this course are to understand the police function both in terms of its nature and its relationship with society, to appreciate advances and emerging theories in policing, and to assess current research in the field and its implications for the police profession. Students are expected to follow the scientific research process to do research, write papers, and have informed discussion of current police policies and practices.

CJ 09525: Altruism, Cooperation, and Criminal Justice 3 s.h.
This course examines the philosophical and empirical data of altruism and cooperation and relates these fields to the study of criminal justice organizations. Specifically, we examine whether it is necessary to "be nice" to work in the criminal justice field. We further examine whether those that are more cooperative and altruistic perform their jobs more effectively and how relationships between client and worker, and worker and supervisor are influenced by altruistic and cooperative tendencies of the individuals. Finally, students will collect, analyze, and summarize original data testing the hypotheses offered within the course.

CJ 09526: Management of Criminal Justice Organizations 3 s.h.
The course focuses on diagnosing criminal justice organizations based on their: structure, purpose, leadership styles, rewards and motivations, relationships and communication theories, decision-making processes, goals and objectives. Students learn how to assess the effectiveness of various criminal justice agencies based on the aforementioned concepts and will also learn how to integrate planned change to a criminal justice organization. Criminal justice organizations exist in different political and legal environments than private, for-profit institutions and students learn how to assess these differences and gain an understanding of how criminal justice organizations work at the organizational and individual level.

CJ 09528: Seminar in Juvenile Justice and Delinquency 3 s.h.
This course will examine the biological, psychological, and sociological factors that increase the risk of juvenile delinquency, and how the justice system has reacted to crime committed by young people. Topics such as early intervention, protective factors, diversion, gangs, research based rehabilitation programs, and transfer to adult court will be examined. Students also will learn to critically assess and design evaluations of prevention and rehabilitation programs designed for juveniles.

CJ 09529: Community Justice 3 s.h.
This course will examine how the community can work with police, courts, and correctional agencies to prevent crime and rehabilitate and reintegrate offenders. It will examine the effect on implementing community programs of the organizational environment and effective recruitment, screening, and training of community members. Techniques such as participatory management, collaboration, problem solving, and mediation will be examined. Students also will learn to critically assess and design evaluations of community programs.

CJ 09530: International Criminal Law Seminar 3 s.h.
This graduate course will include an in-depth study of international crimes and the international criminal process. It will examine the various types of international criminal offences, the impact they have on the international community, and the international legal consequence for such crimes. Students will learn to critically analyze historical international cases and understand case precedents and their future impact on international criminal law.

CJ 09532: Race, Ethnicty, Class & Justice 3 s.h.
This graduate course will include an in-depth study of race, ethnicity and class, and their evolving impact upon the U.S. criminal justice system, as well as the system's impact on minorities, the poor, and their communities. A major focus of this course will be a critical examination and analysis of how race, ethnicity, and class have impacted the nature, content, and quality of justice that is rendered within the nation. One major purpose of our study is to provide students with an opportunity to gain sophisticated understanding of the inequities that minorities experience within our system of justice and in the wider community. Students will learn to critically assess significant research concerning race, ethnicity and class and the criminal justice system, and understand the practical applications of this research.

CJ 09600: INDEPENDENT STUDY 1 to 6 s.h.

CJ 09601: Master's Thesis in Criminal Justice I 3 s.h.
This course requires students to design and begin implementing their own research project to be used to satisfy the program's thesis requirement. Under the guidance of a member of the Law and Justice Department faculty who agrees to serve as Thesis Advisor, the student will develop a Research Proposal that will consist of an introduction and Statement of the Problem, a Literature Review, a Data and Methods Section, and a brief summary of the proposed research. The student will defend this Research Proposal in front of the Master's Thesis Committee, and will begin implementing the research after obtaining the Committee's approval.

CJ 09602: Master's Thesis in Criminal Justice II 3 s.h.
This course requires students to complete the research project they began in Master's Thesis in Criminal Justice I in order to satisfy the program's thesis requirement. Under the guidance of a member of the Law and Justice Department faculty who has agreed to serve as Thesis Advisor, the student will collect their data or obtain secondary data, analyze the data, and write the results, discussion and conclusion, and references section. They will combine their work from Master's Thesis I and II into a completed thesis which they will present to the Master's Thesis Committee for approval.

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 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.

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 patter 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, Eighthm, 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 selp-incrimination. This course has two primary objectives. The first is to introduce students to the analysis of judicial opinions, a primary sourse 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 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.

LAWJ 05325: Comparative and International Criminal Justice 3 s.h.
Prerequisites: LAWJ 05175
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 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 sourse 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 05356: Criminal Justice Internship I 3 to 6 s.h.
Prerequisites: COMP 01112 or HONR 01112
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 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 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 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 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 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 01505: MBA Supervised Internship 3 s.h.
This course requires a field experience in government, business, industry or non-profit organizations. Students complete assignments that prepare them for productive employment upon graduation. The MBA faculty member will partner with each employer and student to define and enrich the student's work experiences and to monitor and assess the learning process. This course is integral to the MBA Program and Supervised Internship credits cannot be used to substitute MBA elective credits.

BUS 01518: Integrative Managerial Skills 3 s.h.
This course serves as a keystone course for the M.B.A. program. Key skills, tools, and issues necessary for further study will be developed and extended. Course topics and techniques include information systems, financial ratios, behavioral, presentation, team building, quantitative analysis, critical thinking, written communication, legal and ethical issues, and library research including electronic data bases and internet research.

BUS 01521: Integrative M.B.A. Seminar 3 s.h.
A capstone course for the M.B.A. program, it aids students in reinforcing and integrating core courses by studying strategic audits and process analysis techniques. Student projects will use teams to analyze how organizations use people, operational management, information systems and financial measurements to achieve strategic and operational effectiveness.

BUS 01550: INDEPENDENT STUDY 1 to 4.5 s.h.

BUS 01600: Special Topics in Business Administration 3 to 6 s.h.
Students will study advanced level topics in specific disciplines as identified through participation in indepth seminars on topics to be determined by faculty in consultation with the Graduate Committee of the College of Business. Students will complete research or projects on specialized topics in various disciplines in Business Administration. Students may take each topic only once. This course may not be offered annually.

ENT 06504: Strategic Project-Based Experience 3 s.h.
This course is designed to provide strategic focused field based project learning experiences and opportunities for graduate students by affording them the opportunity to work with a wide variety of public and private organizations. The course uses a team-based approach to offer consulting advice to organizations with the goal of improving their performance. The emphasis in the course is on experiential approaches that provide a participative type of learning about the crucial issues faced by organizations. This course is interdisciplinary in nature and open to all graduate students.

ENT 06505: Entrepreneurship and Innovation 3 s.h.
Prerequisites (effective Spring 2009): ACC 03500 andMGT 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 06506: Corporate Entrepreneurship and New Venture Development 3 s.h.
This course provides an overview of the potential for innovation and entrepreneurial opportunities or new ventures within a corporate environment. The course covers various aspects of corporate entrepreneurship and new venture development. Major topics include understanding the corporate entrepreneurial revolution, learning about the nature of entrepreneurship within established organizations, understanding the requirements for setting up an environment conducive to new ventures within a corporate setting, and learning about the entrepreneurial direction of firms as they grow and evolve. Among the issues discussed are application of entrepreneurship to established firms, the disparity between start-up and corporate entrepreneurship, the role of creativity within corporate entrepreneurship, the relation to product innovation and technology, the importance of corporate strategy within an entrepreneurial framework, and what it takes to create an entrepreneurial culture.

ENT 06599: Special Topics in Entrepreneurship 3 s.h.
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 06500: INDEPENDENT STUDY:HRM 1 to 6 s.h.

HRM 06598: Special Topics in Human Resources Management 3 s.h.
Students will study advanced level topics in Human Resources Management. The exact topics to be covered will change over time. Contact the MBA office or Management and MIS Department for details.

HRM 06605: Strategic Human Resource Management 3 s.h.
Prerequisite: Admission into the MBA Program or Admission into the Certficate of Advanced Graduate Study (CAGS) in Business Management
Strategic Human Resource Management consists of planned organizational activities designed to increase organizational effectiveness and equity. This course outlines the transformation of HRM from a clerical function to an important strategic partner of top management. It focuses on the ability of HRM to provide a source of competitive advantage to forward-thinking organizations.

HRM 06688: Human Resource Management in Health Promotion 3 s.h.
Prerequisite: Admission into the Master of HealthPromotion Management (MHPM) program.
Human resource management consists of planned organizational activities that are designed to improve efficiency and equity. In this class, health promotion professionals will develop their capabilities as human resource managers and will enhance their appreciation of human resource management professionals who make the strategic choice to promote employee health.

MGT 01510: PROF, LEGAL, MGRL RESPONSIBIL 3 s.h.
Admission into the MBA program or admission into the COGS in Business.
In that business leaders have become personally and professionally responsible for the legal and ethical behaviors of the individuals within their organizations, the need for formal training in ethical and legal decision making is essential. In this course students will learn how to effectively apply a variety of legal and ethical frameworks within the global marketplace. Students will also learn appropriate and effective legal and ethical issue reporting practices, principles and responsibilities.

MGT 06300: Organizational Behavior 3 s.h.
Prerequisite: Completion of 57 semester hours
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 06500: Designing, Developing, and Leading High Performance Organizations 3 s.h.
Students will study and develop skills in interpersonal behavior in organizations and groups. They will learn about issues in leadership, how groups function, elements of power and influence, conflict management, management of time and stress, creative and rational problem solving in groups. In addition, they will study theories of motivation and methods of empowerment in organizations.

MGT 06501: Advanced Operations Management and Strategy 3 s.h.
Prerequisite: Admission to an MBA program
This course is designed to familiarize students with the complexities of operating a manufacturing, as well as a service, organization. The focus is primarily on gaining a competitive edge by improving functions of operations management. Concepts and tools pertaining to business forecasting, operations decision-making, resources allocation, location and capacity planning, inventory control and management, facility layouts, scheduling, project management, and quality control and management will be covered. Case studies and team projects will also be used to provide practical applications in a realistic business context.

MGT 06502: International Business and Society 3 s.h.
This course addresses numerous aspects of the increasingly global business environment and implications for business organizations and key stakeholders. Frameworks for comparing political, legal, social, economic, and governmental differences across nations are utilized. Macro issues include trade theories, trade regimes, roles of governments and global institutions. Strategies and structures adopted by various types of international firms and functional approaches to international finance, management, and marketing are also included.

MGT 06503: Organization Development 3 s.h.
Students study the application behavioral science in the management of planned organizational change and development. In addition to the analysis of issues facing the change agent, students also develop skills in implementing and intervening in the effort to improve organizational effectiveness. This course may not be offered annually.

MGT 06510: Strategic Engineering Management 3 s.h.
The course introduces engineers to the concepts and application of strategic planning specifically to the roles and responsibilities of the engineering function in the strategic planning process for high-tech firms.

MGT 06519: Leadership in Health Promotion 3 s.h.
The course is designed for graduate students in the M.A. in Wellness and Lifestyle Management program. Course content will cover the theories of leadership in health promotion and the focus of this course will be on leadership from a variety of perspectives - - health organizational leadership in the external environment, as well as leadership at the top, middle and lower levels inside organizations. Students will focus on the theory and implementation of various health leadership tasks and responsibilities including working with other leaders in a multinational world, supervising workers with diverse backgrounds. These leadership skills will include establishing workplace goals, organizing work units for productivity, conducting interviews, giving feedback to subordinate employees, designing and implementing employee motivation programs, changing organization culture, the capacity to lead globally, leading work teams and managing workforce diversity. By the end of this course, students will be able to effectively diagnose the complex dynamics of leadership in health organizational environments and take action as leaders and to improve individual and health organization performance.

MGT 06520: Global Leadership and Organization Culture 3 s.h.
The course is designed for graduate business students. Course content will cover the theories of business leadership and the focus of this course will be on leadership from a variety of perspectives--organizational leadership in the external environment, as well as leadership at the top, middle and lower levels inside organizations. Students will focus on the theory and implementation of various business leadership tasks and responsibilities including working with other leaders in a multinational world, supervising 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, changing organization culture, the capacity to lead globally, leading work teams and managing workforce diversity. By the end of the course, students will be able to effectively diagnose the complex dynamics of leadership in business environments and take action as leaders and to improve individual and organization performance.

MGT 06599: Special Topics in Management 3 s.h.
Students will study advanced level topics in management. The exact topics to be covered will change over time. Contact the MBA office or Management and MIS Department for details.

MGT 06601: Strategic Planning for Operating Managers 3 s.h.
This course prepares the operating manager for the responsibilities of performing strategic planning. The course will identify what goes into and how strategic planning is performed. Strategy formation and evaluation will be assisted by computer decision models and management games. The interrelationships of organizational units and pro-active management posture with respect to environmental forces will be stressed. This course may not be offered annually.

MGT 06603: Business Processes and Improvement 3 s.h.
Prerequisite: MKT 09575
This course introduces the fundamental Lean Six Sigma principles that underlay modern continuous improvement approaches for industry, government and other organizations. Six Sigma is a quality system developed at Motorola which focuses on elimination of variation from all processses. 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. In this course, students will learn how lean, six sigma, and ERP systems improve business processes.

MGT 06629: Managing Organizational Strategy 3 s.h.
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 06666: Managing Engineering Teams 3 s.h.

MGT 06677: Management Skills for Engineers 3 s.h.
Prerequisite: Admission to the Master ofEngineering Management Program
Technical skills are necessary but insufficient for success in engineering management. It is also necessary for enginerring managers to be effective motivators and leaders. In this course, students will also learn optimal techniques of hiring and rewarding engineers.

MGT 07500: Managerial Decision Making Tools 3 s.h.
This course requires the application of analysis and decision making tools in a business setting, with emphasis on the evaluation of problems facing the modern firm in a changing global marketplace. It provides in-depth coverage of analytical tools that are invaluable to the entrepreneur/manager as he or she is confronted with strategy and implementation decisions in a competitive world.

MGT 07600: Business Forecasting 3 s.h.
This course is designed to acquaint the graduate student with the advanced statistical forecasting techniques. Upon completion of the course, the student should be able to identify a forecasting problem, gather data and use computerized statistical packages to obtain solutions, analyze results, determine the validity and reliability of the model, and if necessary, recommend alternative methods to solve the model. This course may not be offered annually.

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.

BUS 01303: Business Practicum 3 s.h.

MIS 02150: 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 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 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 02500: Issues in Management Information Systems 3 s.h.
Prerequisites: Admission to the MBA Program oradmission to the COGS in Business oradmission to the COGS in MIS
Information technology and systems are pervasive in business today and will become more so in the future. Therefore, this course is designed to provide skills for managing this changing environment. The primary focus of the course is on the management of technology. The management of technology and systems is not left solely to information systems professionals; it is the responsibility of all managers.

MIS 02510: EXPERT SYS BUSINESS 3 s.h.

MIS 02511: ERP Systems for Management 3 s.h.
Prerequisites: Admission to MBA, COGS in MIS, or CAGS in MIS programs
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 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 02515: Electronic Commerce 3 s.h.
Prerequisite: Admission to the MBA Program OR Admission to Certficate of Graduate Study (COGS) in MIS OR Admission to Certficate of Advanced Graduate Study (CAGS) in MIS
This course will introduce students to electronic business. It will cover such diverse issues as: e-commerce payment mechanisms, encryption and authentication of data, web assurance, electronic data interchange, legal issues on the web, and web marketing. There will also be a lab component that will provide students with exposure to and practice in web page design and creation.

MIS 02522: Systems Analysis and Design 3 s.h.
Prerequisites: Admission to the MBA Program OR Admission to Certificate of Graduate Study (COGS) in MIS OR Admission to Certficate of Advanced Graduate Study (CAGS) in MIS
This course explains 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.

MIS 02525: Project Management 3 s.h.
Prerequisites: Admission to the MBA Program OR Admission to Certificate of Graduate Study (COGS) in MIS OR Admission to Certficate of Advanced Graduate Study (CAGS) in MIS
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 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 02528: Business Application Design and Development 3 s.h.
Prerequisites: Admission to MBA, COGS in MIS, or CAGS in MIS programs
Students will design, create, and maintain web applications that: dynamically display content from relational and hierarchical databases, provide transaction processing from procurement to fulfillment, connect to and share internal data with supply chain partners (extranet), afford ubiquitous access to internal data via secure channels (intranet). Students will gain experience working with integrated software development tools, various programming languages, and many web-based business standards.

MIS 02538: Database Design 3 s.h.
Prerequisites: Admission to the MS in Bioinformatics, MBA, COGS in MIS, or CAGS in MIS programs
This course explores the fundamentals of designing a database. It emphasizes the relational model; however, the course also explores the hierarchical and network models. Additionally, the course covers such topics as data insertion, modification, and extraction using SQL. CASE tools and database management tools will be employed.

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 Certficate 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 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 09500: Marketing Management 3 s.h.
Prerequisites: Admission to the MBA Program or COGS in Business
This course focuses on managing the marketing function in a dynamic, competitive environment in coordination with other organizational functions to enhance the overall performance of an organization. Attention will be devoted to the design of strategies for the achievement of competitive advantage in product/service offerings, pricing, promotion and distribution. Students will build upon their existing knowledge base of marketing concepts and will develop or extend competencies in analytical decision-making, ability to identify market opportunities, and ability to develop and evaluate marketing plans.

MKT 09501: Consumer Analysis 3 s.h.
Students will conduct detailed analyses of consumer and/or business markets. After examining a range of conceptual materials and research methodologies, they will apply these insights to the analysis of actual decision-making situations by means of case studies and/or independent research projects.

MKT 09502: Marketing Research 3 s.h.
Contemporary marketing decisions are based on marketing research information. This course will help students develop a managerial perspective on the use of marketing research information in making decisions, as well as specific research skills and practical experiences that will enhance their career advancement. The skills covered in this course are applicable to marketing problems encountered in both consumer and business-to-business markets. Students will experience a "project-based learning" to apply marketing research tools and methods to identify and solve specific marketing problems.

MKT 09503: Marketing Communication and Promotion 3 s.h.

MKT 09575: Introduction to Logistics and Supply Chain Management 3 s.h.
Prerequisite: Admission to graduate programs
The course is a basic introduction to the field of logistics and supply chain management, including both defense logistics and commercial supply chain management. The objective of the course is to provide students a solid awareness and understanding of the processes and functions that comprise a supply chain. The course serves as the introductory course of a three course specialization in Supply Chains and Logistical Systems in the MBA program. Moreover, students are required to complete a term project to demonstrate their understanding of logistics and supply chain issues. Case analysis and hands-on experience in this class will offer students the opportunity to broaden their horizon on the critical roles that the supply chain plays in this globalized and interdependent world.

MKT 09599: Special Topics in Marketing 3 s.h.
Prerequisites: Admission to the MBA Program
Students will study advanced-level topics in Marketing. The exact topics to be covered will change over time. Contact teh MBA office or the Marketing Department for details.

MKT 09600: International Marketing 3 s.h.
Students will examine all issues facing marketing managers in the light of the unique challenges posed by the internationalization of the economy. The cultural, economic, political, and legal environment will be examined. Market research in world markets, the planning and development of consumer and industrial products, promotion, pricing and distribution will also be analyzed. This course may not be offered annually.

MKT 09605: Competitive Advantage through Supply Chain Management 3 s.h.
Prerequisite: MGT 06603
The course has been developed to be the capstone course for the Supply Chain and Business Systems specialization in the Master of Business Administration program. As such, the course will provide the culminating experience for graduate students in their final courses in the graduate program and will serve as a point of assessment. Utilizing the relationship between the RCOB and SAP, students will have the opportunity to utilize the SAP SD (Sales and Distribution) Module of SAP software in applications that are common in logistical systems. Students will have to complete their term projects. In addition, students will be required to participate in SAP case competition, which encourages students to comprehend, integrate and apply supply chain management concepts in the context of SAP.

MATH 01122: Precalculus Mathematics 4 s.h.
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 01130: Calculus I 4 s.h.
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 4 s.h.
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.

MATH 01205: Technological Tools for Discovering Mathematics 2 s.h.
Prerequisites: C- or better in CS 01104 and MATH 01131 and MATH 03150
This course will use mathematics-specific technologies to help students discover mathematics and to develop a better understanding of new content. Throughout the course students will become aware of the broad range of mathematics-specific technologies available to mathematicians, become proficient in the use of these, and pursue the advantages, disadvantages, and limitations of such technologies. Students will solve problems and advance their understanding of topics in the areas of pre-calculus, calculus, geometry and statistics.

MATH 01210: Linear Algebra 3 s.h.
Prerequisites: C- or better in MATH 01131 and (MATH 03150 or MATH 03160)
This course includes: linear equations and matrices, vector spaces, linear dependence and independence, dimension and basis of a vector space, linear transformations, inner product and cross product, orthogonality, eigenvalues and eigenvectors. Use of graphing calculators is required and computers may be used at the option of the instructor.

MATH 01230: Calculus III 4 s.h.
Prerequisites: C- or better in MATH 01131
This course includes: vectors, vector functions, velocity, acceleration, partial differentiation, directional derivatives, multiple integration, and vector calculus. The student is expected to use computer software, such as Mathematica, in addition to the graphing calculator.

MATH 01231: Ordinary Differential Equations 3 s.h.
Prerequisites: C- or better in both MATH 01210 and MATH 01230
Applications of ordinary differential equations and their methods of solution form the major part of this course. It also includes the solution of nth order equations, particularly of first and higher degree linear differential equations, and series and Laplace Transform solutions. Students might be asked to use computers and/or graphics calculators as an aid in solving equations.

MATH 01310: College Geometry 4 s.h.
Prerequisites: C- or better in PHIL 09130 andMATH 01210 and MATH 01230 and MATH 03150
This geometry course will use both synthetic and analytic approaches to study advanced concepts in Euclidean geometry, to introduce non-Euclidean geometry, to explore the basics of Transformational geometry and Higher Dimensional geometry, and to trace the historical development of geometry. Computer use will be emphasized throughout the course.

MATH 01330: Introduction to Real Analysis I 3 s.h.
Prerequisites: C- or better inMATH 01230 and MATH 03150
This course prepares students for more advanced courses in analysis as well as introducing rigorous mathematical thought processes. Topics included are sets, functions, the real number system, sequences, limits, continuity and derivatives.

MATH 01331: Introduction to Real Analysis II 3 s.h.
Prerequisites: C- or better in MATH 01330
This course is a continuation of Introduction to Real Analysis I. The purpose is to extend student's understanding of basic analysis and the calculus. Topics included are: the mean-value theorem, existence of the Riemann integral, Riemann-Stieltjes integration, infinite series, convergence tests and Fourier series.

MATH 01332: Numerical Analysis 3 s.h.
Prerequisites: C- or better in CS 01104 andand MATH 01131 and MATH 01210
This course includes: elements of error analysis, real roots of an equation, polynomial approximation by finite difference and least square methods, interpolation, quadrature, numerical solution of ordinary differential equations, and numerical solutions of systems of linear equations. The student should expect to program a computer in addition to using a graphing calculator.

MATH 01340: Modern Algebra I 3 s.h.
Prerequisites: C- or better in MATH 03150 and MATH 01210 and PHIL 09130
This course includes: the natural numbers, integers, rationals, and reals as mathematical systems, and the introductory theory of groups, rings, integral domains, and fields. Also included are homomorphisms and isomorphisms, subgroups, kernels, rings and ideals and polynomial rings. At the option of the instructor, computer use can be required.

MATH 01341: Modern Algebra II 3 s.h.
Prerequisites: C- or better in MATH 01340
This course extends the study begun in Modern Algebra I to a more detailed investigation of abstract algebraic structures. Included are Sylow theorems, rings and ideals, polynomial rings, ring and field extension and Galois theory.

MATH 01352: Theory of Numbers 3 s.h.
Prerequisite: C- or better in both MATH 01210 and MATH 03150 or C- or better in both MATH 01210 and MATH 03160
This course includes divisibility properties of integers, theory of congruence, Diophantine Analysis, congruences of higher degree, quadratic residues and famous problems of number theory.

MATH 01354: Introduction to Topology 3 s.h.
Prerequisites: MATH 01330
This course covers the properties of general topological spaces, separation, compactness, connectedness and the Heine-Borel and Bolzano-Weierstrass theorems.

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 01500: Foundations of Mathematics 3 s.h.
Strategies and tools for problem solving, including computer use, will be applied to specific problems from number theory, geometry, analytic geometry, algebra, discrete mathematics, logic, and calculus.

MATH 01502: Linear Algebra and Matrix Theory 3 s.h.
This course includes linear systems, linear dependence and independence, linear transformation theory, multilinear forms, matrices, determinants, inner product spaces.

MATH 01503: Number Theory 3 s.h.
This course includes divisibility properties of integers, mathematical induction, modular congruence, linear congruences and diophantine analysis, congruences of higher degree, quadratic residues, famous problems of number theory.

MATH 01504: Introduction to Mathematical Logic 3 s.h.
This course includes intuitive set theory, relations and functions, sentential calculus, predicate calculus, mathematical systems, axiomatic theories.

MATH 01505: Probability and Mathematical Statistics 3 s.h.
This course includes probability for discrete sample spaces, probability distributions, Chebyshev's theorem, moment generating functions, continuous random variables, sampling distributions, point and interval estimation, theory of hypothesis testing, regression and correlation, introductory analysis of variance. Other than on the recommendation of the adviser, this course should not be chosen if a corresponding similar course has been part of the student's undergraduate study.

MATH 01507: Differential Geometry 3 s.h.
This course explores the application of calculus towards the study of higher-dimensional surfaces and their geometry. Topics include geodesics, tangent space, directional derivative, Riemannian metrics, isometrics, Gaussian curvature, first and second fundamental forms, Gauss-Bonnet Theorem, minimal surfaces, differential manifolds, connections, and Riemannian curvature tensors. Special topics (at the discretion of the instructor) may include Lie groups, symmetric spaces, general relativity, cohomology, and complex geometry. Students will be required to use a computer algebra system to gain geometric intuition.

MATH 01510: Real Analysis I 3 s.h.
The theoretical treatment of the foundations of calculus covering the real and complex number systems, elementary set theory, number sequences and series, topological treatment of the real line, continuity and differentiation.

MATH 01511: Real Analysis II 3 s.h.
The continuation of Real Analysis I covering Riemann-Stieltjes integration, sequences and series of function, functions of several variables, elements of measure theory and Lebesgue integration.

MATH 01512: Complex Analysis I 3 s.h.
The elementary theory of the functions of a complex variable covering operations with complex numbers, graphing on the Argand-Gauss-Wessel plane, analytic functions, complex integration. Cauchy's theorem and its applications, poles and residues, power series and conformal mapping are studied.

MATH 01513: Complex Analysis II 3 s.h.
The continuation of Complex Analysis I covering Riemann-Stieltjes integration, meromorphic functions, conformal mappings, analytic continuation, fractional linear transformations and periodic functions.

MATH 01515: Engineering Applications of Analysis 3 s.h.
This course will cover various techniques for solving linear and nonlinear partial differential equations (PDEs) arising from physical and engineering applications; this includes both analytical and numerical methods. More specifically, students will learn the method of separation of variables for solving multi-dimensional problems, Fourier/Laplace transforms for solving infinite-domain problems, numerical methods (finite-difference, finite-element, Monte-Carlo), Green's functions, method of characteristics, and inverse scattering. Basic applications include a vibrating membrane (wave equation), heat flow along a metal plate (heat equation), steady-state fluid flow (Laplace's equation), traffic flow (shock waves), and solitary waves (solitons). Students will be required to use a computer algebra system, e.g. Mathematica, to solve problems.

MATH 01520: Topics in Applied Mathematics 3 s.h.
This course provides an overview of the mathematical modeling process and includes applications to optimization, dynamical systems, and Stochastic processes. Models of specific real world systems will be developed and studied using analytical and numerical methods.

MATH 01521: Nonlinear Differential Equations 3 s.h.
This course examines analytic and computer methods for the solution of ordinary differential equations which are of interest in applications. Topics are selected from differential equations in the phase plane, geometrical and computational aspects of the phase plane, averaging methods, perturbation methods, stability, Liapunov methods, existence of periodic solutions, bifurcations and chaos. Applications are also included that are of use in science and engineering.

MATH 01522: History of Mathematics 3 s.h.
Topics will include: Babylonian, Egyptian and Greek mathematics. Attention will be given to the development of trigonometry, algebra, analytic geometry and the calculus.

MATH 01523: Selected Topics in Mathematics 1 to 6 s.h.
This course provides students with the opportunity to explore current issues in mathematics. The course will have a changing focus that will permit faculty to offer specialized seminars focused on new developments in the field, issues of significance, areas of faculty research, or in response to students' requests. Students may take this course for credit more than once (limit: 9 s.h.), as long as the focus of the course is different each time the student enrolls.

MATH 01524: Abstract Algebra I 3 s.h.
This introduction of abstract algebra will include the construction of number systems, theory of groups, rings, integral domains and fields. Other than on recommendation of the adviser, this course should not be chosen if a corresponding similar course has been part of the student's undergraduate study.

MATH 01525: Modern Geometry 3 s.h.
This course provides an overview of the field of geometry by studying selected geometries in depth, both Euclidian and non-Euclidian. Indicative exploration and the axiomatic method, as well as synthetic and algebraic approaches to problems, are examined. Unless recommended by the adviser, this course should not be chosen if a similar course has been part of the student's undergraduate program.

MATH 01526: Point Set Topology 3 s.h.
An introduction to one of the major branches of modern mathematics covering axiomatic development of topological spaces and metric spaces, and the concepts of convergence, continuity, separation, compactness and connectedness.

MATH 01527: Abstract Algebra II 3 s.h.
The continuation of Abstract Algebra I covering advanced material from group theory, ring theory and field theory.

MATH 01528: Mathematical Modeling & Algebraic Reasoning 3 s.h.
Students in this course will learn about polynomial, rational, and exponential functions by building and analyzing mathematical models for a variety of situations. Using algebraic representations, problem solving, using technology, connecting abstract algebra with middle grades mathematics, and fluency with algebraic procedures will be stressed.

MATH 01529: Numerical Analysis 3 s.h.
This course examines the theoretical foundations of numerical methods and studies in detail existing numerical methods for solving many standard mathematical problems in analysis and algebra. Error analysis will be developed for all methods. Some recent advances in the theory of chaos and nonlinear dynamics will also be presented.

MATH 01533: Graduate Seminar in Mathematics 3 s.h.
Students will be introduced to mathematics not found in textbooks. They will learn how to read journal articles and analyze them. An emphasis will be placed on communication skills, both oral and written. Students will be required to give both oral and written analysis of their readings.

MATH 01550: Independent Study 1 to 6 s.h.
This course is designed for an individual who wishes to study a mathematical subject or topic not included in the listed offerings of the program. The student undertakes independent study under the supervision of a mathematics staff member. Registration by permission of the department chairman and the supervising department member.

MATH 01552: HISTORY OF MATH 3 s.h.

MATH 01561: School Mathematics from an Advanced Standpoint 3 s.h.
This course is to develop a deeper understanding of mathematics and a new appreciation of its beauty, its logical structure and its applicability. The course will take into account not only the many interconnections among school mathematics topics but also their relationship to higher mathematics.

MATH 03125: Calculus: Techniques and Applications 3 s.h.
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.
Prerequisites: MATH 01122 or MATH 01130
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 (MATH03.150), 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 03400: Applications of Mathematics 3 s.h.
Prerequisite: C- or better in each of 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 01230or MATH 01141) and C- or better in (MATH 01210or 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 andMATH 03411 or C- or better in each of STAT 02360 andeither MATH 01230 or MATH 01141 and either MATH01210 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.

MATH 03511: Operations Research I 3 s.h.
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, project planning, network optimization, assignment and transportation problems, dynamic programming and game theory. Solutions will be obtained using theoretical methods and software packages.

MATH 03512: Operations Research II 3 s.h.
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, simulation, Markov chains, queuing theory, decision analysis, dynamic programming, system reliability and inventory theory. Solutions will be obtained using theoretical methods and software packages.

MATH 03550: Topics in Discrete Mathematics 3 s.h.
This course provides an advanced approach to topics in discrete mathematics for persons with substantial backgrounds in traditional mathematics. Selected topics are explored in depth and related to concepts from other areas of mathematics. Topics normally included are logic, combinatorics, number systems, data structures and representations, Boolean algebra, induction, graphs and trees.

MATH 03600: Topics in Elementary Mathematics 3 s.h.
This course is designed to improve the understanding and attitudes of practicing elementary teachers (K-8). Specific topics to be addressed include quantitative reasoning, spatial reasoning, inductive and deductive reasoning, mathematical systems, and communication in mathematics. Students are expected to engage in some independent work.

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 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. 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.

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 01512: Principles of Nanotechnology 3 s.h.
Prerequisites: (PHYS 02200 OR PHYS 00220) AND(PHYS 02201 OR 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 10501: Computer Integrated Manufacturing and Automation 3 s.h.
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.

ME 10505: Special Topics in Mechanical Engineering 3 to 6 s.h.
The topics will be announced in the course schedule.

ME 10506: Computational Materials Science 3 s.h.

ME 10511: Combustion 3 s.h.
This course presents the concepts of chemically reacting systems (flames) along with many practical applications. Topics include chemical equilibrium, chemical kinetics, premixed laminar flames, detonations, diffusion flames and environmental issues. The course uses chemically reacting flow software for combustion modeling.

ME 10512: Rocket Propulsion 3 s.h.
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.

ME 10513: Principles in Advanced Heat and Mass Transfer 3 s.h.
Prerequisite: CHE 06311 or ME 10322
The topics covered in this course extend and complement the Thermal-Fluid Sciences II course. While Thermal-Fluid Sciences II provides an overview and introduction to the engineering fundamentals of heat transfer, Principles of 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.

ME 10514: Energy Conversion Systems 3 s.h.
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 cells, and environmental considerations in power generation. A course project will be required on an advanced topic of mutual interest between the student and instructor.

ME 10521: Gas Dynamics 3 s.h.
This course emphasizes application of the conservation equations of mass, momentum and energy to solve problems in one-dimensional and two-dimensional compressible flow including 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. Numerical techniques are presented and a numerical analysis project is completed on one-dimensional, unsteady flow.

ME 10522: Computational Fluid Dynamics 3 s.h.
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. The student will complete an independent laboratory exercise of project.

ME 10541: Advanced Mechanism Design 3 s.h.
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. It also covers branch defects and circuit defects that occur during mechanism synthesis and modeling and simulation of mechanical systems. Students will perform analysis and simulation using appropriate mechanism design software.

ME 10542: Advanced Mechatronics 3 s.h.
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. A final project will be required.

ME 10543: Advanced Design for X 3 s.h.
This course introduces students to the design of systems from the Design for X perspective. The Design for X course teaches how to deal with conflicting and ever-increasing constraints upon the design process. It teaches students to adopt a systematic design approach that addresses issues related to manufacture, assembly, environment, reliability and other factors.

ME 10544: Automotive Engineering 3 s.h.

ME 10550: Advanced Solid Mechanics 3 s.h.

ME 10551: Mechanics of Continuous Media 3 s.h.
Students will engage the three-tiered framework used to interrogate problems involving bodies of continuous media. This begins with derivation of the governing equations from the conservation of mass, momentum, and energy followed by the application of constitutive models, such as Hooke's law, that govern the behavior of particular materials, and concludes with the solution of boundary value problems. In addition to the study of classical problems and their solutions, students will be required to program numerical algorithms for the solution of problems that can not be solved in closed form. Kinetic and kinematic constraints, such as material frame indifference, compatibility, and objectivity, will be addressed. The material covered will include both cylindrical and Cartesian coordinate frames.

ME 10552: Structural Acoustics 3 s.h.
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 10553: Analytical Dynamics 3 s.h.
This course is an advanced introduction to three-dimensional motion of particles and rigid bodies. Students study modern analytical rigid body dynamics equation formulation and computational solution techniques applied to mechanical systems and multibody systems. Students will formulate Newton/Euler and Lagrangian equations for applications to engineering systems, Hamiltonians principle, study kinematics of motion generalized coordinates and speeds, analytical and computational determination of inertia properties, generalized forces, holonomic and nonholonomic constraints, computational simulation.

ME 10554: Elastic Stability of Structures 3 s.h.
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 graduate-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 10570: Principles in Biomechanics 3 s.h.
This course presents topics in the 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. A course project and laboratory project will enhance this course.

ME 10571: Principles in Biotransport 3 s.h.
Prerequisites: ENGR 01341 or ME 10321
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. The student will complete an independent laboratory exercise or project.

ME 10572: Principles in Biomaterials 3 s.h.
Prerequisites: ENGR 01281 or ENGR 01283
The goal of this course is to introduce the numerous issues that factor into 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.

ME 10576: Principles in Orthopaedic Biomechanics 3 s.h.
Prerequisite: ENGR 01272 or ENGR 01273
This course presents both introductory and emerging areas of orthopaedic biomechanics. The course will encompass the use of engineering principles to describe, analyze and assess the musculoskeletal system. Topics will include bone and soft tissue mechanics, implant systems, fracture fixation, joint replacements and reviews of current research.

MED 01627: Scholars Workshop IV 1 s.h.

MED 01628: Ambulatory Clerkship IV 1 s.h.

MUS 04536: Chamber Music I 1 s.h.
The study and performance of selected repertoire for specific instrumental groups and combinations. Students will be assigned to a small ensemble and will be required to rehearse and to perform the chosen repertoire in a public setting.

MUS 04537: Chamber Music II 1 s.h.
The study and performance of selected repertoire for specific instrumental groups and combinations. Students will be assigned to a small ensemble and will be required to rehearse and to perform the chosen repertoire in a public setting.

MUS 04540: Jazz Arranging and Composition 3 s.h.
The course presents techniques in arranging and composition in the jazz idiom and is tied to the course CD Project in that it coordinates the needs of the second course through preparation in Jazz Arranging and Composition. Students will be required to arrange and orchestrate existing compositions and compose original music in the jazz idiom.

MUS 04541: Jazz Piano 1 s.h.
This course in applied music for the non-pianist focuses on the basic keyboard skills needed by the professional jazz musician, especially the use of the piano to realize harmonic progressions and concepts. The student must have passed the piano proficiency exam before enrolling for this course.

MUS 04545: Opera Role Study I 3 s.h.
A complete opera role from the standard repertoire will be learned and performed in each semester through private instruction and coaching, either in staged or unstaged, in public.

MUS 04551: Piano Accompanying I 1 s.h.
This course in applied piano accompanying will pair the student with a vocal or instrumental student under the supervision of the piano instructor.

MUS 04557: Advanced Orchestration 3 s.h.
This course will introduce the conducting student to the practical considerations of performance on orchestral instruments and their use in orchestral repertoire.

MUS 04560: Form and Analysis 3 s.h.
The course presents important contemporary approaches to the analysis and understanding of music of all periods including those of the present. Students will present analyses of works appropriate to their graduate level studies in their major area. This is a required course for all students in the master of music program.

MUS 04561: Score Reading I 1 s.h.
This course begins training the conducting student to read orchestral scores, including the mastery of clefs and transposition. It is a requirement for the Master of Music in Instrumental Conducting.

MUS 04562: Score Reading II 1 s.h.
This course continues training the conducting student to read orchestral scores, including the complete mastery of clefs and transposition, and the study of score reductions. It is a requirement for the Master of Music in Instrumental Conducting.

MUS 04565: Seminar in Band Conducting 3 s.h.
This course will involve classroom discussion, research, and scholarly presentations of topics related to the business of conducting, where students will share their views with other students and the facilitator. The class will visit rehearsals of professional organizations and bands and will interview known professionals in the field. A lecture presentation by each student on a relevant conducting topic will conclude the semester.

MUS 04570: 20th Century Literature and Techniques 3 s.h.
This course explores 20th century music and the compositional techniques it embodies. Emphasis will be upon important trends and developments that are still current in the music of today. Each student will present his/her own research in this area of study as it relates to their major area of study. This is a required course for the master of music in composition.

MUS 04575: CD Project 2 s.h.
The student will develop and produce a compact disk containing the student's original compositions through the choice of repertoire to be performed, the rehearsal of the material, to the completion of the technical and business details leading to a final product.

MUS 08156: Contemporary Music Ensemble 1 s.h.
Dedicated to the performance of new music, this ensemble performs the works of Rowan composition students and other contemporary composers.

MUS 10501: Graduate Secondary Applied Instrument I 2 s.h.
Private instruction on a student's major instrument. Designed to guide the development of each student toward the realization of his fullest potential as a performer.

MUS 10502: Graduate Secondary Applied Instrument II 2 s.h.
Private instruction on a student's major instrument. Designed to guide the development of each student toward the realization of his fullest potential as a performer.

MUS 10503: Graduate Secondary Applied Instrument III 2 s.h.
Private instruction on a student's major instrument. Designed to guide the development of each student toward the realization of his fullest potential as a performer.

MUS 10504: Graduate Secondary Applied Instrument IV 2 s.h.
Private instruction on a student's major instrument. Designed to guide the development of each student toward the realization of his fullest potential as a performer.

MUS 10505: Graduate Secondary Applied Voice I 2 s.h.
Private instruction in techniques of singing. Designed to guide the development of each student toward the realization of his fullest potential as a performer.

MUS 10506: Graduate Secondary Applied Voice II 2 s.h.
Private instruction in techniques of singing. Designed to guide the development of each student toward the realization of his fullest potential as a performer.

MUS 10507: Graduate Secondary Applied Voice III 2 s.h.
Private instruction in techniques of singing. Designed to guide the development of each student toward the realization of his fullest as a performer.

MUS 10508: Graduate Secondary Applied Voice IV 2 s.h.
Private instruction in techniques of singing. Designed to guide the development of each student toward the realization of his fullest potential as a performer.

MUS 10509: Graduate Applied Instrument I 4 s.h.
Private instruction on a student's major instrument. Designed to guide the development of each student toward the realization of his fullest performer as a performer.

MUS 10510: Graduate Applied Instrument II 4 s.h.
Private instruction on a student's major instrument. Designed to guide the development of each student toward the realization of his fullest potential as a performer.

MUS 10511: Graduate Applied Instrument III 4 s.h.
Private instruction on a student's major instrument. Designed to guide the development of each student toward the realization of his fullest potential as a performer.

MUS 10512: Graduate Applied Instrument IV 4 s.h.
Private instruction on a student's major instrument. Designed to guide the development of each student toward the realization of his fullest potential as a performer.

MUS 10513: Graduate Applied Voice I 4 s.h.
The continuation, on an advanced level, of the intensive study of vocal technique and performance begun in the undergraduate level. Successful completion requires the preparation and performance of a graduate recital of sufficiently high quality to provide access to professional auditions, doctoral programs and teaching positions in higher education.

MUS 10514: Graduate Applied Voice II 4 s.h.
The continuation, on an advanced level, of the intensive study of vocal technique and performance begun in the undergraduate level. Successful completion requires the preparation and performance of a graduate recital of sufficiently high quality to provide access to professional auditions, doctoral programs and teaching positions in higher education.

MUS 10515: Graduate Applied Voice III 4 s.h.
The continuation, on an advanced level, of the intensive study of vocal technique and performance begun in the undergraduate level. Successful completion requires the preparation and performance of a graduate recital of sufficiently high quality to provide access to professional auditions, doctoral programs and teaching positions in higher education.

MUS 10516: Graduate Applied Voice IV 4 s.h.
The continuation, on an advanced level, of the intensive study of vocal technique and performance begun in the undergraduate level. Successful completion requires the preparation and performance of a graduate recital of sufficiently high quality to provide access to professional auditions, doctoral programs and teaching positions in higher education.

MUS 10517: Graduate Applied Instrument I 6 s.h.
Private instruction on a student's major instrument. Designed to guide the development of each student toward the realization of his fullest potential as a performer.

MUS 10518: Graduate Applied Instrument II 6 s.h.
Private instruction on a student's major instrument. Designed to guide the development of each student toward the realization of his fullest potential as a performer.

MUS 10519: Graduate Applied Instrument III 6 s.h.
Private instruction on a student's major instrument. Designed to guide the development of each student toward the realization of his fullest potential as a performer.

MUS 10520: Graduate Applied Instrument IV 6 s.h.
Private instruction on a student's major instrument. Designed to guide the development of each student toward the realization of his fullest potential as a performer.

MUS 10521: Graduate Applied Voice I 6 s.h.
The continuation, on an advanced level, of the intensive study of vocal technique and performance begun in the undergraduate level. Successful completion requires the preparation and performance of a graduate recital of sufficiently high quality to provide access to professional auditions, doctoral programs and teaching positions in higher education.

MUS 10522: Graduate Applied Voice II 6 s.h.
The continuation, on an advanced level, of the intensive study of vocal technique and performance begun in the undergraduate level. Successful completion requires the preparation and performance of a graduate recital of sufficiently high quality to provide access to professional auditions, doctoral programs and teaching positions in higher education.

MUS 10523: Graduate Applied Voice III 6 s.h.
The continuation, on an advanced level, of the intensive study of vocal technique and performance begun in the undergraduate level. Successful completion requires the preparation and performance of a graduate recital of sufficiently high quality to provide access to professional auditions, doctoral programs and teaching positions in higher education.

MUS 10524: GRADUATE APPLIED VOICE IV 6 s.h.
The continuation, on an advanced level, of the intensive study of vocal technique and performance begun in the undergraduate level. Successful completion requires the preparation and performance of a graduate recital of sufficiently high quality to provide access to professional auditions, doctoral programs and teaching positions in higher education.

MUS 10525: Graduate Music Composition I 4 s.h.
The student develops his undergraduate compositional skills, completing a major work for chamber ensemble which demonstrates an ability to use contemporary compositional ideas in the organization of music.

MUS 10526: Graduate Music Composition II 4 s.h.
This course prepares the student to complete his/her major requirement in music composition: a thesis consisting of a major compositional work and a paper describing its genesis. May be re-taken.

MUS 10527: Graduate Music Composition I 6 s.h.
The student develops his undergraduate composition skills, completing a major work for chamber ensemble which demonstrates an ability to use contemporary compositional ideas in the organization of music.

MUS 10528: Graduate Music Composition II 6 s.h.
This course prepares the student to complete his/her major requirement in music composition: a thesis consisting of a major compositional work and a paper describing its genesis. May be re-taken.

MUS 10529: Graduate Conducting I 4 s.h.
Private instructing in conducting. This course in the conducting sequence, is designed to guide the development of conductors to a full realization of their technical and musical potential.

MUS 10530: Graduate Conducting II 4 s.h.
Private instructing in conducting. This course in the conducting sequence, is designed to guide the development of conductors to a full realization of their technical and musical potential.

MUS 10531: Graduate Conducting III 4 s.h.
Private instructing in conducting. This course in the conducting sequence, is designed to guide the development of conductors to a full realization of their technical and musical potential. During semester III of the conducting sequence, the student is expected to serve as Assistant Conductor of an appropriate ensemble at the discretion of the conducting faculty.

MUS 10532: Graduate Conducting IV 4 s.h.
Private instructing in conducting. This course in the conducting sequence, is designed to guide the development of conductors to a full realization of their technical and musical potential. During semester IV of the applied conducting sequence, the student is expected to serve as Assistant Conductor of an appropriate ensemble at the discretion of the conducting faculty. In addition, as a culminating activity, the student will present a full-length conducting recital.

MUS 10533: Graduate Conducting I 6 s.h.
Private instructing in conducting. This course in the conducting sequence, is designed to guide the development of conductors to a full realization of their technical and musical potential.

MUS 10534: Graduate Conducting II 6 s.h.
Private instructing in conducting. This course in the conducting sequence, is designed to guide the development of conductors to a full realization of their technical and musical potential.

MUS 10535: Graduate Conducting III 6 s.h.
Private instructing in conducting. This course in the conducting sequence, is designed to guide the development of conductors to a full realization of their technical and musical potential. During semester III of the conducting sequence, the student is expected to serve as Assistant Conductor of an appropriate ensemble at the discretion of the conducting faculty.

MUS 10536: Graduate Conducting IV 6 s.h.
Private instructing in conducting. This course in the conducting sequence, is designed to guide the development of conductors to a full realization of their technical and musical potential. During semester IV of the conducting sequence, the student is expected to serve as Assistant Conductor of an appropriate ensemble at the discretion of the conducting faculty. In addition, as a culminating activity, the student will present a full-length conducting recital.

MUS 10537: Graduate Ensemble: Concert Choir 1 s.h.

MUS 10538: Graduate Ensemble: Concert Choir 1 s.h.

MUS 10539: Graduate Ensemble: Concert Choir 1 s.h.

MUS 10540: Graduate Ensemble: Concert Choir 1 s.h.

MUS 10541: Graduate Ensemble: Jazz Band 1 s.h.

MUS 10542: Graduate Ensemble: Jazz Band 1 s.h.

MUS 10543: Graduate Ensemble: Jazz Band 1 s.h.

MUS 10544: Graduate Ensemble: Jazz Band 1 s.h.

MUS 10545: Graduate Ensemble: Lab Band 1 s.h.

MUS 10546: Graduate Ensemble: Lab Band 1 s.h.

MUS 10547: Graduate Ensemble: Lab Band 1 s.h.

MUS 10548: Graduate Ensemble: Lab Band 1 s.h.

MUS 10549: Graduate Ensemble: Orchestra 1 s.h.

MUS 10550: Graduate Ensemble: Orchestra 1 s.h.

MUS 10551: Graduate Ensemble: Orchestra 1 s.h.

MUS 10552: Graduate Ensemble: Orchestra 1 s.h.

MUS 10553: Graduate Ensemble: Wind Ensemble 1 s.h.

MUS 10554: Graduate Ensemble: Wind Ensemble 1 s.h.

MUS 10555: Graduate Ensemble: Wind Ensemble 1 s.h.

MUS 10556: Graduate Ensemble: Wind Ensemble 1 s.h.

MUS 97111: String Class-Low 1 s.h.
The fundamentals of cello and bass are studied.The fundamentals of cello and bass are studied.

MUS 97112: String Class-High 1 s.h.
Fingering and bowing patterns, tone production, tuning, methods and materials are studied for the violin and viola.

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 goup 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.

MUS 97410: Oboe Class .5 s.h.
Designed for Music Education majors, this course addresses oboe pedagogy and basic oboe performance.

MUSG 05547: Music and the Related Arts 3 s.h.
The aesthetics of music is approached from the point of view that the same forces motivate all the arts and that significant parallels exist among them. This course may not be offered annually.

MUSG 06303: Choral Literature 2 s.h.
A chronological study and analysis of small and large choral works from the early chant to the present is stressed through recordings, live performances and class participation. Conducting of choral work is a major activity of this course.

MUSG 06503: Jazz History 3 s.h.
This course presents an overview of jazz history and requires the student to prepare indepth studies of any three topics related to the history of jazz, chosen in consultation with the professor. Students must exhibit their mastery of these areas by written and oral assignments.

MUSG 06505: History and Literature of Guitar and Lute 3 s.h.
This course provides indepth study of the literature of the family of plucked instruments, especially the guitar and lute, from the Renaissance to the present day.

MUSG 06506: Art Song Literature 3 s.h.
The indepth study of the evolution and development of the art song as a genre, its development, structure, styles and composers from the 17th century to the present. Aural familiarity and stylistic recognition will be emphasized, as will the association of song composers with their works and periods.

MUSG 06509: String Instrument Literature 3 s.h.
This course explores the literature written for stringed instruments from both stylistic and technical points. Students will study and analyze the most important solo works for the bowed string instruments and will be expected to identify aurally these works and to provide written analyses of several. It is a required course for string students in the master of music program and is available also as an elective.

MUSG 06510: Keyboard Literature 3 s.h.
This course presents a broad overview of the massive literature for the keyboard from Baroque through the end of the 20th century. Students learn to listen, to analyze, and to identify the stylistic characteristics of the great composers for the piano. They will, within the course of the semester, choose several composers whose works are of particular interest to them, thoroughly catalogue their literature and analyze in depth several compositions by each. The results of this work will be presented in oral and written form.

MUSG 06511: Twentieth Century Band Literature 3 s.h.
This course will survey all levels of band repertoire, from elementary through high school, and standard college and professional band works. Students will have a knowledge of where to find musical selections for any scenario, from teaching works to standard competition pieces and public performance selections.

MUSG 06542: Opera Literature 3 s.h.
An historical survey of opera, its development and composers, from 1600 to the present. The course will emphasize the most important operas, their plots, forms and main musical numbers.

MUSG 06545: Development and Interpretation of Choral Literature 2 s.h.
Studies choral music from Gregorian chant to contemporary works. Representative works of various types studied in detail. These are drawn from various categories such as motet, madrigal, polyphonic chanson, cantata and oratorio. This course may not be offered annually.

MUSG 06546: Development and Interpretation of Symphonic Literature 3 s.h.
The evolution of instruments, the standardization of the orchestra in the classic period, the introduction of new instruments and the growth of the orchestra are studied. The principal orchestral forms such as the symphony and the concerto are studied and various types of orchestration are examined. This course may not be offered annually.

MUSG 06555: SEL TOPICS-MUSIC ED 3 s.h.

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 32329: 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 30319and SMED 33420
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 32330: 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 32331: 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 32502: Teaching of Music Theory 3 s.h.
Methods of teaching theory such as listening, reading, writing, analyzing, playing and creating are examined. The content of music theory courses and representative music theory texts are analyzed and evaluated. This course may not be offered annually.

SMED 32505: Selected Approaches in Music Education 3 s.h.
The approaches are those of: Gordon, Kodaly, Orff, Montessori, Suzuki, and Jacques-Dalcroze. The student will research each approach, and while doing an in-depth study on one approach, develop a curriculum for his or her teaching situation. This course is offered bi-annually.

SMED 32506: Guitar Pedagogy 3 s.h.
The student will be made aware of the philosophies of guitar instruction, be familiar with the two or three most widely-used method books and will have begun to develop his/her own pedagogical system. A practicum experience is included in the course.

SMED 32507: Piano Pedagogy 3 s.h.
The course will systematically present the pedagogical methods and materials readily found in the United States for teaching beginning, intermediate and early advanced students of the piano. A supervised practicum is an essential part of the course.

PHIL 09110: The Logic of Everyday Reasoning 3 s.h.
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.

PHIL 09120: Introduction to Philosophy 3 s.h.
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.

PHIL 09130: Introduction to Symbolic Logic 3 s.h.
This course provides students with a working familiarity with the principles and procedures involved in deductive logic.

PHIL 09241: Philosophy and Society - WI 3 s.h.
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 3 s.h.
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.

PHIL 09325: American Philosophy 3 s.h.
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 3 s.h.
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 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.

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 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.

ASTR 11520: SEL TOP IN SPACE SCIENCE 3 s.h.

ASTR 17520: Selected Topics in Earth and Space Science 3 s.h.
A three-part course: (A) the importance of astronomy to society, (B) the climates of the Earth and the factors controlling them, (C) forces operating within and upon the surface of Earth. This course may not be offered annually.

PHSC 01532: PHYS SCI ACTIV FOR TEACHERS 3 s.h.

PHYS 00220: Introductory Mechanics 4 s.h.
Co/Prerequisite: MATH 01130 or Math 01140
This course studies the basic principles or mechanics and is equivilant 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 gasses, 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 equivalant to most calculus based introductory electricity and megnetism courses often entitled Physics II. The course is designed to cover introductory electricity and megnetism (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 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 4 s.h.
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 00320: ELECTRICITY AND MAGNETISM I 4 s.h.
Prerequisite: 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 00330: Mathematical Physics 3 s.h.
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 4 s.h.
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 00410: Quantum Mechanics I 4 s.h.
Prerequisite: PHYS 00300
This course will serve as an introduction to quantum mechanics. Students will learn the basic concepts of quantum mechanics and how to solve simple problems using quantum mechanics. Topics selected for study include the origins of quantum mechanics, the free particle in wave mechanics, particles in one-dimensional potentials, the axiomatic formulation of quantum physics, particles in three-dimensions, spin and the Pauli exclusion principle.

PHYS 00430: Statistical Physics 3 s.h.
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 02527: Statistical Mechanics 3 s.h.
The student will consider the laws of thermo dynamics from a statistical point of view. Topics may include: ideal gases, simple thermodynamic systems, classical and quantum distribution functions, phase transitions, and other special topics. The requirements for this course include a graduate laboratory project and/or research paper. Admission to the course will be at the discretion of the graduate advisor.

PHYS 02528: Electricity and Magnetism I 4 s.h.
This course studies static fields and charges and the application of vector calculus to electricity and magnetism. Maxwell's equations are derived from basic electrostatic phenomena. Some of the immediate consequences of Maxwell's equations, such as electromagnetic waves, will also be covered. The requirements of this course include a graduate research paper or a laboratory project. Admission to the course will be at the discretion of the graduate advisor.

PHYS 02529: Electricity and Magnetism II 3 s.h.
In this course, some of the major consequences of Maxwell's equations, such as the generation and propagation of electromagnetic waves, scattering, and special relativity will be explored. A special attention will be given to the connection of electricity and magnetism with relativity. The requirements of this course include a graduate laboratory project or research paper. Admission to the course will be at the discretion of the graduate advisor.

PHYS 02530: Applied Physics Lab 4 s.h.
This course introduces modern experimental techniques commonly used in physics. Projects consist of original experimental research experiences in Solid State Physics, Laser Physics, and/or other experimental areas of current research in the department. Experimental results are correlated with existing theories. Technical writing and presentation skills are developed and evaluated.

PHYS 02541: Quantum Mechanics I 4 s.h.
This course will serve as an introduction to quantum mechanics. Students will learn the basic concepts of quantum mechanics and how to solve simple problems using quantum mechanics. Topics selected for study include the origins of quantum mechanics, the free particle in wave mechanics, particles in one-dimensional potentials, the axiomatic formulation of quantum physics, particles in three-dimensions, spin and the Pauli exclusion principle. The requirements of this course include a graduate research paper or a laboratory project.

PHYS 02542: Quantum Mechanics II 3 s.h.
This course is a continuation of Quantum Mechanics I. Students will learn more advanced concepts and problems in quantum mechanics. Topics selected for study include the formalism of quantum mechanics, particles in three-dimensions, spin and angular momentum, 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 at a higher level. The requirements of this course include a graduate research paper or a laboratory project.

PHYS 02555: Mechanics 4 s.h.
Emphasizes Newton's laws of motion, the conservation laws, kinetics and reactions, calculation of moments of inertia, periodic motion and heat. Theories and principles will be related to the motion and properties of gross bodies, and the relevance of these ideas to modern atomic physics will be pointed out. The requirements of this course include a graduate laboratory project and/or research paper. Admission to the course will be at the discretion of the graduate adviser. This course may not be offered annually.

PHYS 02599: INDEP STUDY PHYS SCI 3 s.h.

POSC 07100: Introduction to Government and Politics 3 s.h.
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.

POSC 07110: American Government 3 s.h.
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.

CMS 05381: PSYCHOLINGUISTICS 3 s.h.

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 01316: Behavioral Assessment and Measurement 3 s.h.
Prerequisites: PSY 01104 or PSY 01107
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 01424: Professional Issues in Applied Behavior Analysis 3 s.h.
Prerequisites: PSY 02310 and PSY 01316Corequisite: PSY 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 01501: IND STUDY PSYCH 3 to 6 s.h.

PSY 01564: Counseling Theory and Techniques I 3 s.h.
Prerequisite: Matriculation in the Masters Program inClinical Mental Health Counseling
This course is designed to be an overview of several major theoretical approaches to psychotherapy, including: Humanistic-Existential, Behavioral, and Cognitive-Behavioral. The course will include didactic and experiential components, and will focus on developing the skills and knowledge necessary to use techniques from these theories in a professional context.

PSY 01566: Counseling Theory and Techniques II 3 s.h.
Prerequisite: PSY 09595 and PSY 01564 withgrade of B- or above
This course is designed to be an overview of several major theoretical approaches to psychotherapy, including: Psychodynamic, Systems, Cognitive, and Interpersonal. The course will include didactic and experiential components, and will focus on developing the skills and knowledge necessary to use techniques from these theories in a professional context. In addition to these general skills, the course will also focus on the application of these techniques to specific populations of interest within the psychological community.

PSY 01570: Research Methodology and Statistics in Counseling Psychology 3 s.h.
This is a graduate level introduction to research methodology and statistics with special application of these principles to the practice of mental health counseling. Students will develop the skills necessary to critically evaluate and interpret research and statistics, thus allowing them to be excellent consumers of research as well as developing practice-relevant research projects.

PSY 01572: Research Methodology and Statistics in Counseling Psychology I: Basics 3 s.h.
Prerequisite: Matriculation in the Masters Program inClinical Mental Health Counseling
This is a graduate level introduction to research methodology and statistics with special application of these principles to the practice of mental health counseling. Students will develop the skills necessary to critically evaluate and interpret research and statistics, thus allowing them to be excellent consumers of research as well as developing practice-relevant research projects.

PSY 01574: Research Methodology and Statistics in Counseling Psychology II: Applied 3 s.h.
Prerequisite: PSY 01572 with B- or above
In this graduate level course, students will learn how to apply the skills learned in Research Methodology & Statistics in Counseling Psychology I: Basic course through all of the steps required to propose an empirical project requiring either postulating a testable hypothesis and delineating the methodology used to test the hypothesis or to apply knowledge of research methodology to the empirical evaluation of counseling interventions with a single or small number of clients.

PSY 01610: Career and Lifestyle Development 3 s.h.
Advanced students will learn the major theories of career choice and development, gaining an understanding of the complex personal, organizational, and societal factors that impact upon career choice. Students will learn to understand occupational trends and occupational classification systems, and have the opportunity to study and administer various career interest batteries. Students will gain an appreciation for the changing nature of work and career focus across the life span, including predictable career transitions and challenges. Theoretical and self assessment techniques will be utilized to help students gain an understanding of the need for balance between work and personal life, and will provide insight into the theories and choices involved in leisure activity and in stress management practices. Experiential exercises and projects will be an integral aspect of the course leading to an appreciation not only of theory but of its application.

PSY 01612: Group Counseling and Psychotherapy 3 s.h.
Prerequisite: PSY 09595 and PSY 01624 withgrade of B- or above
This course addresses fundamental issues concerning the development and dynamics of group counseling and provides the student with a background in group counseling theories and methods. Issues covered include group process components, the stages of group development and leadership styles and approaches. Methods for evaluating the effectiveness of group counseling are discussed.

PSY 01615: Professional Proseminar 1 s.h.
Prerequisites: Matriculation in the Masters Program inClinical Mental Health Counseling
This seminar is intended to serve two purposes for students in the first year of training in the MA Program in Clinical and Counseling Psychology. First, students will be provided with the ability to discuss how the skills and knowledge they have acquired during their training should be integrated to form a coherent professional identity. Second, students will have the opportunity to gain more knowledge and understanding of the profession they are being trained in and how to become an active/contributing member to that profession. Current accreditation standards in the field place a particular emphasis on students developing a solid sense of professional identity, which includes knowledge of a) the history of the profession, b) current trends in the field, c) licensing and credentialing issues, and d) areas of work and influence in the field. This course will provide the vehicle for discussing and desseminating these issues.

PSY 01616: The Counseling Profession: Ethics and Professional Identity 3 s.h.
This course is designed to enrich the student's understanding of the counseling profession and the professional identity of counselors. The student will be exposed to the professional roles, functions, goals, and objectives of the counseling profession, as well as organizations and associations of the profession. Students will study the history and development of counseling as a profession and will examine current trends in counseling. Finally, the student will explore professional ethics and standards of practice (ACA, ASGW, AMHCA, NCAD) and will become familiar with professional licensure in New Jersey and national certifications (NBCC AND CCE) and with accreditations standards for counseling (CACREP). (For Summer 2011 the course is offered as web-assisted, with some content delivered online.)

PSY 01620: Legal, Ethical, & Professional Issues in Counseling Psychology 3 s.h.
Prerequisite: Matriculation in the Masters Program inClinical Mental Health Counseling
This course covers legal and ethical issues involved in the delivery of human services and counseling. Issues addressed include ethical standards for therapists, the role of the mental health professional in the legal system, and standards of ethical practice for counselors. The student will consider the possible legal consequences of treatment decisions and approaches. This course will provide an understanding of all aspects of professional functioning including history, roles, ethics, standards and credentialing.

PSY 01623: Psychopathology I: Diagnosis and Epidemiology 3 s.h.
This course reviews the diagnostic criteria for the major categories of psychopathology included in the DSM-IV-TR. The emphasis for course is reviewing the prevalence rates and differential diagnosis for the various categories. The course reviews the concepts and skills necessary to provide a five axis diagnosis for adults and children.

PSY 01624: Psychopathology II: Conceptualization and Etiology 3 s.h.
Prerequisites: PSY 01623 with B- or above
This course reviews the diagnostic criteria for the major categories of psychopathology included in the DSM-IV-TR. The course emphasizes the etiological facators for the various diagnostic categories as well as the course and prognosis for each disorder. Current research for evidence based interventions for each of the disorders will also be reviewed.

PSY 01630: Family Systems Theory and Family Therapy 3 s.h.
This graduate level course will explore the importance of family therapy in the human service delivery system. The course will emphasize several areas. First, the course will review the major theoretical approaches to family therapy as well as the foundation concepts of general system theory. Second, the skills and techniques unique to family therapy will be reviewed. This aspect of the course will utilize role plays to demonstrate specific intervention strategies. Third, the course will review assessment tools and evaluation research of family therapy. Finally, the ethical and documentation issues involved in a family therapy will be discussed.

PSY 01650: Practicum in Counseling 1 to 9 s.h.
Prerequisite: PSY 01624 and PSY 01566 andPSY 01620
Students will be placed in human service settings where they will provide, under supervision, counseling and related services. Both on-site and Psychology Department supervisors will monitor student progress. Students will work with clients to establish goals for change, employ appropriate counseling techniques and evaluate goal attainment.

PSY 01660: Practicum in Applied Behavior Analysis I 3 s.h.
In this course students are placed in a community agency to apply their knowledge and skills in applied behavior analysis. Students will be required to meet weekly with the instructor of the course.

PSY 01661: Practicum in Applied Behavior Analysis II 3 s.h.
Prerequisites: PSY 01660
In this course students are required to complete intensive supervised fieldwork in a community agency to further develop their clinical skills in applied behavior analysis. Focus will be placed on advanced assessment, intervention, and maintenance programming, treatment integrity, consultation, and staff supervision and training. Students will be required to meet weekly with the instructor of the course.

PSY 01685: Masters Thesis in Psychology I 3 s.h.
Prerequisite: PSY 01574 with B- or above
This course requires the design of an independently executed research project. The project will be supervised by a member of the Psychology Department. The student may choose a group design, single subject ABA design or Case Study for their project. The thesis will include a literature review, design of the project and the initial implementation.

PSY 01687: Masters Thesis in Psychology II 3 s.h.
Prerequisite: PSY 01685
This course requires the completion of the independently executed research project that was initiated in Masters Thesis in Psychology I. The project will be supervised by a member of the Psychology Department. Completion of the course will include the production of a comprehensive final product that needs to be approved by the student's project supervisor.

PSY 02305: Applied Behavior Analysis 3 s.h.
Prerequisites: PSY 01100 or PSY 01104 or PSY 01107
This course deals with the principles, procedures and utility of behavior modification in normal and clinical settings.

PSY 02310: Learning and Behavior 3 s.h.
Prerequisites: PSY 01104 or PSY 01107
This course provides an overview of the experimental analysis of behavior with minor attention to other theories of learning. Topics may include classical conditioning, operant conditioning, and schedules of reinforcement.

PSY 02500: Basic Principles of Behavior 3 s.h.
This course is a graduate course in the basic principles of behavior. Course content includes the historical basis of behavior analysis, the distinction between respondent/classical and operant conditioning, and the basic principles, processes, and concepts of behavior analysis.

PSY 02510: Research Methods in Behavior Analysis 3 s.h.
Prerequisite: PSY 02500
This course provides students with the knowledge and skills to choose and implement an appropriate experimental design to evaluate the success of behavioral interventions.

PSY 02520: Assessment and Interventions for Social Skills and Relationships in Children 3 s.h.
Prerequisite: PSY 02610
This course is a graduate course in examining the development of social and emotional competence in children, the assessment of social skill deficits, and various interventions aimed at improving social skills and relationships in children and children with special needs.

PSY 02600: ABC's of Applied Behavior Analysis 3 s.h.
This course provides a graduate level introduction to the field of behavior analysis. The course will cover the history of the field,behavorial assessment,and behavorial intervention. The focus of this course is on knowledge of the field and not the application of skills.

PSY 02610: APPLIED BEHAVIOR ANALYSIS 3 s.h.

PSY 02620: Behavioral Assessment & Functional Analysis 3 s.h.
Prerequisite: PSY 02500 and PSY 02610
This course teaches students how to conduct a comprehensive assessment for behavior problems, to identify, with the client, the appropriate goals and objectives for intervention, to conduct the appropriate assessment techniques, and to select the appropriate measurement procedures to evaluate outcomes.

PSY 02660: Research Project in Applied Behavior Analysis 3 s.h.
Prerequisite: PSY 02.510
This graduate level course requires the design of an independently executed research project evaluating applied behavior analytic techniques for changing behavior. In this course students will work from foundational skills acquired in the prerequisite course in Research Methods in Behavior Analysis (PSY 02.510) and with close instructor consultation to fully design and implement an empirical single-subject research study that will culminate in a formal research paper and presentation. This is a required course for the Master's of Arts program in Applied Behavior Analysis.

PSY 02661: SP TP APPLIED BEHAV ANALYSIS 3 s.h.
Prerequisite: PSY 02500 and PSY 01610
This course is a graduate seminar course providing in-depth coverage of special topics in the practice of Applied Behavior Analysis. Course content will reflect the most current issues involving the design and implementation of behavioral interventions for specific populations and circumstances. Course topics may include but are not limited to: verbal behavior, curriculum design for children with autism, behavioral interventions for basic life skills, behavior analysis in education, behavioral interventions for children with emotional/behavioral disorders, behavior analysis of addiction, legal issues for applied behavior analysts, early intensive behavioral intervention, and large-scale behavioral intervention.

PSY 02670: Ethics in Applied Behavior Analysis 3 s.h.
Prerquisites: PSY 02610 and PSY 02620
This graduate level course is required for students in the Master's of Arts program in Applied Behavior Analysis. The purpose of this course is to ensure that students know and are able to apply the Behavior Analyst Certification Board's (BACB) Guidelines for Responsible Conduct for Behavior Analysts. In addition, students will be taught the BACB Professional Disciplinary and Ethical Standards.

PSY 02680: Advanced Practice in Applied Behavior Analysis 3 s.h.
Prerequisites: PSY 02500 and PSY 02510 andPSY 01610 and PSY 02620
This course provides in-depth hands-on demonstration and practice of a variety of behavior analytic clinical techniques. Students will demonstrate competencies in a variety of clinical skills including those involving specific behavior change procedures, broad behavior change systems and the implementation, management, and supervision of those procedures.

PSY 03518: Psychological Evaluation and Counseling Services to Combat Alcohol and Drug Abuse 3 s.h.
This course provides students with information needed to evaluate and counsel drug and/or alcohol dependent or addicted individuals and their families. Topics covered include strategies necessary for the coordination and delivery of intervention and referral services in a school setting.

PSY 03620: Cognitive-Behavioral Treatment Strategies 3 s.h.
This course is designed to be an overview of cognitive-behavioral treatment and theory. The course will include didactic and experiential components, and will focus on developing the skills and knowledge necessary to use cognitive-behavioral treatment in a professional context. In addition to these general skills, the course will also focus on the application of these techniques to specific populations of interest within the psychological community.

PSY 03624: Psychopathology of Children and Adolescents 3 s.h.
This course includes relating personality theory to psychopathology, diagnostic nomenclature in child psychopathology, review of major psychotherapeutic approaches for children, techniques for working with parents and treatment facilities away from home. This course may include field trips to appropriate agencies and as well as case preparation.

PSY 05501: Intervention Approaches in Psychology and Human Services 3 s.h.
This course provides an overview of major intervention strategies used in diverse settings to address the counseling needs of a variety of client populations. Factors affecting counselor efficacy are discussed. The course covers ethical principles and practice standards in human service intervention, as well as strategies for measuring the effectiveness of intervention approaches as applied to specific problems.

PSY 05502: Fundamentals of Drug and Alcohol Abuse and Dependency 3 s.h.
This course provides an overview of fundamental issues concerning drug and alcohol use and addition. Topics covered include psychological theories of addiction, psychopharmacology, and legal and ethical issues in the prevention and treatment of addiction. The role of social context in drug and alcohol abuse prevention and treatment is discussed.

PSY 05512: Positive Psychology 3 s.h.
Prerequisite: Graduate level standing
What is a "good life?" What personal qualities and life experiences determine happiness? Are there things we can do that increase satisfaction with life in a meaningful and consistent way? How do people overcome adversity and build hope, strength and courage? In short, what really matters? Positive Psychology is an emerging area of psychology that attempts to scientifically examine these timelines and central questions. Positive Psychology focuses on such topics as happiness, hope, contentment, gratitude, creativity, optimism, values and resilience. This class will examine contemporary theory and research in Positive Psychology, with the goal of exploring how we might build a more satisfying life for ourselves and for others, and ultimately use this knowledge to improve organizations, schools, and other institutions for a healthier community.

PSY 05610: Social and Cultural Diversity 3 s.h.
This course will review studies that provide an understanding of the issues and trends in a multicultural and diverse society and their influence on social thinking, social influence, and social relations. It will examine research dealing with the dynamics and impact of socially constructed categories. These categories include culture, ethnicity, nationality, age, gender, sexual orientation, mental and physical characteristics, education, family values, religious and spiritual values, socioeconomic status and unique characteristics of individuals, couples, families, ethnic groups, and communities. The implications of these issues for effective counseling is addressed.

PSY 05623: Social Psychology 3 s.h.
Course includes a survey of the field of social psychology with emphasis upon: basic psychological factors affecting social behavior; attitudes; language and communication, society and culture; individual in relation to social groups and organizations, group effectiveness and role behaviors. Emphasis will be placed upon major theories and concepts of social psychology and relationships to other disciplines.

PSY 05651: Interpersonal Theory and Psychotherapy 3 s.h.
This course is designed to be an overview of interpersonal psychotherapy and theory. The course will include didactic and experiential components, and will focus on developing the skills and knowledge necessary to use interpersonal techniques in a professional context. In addition to these general skills, the course will also focus on the application of these techniques to specific populations of interest within the psychological community.

PSY 05652: Advanced Seminar in Clinical Practice 3 s.h.
This advanced seminar in clinical practice is intended as a vehicle for bringing cutting edge information to current and future practitioners engaged in clinical services. The topic(s) covered in a specific section will vary depending upon focus chosen by the faculty member who is directing the class. However, the broad focus of each seminar will be on developing knowledge and skills that directly benefit the students' ability to function as a mental health professional.

PSY 06533: Tests and Measurements 3 s.h.
The use, organization and interpretation of individual and groups standardized tests are studied. Other means of evaluation, such as observations, inventories and use of cumulative records, will be included. Opportunity will be provided for examining and evaluating these various evaluation instruments and techniques.

PSY 06625: Assessment I: Psychometrics, Evaluation, & Treatment Planning 3 s.h.
Matriculation in the Masters Program in ClinicalMental Health Counseling

PSY 06626: Assessment II: Assessment of Career/Vocational Interests, Treatments, & Programs 3 s.h.
Prerequisite: PSY 06625 with B- or above
This course will introduce students to three unique applications of assessment principals within clinical and counseling contexts. Specifically, students will learn about the use of the assessment process and instruments for the purpose of career and vocational counseling. In addition, students will learn how to design and implement procedures aimed at assessing the effectiveness of their services at an individual (treatments) and organizational (programs) level. Students will also be introduced to ethical and professional issues related to assessment in these contexts, and they will be expected to demonstrate their skills as part of their classroom experience.

PSY 06631: Psychological Testing of the Preschool Child 3 s.h.
Practice in administration, analysis and evaluation of individual tests with infants and preschool children with emphasis upon such tests as the Gessell Infant Intelligent Scale, Cattell Infant Intelligence Scale, Gessell Developmental Tests, Minnesota Preschool Test and so forth. Tests will be administered under supervision with subsequent reports.

PSY 09209: Child Development 3 s.h.
The content of this course includes the physical, cognitive, perceptual, linguistic, emotional, and social development of the child. Both the stages of development within each of these domains and the biological and sociocultural mechanism underlying the development are emphasized. This course in intended for nonmajors and will not fulfill requirements of the Psychology majors. Psychology majors must take lifespan development PSY 01308 in order to fulfill the requirements of the major. This course is intended for nonmajors and will not fill requirements of the Psychology major. Psychology majors must take Lifespan Development (PSY01.308) in order to fulfill the requirements of the major.

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 09511: Child Psychology 3 s.h.
This course is designed to help professional educators and others concerned with facilitating healthful child development to become more aware of the interrelationship of children's needs, potentialities and competencies. Attention is devoted to the physical, social, mental and emotional growth of the child from conception to puberty.

PSY 09560: Lifespan Development 3 s.h.
This course focuses on the developmental processes across the lifespan. Major theoretical perspectives are presented. Attention is given to physical, cognitive, social and emotional development at each significant developmental periods.

PSY 09595: Introduction to Counseling: Development of Basic Skills 3 s.h.
This course is a graduate level introduction to the foundation skills necessary for mental health counselors. Thus, there is a minimum expectation of satisfactory understanding from certain core undergraduate areas (e.g.., Abnormal Psychology, Personality Theories) and basic experiences with people who have mental illness. This course will cover a wide variety of theoretical and applied topics including, the development of professional identity, observation skills, micro counseling skills and developing a multicultural competence. This course will also review mental status exams, the content areas of the initial intake interview, assessing for suicide and homicide risk, and conceptualizing clients. Students are expected to demonstrate these skills through the use of role plays and videotapes.

PSY 10610: Psychopharmacology and Biological Bases of Behavior 3 s.h.
This course will provide an understanding of basic neurological mechanisms and how they are effected by psychotropic medications. It includes a description of the functioning of neurotransmitters and their role in the etiology of some mental illnesses. The course will review the major classes of psychotropic medications and their use for specific psychological disorders. The integration of psychotropic medications into best practice treatment plans and case management is discussed.

PSY 22507: Development and Learning 3 s.h.
This course is an introduction to the basic theories, vocabulary and principles of developmental psychology. Special attention is focused upon the role of environmental and educational factors in development, and the application of learning theory to modify behavior. Age-appropriate behaviors expected of children and adolescents are described.

PSY 22512: Educational Psychology 3 s.h.
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.

PSY 22586: Psychology of Motivation and Learning 3 s.h.
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.

PSY 22600: Seminar I in Applied Research: School Psychology 3 s.h.
This course will concentrate on the latest developments in the field of educational psychology, emphasizing theoretical and research findings. An introduction to the field of school psychology will also be included. Students will be expected to complete a project to demonstrate scholarly and professional awareness in the field.

PSY 22601: Seminar II in Applied Research: School Psychology 3 s.h.
This course will concentrate on the latest developments in the field of educational psychology, emphasizing theoretical and research findings. An introduction to the field of school psychology will also be included. Students will be expected to complete a project to demonstrate scholarly and professional awareness in the field.

PSY 22602: Applied Research: School Psychology 1 s.h.

ADV 04330: Introduction to Advertising 3 s.h.
Prerequisites: 30 Credits Required
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.

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.

MAPR 01511: Writing Speeches 1 s.h.
Students will learn how to research the audience, how to locate information and how to write various kinds of speeches. Evaluating the effectiveness of a written speech will be covered.

MAPR 01522: PERSUASION TECHNIQUES 1 s.h.

MAPR 01524: Fundraising and Development 2 s.h.
Students will learn how fundraising and development offices are organized, what research and case studies say about fundraising and development and how to plan and evaluate campaigns.

MAPR 01528: Global Public Relations 1 s.h.
This course will show students how to recognize the characteristics of special publics such as blacks and other minorities, women, senior citizens, youth influentials and the community power structure. Featured will be communication methods and strategies of communicating effectively with these special publics.

MAPR 01530: Internal Communications in Organizations 1 s.h.
Both lateral and vertical communications will be studied in various organizations. The importance of good internal communications on effective external communications will be highlighted. Ideas, plans and methods of initiating and maintaining an effective internal communications program will be emphasized.

MAPR 01531: Media Planning and Buying 1 s.h.
Students will learn how to devise a media plan that will most effectively carry their message to the target audiences. They will gain practice identifying audiences, developing a media budget, devising a media work plan and buying media.

MAPR 01533: Crisis Public Relations 1 s.h.
Students will learn how to anticipate crises and how to plan a communications program that works during a crisis. Working with internal and external audiences before, during and after a crisis will be covered.

MAPR 01534: Small Group Communications 1 s.h.
Addressed in this course will be the definition of small group communication; why to study small group communications; and communication factors such as group size, spatial arrangement in face-to-face groups, status, rank, and power; leadership; group climate; cooperation, competition, and conflict in group climate; and communication networks.

MAPR 01535: Interpersonal Communications 1 s.h.
Considered in this course will be communication between two people. Models of communications developed by authorities in the field will show how the communications process works. Featured will be the concepts of communications such as the frame-of-reference, empathy, authenticity, interpersonal trust, and feeling content. The course will help students understand some of the communication barriers encountered in day-to-day work.

MAPR 01536: Public Relations Law and Ethics 1 s.h.
The course will acquaint students with the substance and interpretation of the "Code of Professional Standards for the Practice of Public Relations," which is the official code of the Public Relations Society of America. During the course students will become familiar with the major laws governing broadcasting, publishing and speaking. A key ingredient of the course will be the opportunity for students to develop personal ethical stances about communications and to refine their skills at judging ethically unclear situations in communications.

MAPR 01537: Contemporary Public Relations Challenges 1 s.h.
This course will mix lecture with seminar discussions on key issues of the day affecting the practice of public relations. Classic problem-solving and decision-making designs will be part of the discussion about the contemporary events. Individual, on-the-job problems from class participants will be discussed and solved in case study fashion. (Using the computer for PR purposes will be stressed.)

MAPR 01538: Legislative Liaison for Public Relations Practitioners 1 s.h.
From this course students will learn how to identify from government officials and records information that affects organizations; to work effectively with government officials at all levels, local, state and federal; to promote legislation that would be helpful to an organization; and to obtain cooperation from government officials and groups.

MAPR 01541: Understanding and Writing Grants and Proposals 1 s.h.
Students will learn where to get grants, how proposals are evaluated and how to write and present proposals.

MAPR 01544: Public Relations Planning 2 s.h.
This course will cover the classic ways to construct a public relations plan, including writing goals and objectives, establishing campaign themes, and strategies, developing PERT and GANTT charts, specifying plan details and learning how to monitor and evaluate the plan. Students will also learn how to write a proposal, how to identify the real communications problem, and how to counsel management about policy related to the success of the plan.

MAPR 01547: Techniques in Communication 3 s.h.
This course consists of five writing modules with varying credits: MAPR01.506-Newswriting, MAPR01.507-Tightening Writing and Translating from Jargon to Comfortable Language, MAPR01.509-Writing Leads That Get Attention, MAPR01.510-Writing Reports, Letters and Memos, and MAPR01.513-Feature Writing. Instruction is given in the five modules in journalistic writing and editing. Students will learn how to prepare effective news releases, to edit the way professional writers do, to gain readers' attention by writing effective leads, to write reports, memos and letters that communicate effectively, and to prepare and place feature stories for newspapers, journals and magazines. Description of individual modules is given under each respective number.

MAPR 01548: Graduate Writing Basics 1 s.h.
In todays fast-action world, you are required to write accurate, hard-hitting communication at a moments notice. This course provides proctical guidelines for students who need to write with speed, precision and power.

MAPR 01550: Introduction to Communication Research 3 s.h.
A study of the research process as it relates to the task of writing a communication thesis. Emphasis will be placed on the four standard, accepted types of research. Students will examine the unique purposes, features, procedures and uses of each research type, using the information as the basis for creating a thesis proposal.

MAPR 01551: Public Relations Overview 3 s.h.
This is an overview of the relationships between an organization and its publics. Development of understanding among them is stressed. The course presents the theoretical foundation of public relations and outlines techniques of structured communications between an organization and its publics.

MAPR 01553: Graduate Case Studies in Public Relations 1 s.h.
This course reviews and predicts how organizations solve their PR challenges. Through case studies, students evaluate issues, audiences and strategic elements of each situation. Students work through problems in seminar situations and write position papers.

MAPR 01554: Planning Special Events 1 s.h.
This course will survey the problems and solutions surrounding the staging of special events and workshops in the practice of public relations. events like ground-breaking news conferences, dignitary visits, seminars, anniversary celebrations and many more pose planning and implementation problems for the practitioner. Students will anticipate and solve these problems and have the option to make plans of their own for upcoming events. Included will be budgeting, involving the audience in planning, choosing sites, working with speakers and evaluating the event workshop.

MAPR 01555: Persuasive and Feature Writing 1 s.h.
Students will learn in this module additional technical skills in modifying opinion through writing. Students will receive a personal checklist of their persuasive writing needs during the course. In addition, students will learn how to prepare and place feature stories for newspapers, journals, and magazines.

MAPR 01556: Organizational Public Relations Management & Counseling 3 s.h.
This three credit course will acquaint students with many aspects of the public relations profession (or review for some). Students will learn about the composition of PR departments, the steps necessary to manage a public relations department and accepted methods to establish budgets in a public relations shop. Students will be expected to analyze the economic realities surrounding the practice of public relations in a variety of settings. For the first time, there will be a concentration on public relations counseling, media training and rehearsal, and media relations.

MAPR 01557: Using Electronic Media In Public Relations 2 s.h.
This course will acquaint students with the techniques of producing video for electronic media and its proper use in a public relations program within a given budget. They will become familiar with the different requirements for electronic media production. Students will also study the steps involved in applying this method: choosing appropriate film subjects and film principles, properly conducting the planning of a story and performing the right production practices.

MAPR 01558: Integrated Marketing Communication 1 s.h.
The relationship of marketing, public relations and advertising will be explored. Marketing, PR and advertising techniques-including cost-effective ways of reaching key audiences-will be discussed, as will positioning, testing and evaluating.

MAPR 01559: Strategic Public Affairs 3 s.h.
The course examines theory and practice of strategic political communications, including depth study of persuasion campaigns, use of propaganda in public affairs, and the role of communicators in engaging the public in the critical public policy issues.

MAPR 01560: Public Affairs Overview 3 s.h.
This course is an overview of the ethical and legal means used by public affairs representatives in influencing the political, legislative, and regular process of government. Emphasis is placed on demonstrating strong writing and research skills, as well as developing effective communication plans.

MAPR 01561: ADV TECHNIQUES COMMUNICATION 3 s.h.

MAPR 01562: INTEG MKT COM (IMC) ONLINE OVR 3 s.h.

MAPR 01563: RSRCH, MESSAG & AUD ONLINE ANA 3 s.h.

MAPR 01565: IMC AND NEW MEDIA 3 s.h.

MAPR 01566: Public Affairs Advertising 1 s.h.
This 5-week module will teach students the basic principles of advertising in the public area. Topics will include using advertising to set the agenda of a public policy debate; how to apply the lessons of product advertising; conditions that enhance the effectiveness of advertising; issue advertising as protected speech; the importance of a good working relationship with advertising agencies; advertising in a crisis; the role of research in advertising; and evaluating the effectiveness of public affairs advertising. The module will also convey real-world examples from practitioners to present to the student a broad understanding of public affairs advertising.

MAPR 01567: Public Affairs and Labor Communication 1 s.h.
This 5-week module concentrates on the role public affairs plays in an organization's relationships with its employees and the unions which represent them. Students will explore the relationship between management, unions and labor, and the role of public affairs in those relationships. Topics include: eommunity organizing; employee communications; building and maintaining political support; federal and state regulations regarding employee relations; media relations; the "Managerial Creed;" and the legal aspects of labor/employee communication. Students will gain thorough knowledge by learning about current cases.

MAPR 01575: INDEP STDY-PUBLIC RELATIONS .5 to 6 s.h.

MAPR 01610: Internship in Public Relations 3 to 6 s.h.
This course requires on-the-job apprenticeship in a public relations program that involves a wide variety of tasks. The internship is overseen by a public relations professional on the job and by a PR professor.

MAPR 01620: Seminar in Public Relations 3 to 6 s.h.
Each student will be required to develop a major communication project or thesis on any phase of educational or corporate communications. The project or thesis will display appropriate research procedures and skill in communications. Some seminar sessions will be used to provide additional communications background for students. Students are required to complete both the fall and spring seminars for the program. The fall semester is a prerequisite for the spring semester. The student must have completed or be enrolled in Public Relations Overview, Techniques of Communication, and Communications Research.

MAPR 06505: Special Topics in Public Relations 1 s.h.
Special topics provide an opportunity for graduate students to explore an emerging issue in the field of public relations in a timely fashion. The course presents an opportunity to study the topic under the guidance of an expert in the particular field or issue.

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.

MAPR 98503: School Public Relations 3 s.h.
This is an overview of the relationships of the school and its various publics. The public character of the school and the need for public understanding of the school are considered. Development of understanding between the school and the community is stressed.

MAPR 99523: POLLS & SURVEYS 1 s.h.

PR 06301: Basic Public Relations Writing 3 s.h.
Prerequisites: PR 06350
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 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.
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 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 03270: Film History and Appreciation I 3 s.h.
Prerequisite: COMP 01111 and COMP 01112
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 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 03295: Introduction to New Media 3 s.h.
Prerequisites: COMP 01111 and COMP 01112
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.

RTF 03393: Film Scenario Writing - WI 3 s.h.
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 10520: Graduate Audio Production 3 s.h.
Graduate Audio Production teaches the basic concepts of sound as it relates to the medium of radio, television, and film. Through coordinated reading assignments and in-class listening, students will become familiar with various styles of documentary audio production. Students will also study the historical evolution of film sound and music through lectures, viewing, and in-class discussion. Students will be expected to integrate this information into the production of professional audio documentaries and sound design for film.

RTF 10521: Graduate Documentary Production 3 s.h.
Graduate Documentary Production is a graduate course where students lacking will gain knowledge and skills to produce documentary projects. Students will explore the culture of the media professional through a series of group assignments that stress productive collaboration, objective criticism and analysis, professional ethics, and time management. Students will develop competencies in the processes and equipment of television field production, experiencing all phases of pre-production, production, and post-production as they research, write, shoot and edit creative projects.

RTF 10522: Graduate Film Production 3 s.h.
Graduate Film Production is a graduate course where students are introduced to the technological, organizational and aesthetic production competencies for shooting narrative films using color, lights and sound. Readings will emphasize cinematic visual storytelling conventions. Homework assignments will emphasize preproduction, previsualization and production coordination of short narrative films. Students will produce a series of production assignments culminating in the production of a short narrative film.

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.

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 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.

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.

BLED 40505: Issues and Innovations in Foreign Language Education 3 s.h.
This course is designed for educators responsible for planning and supervising the foreign language curriculum K-12. The course deals with the issues of sequential curriculum development in foreign languages in keeping with state and national standards. Emphasis is placed on innovations resulting from implications of research in second language acquisition, the interrelationship of language and culture and models for foreign language curriculum development. Topics include modes of communication, aspects of culture, scope and sequence of content, and curriculum evaluation.

BLED 40510: Issues of Language and Cultural Diversity in ESL/Bilingual Programs 3 s.h.
This course focuses on foundational theories and areas of research related to the field of TESOL and bilingual education. Special emphasis is placed on the forces affecting students and policies related to second language schooling in state, national and international contexts. Students will develop a reflective philosophy for educating English Language learners.

BLED 40512: Linguisitcs 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 pradigms 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, disabillity 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.

BLED 40517: Modern Developments in ESL/Bilingual Education 3 s.h.
This course examines the implications of current theoretical positions regarding second language acquisition for program development and instruction. The course deals with a range of methodologies, the selection of content, instructional techniques, the selection and use of materials, and the development of alternative assessment measures.

BLED 40520: Planning, Teaching, and Assessment in ESL Classrooms 3 s.h.
Corequisite: BLED 40523
This course concentrates on how teachers plan, teach, and assess in ESL classes. Students will create unit plans that incorporate both language and content area objectives and learn a variety of research-based instructional methods to support language acquisition and student learning.

BLED 40521: Teaching Bilingual/Bicultural Education: Process and Practice 3 s.h.
The course examines current programs and available materials in bilingual education appropriate to a range of content areas and grade levels. Microteaching and peer coaching are practiced to provide a basis for reflective teaching. The course is open to candidaes who possess or are eligible for a standard or provisional New Jersey instructional certificate. State-approved examinations in oral and written English and the target language are required for certification.

BLED 40522: Integrating Language and Content in the ESL/Bilingual Education Classroom 3 s.h.
This course examines the theory and practice of integrating language and content in K-12 ESL, bilingual and content-area classrooms. Specific focus is given to methods pertaining to implementing sheltered instruction modles, content-based ESL, students' proficiency levels, proficiency testing, and strategies for collaborating with other teachers and school leaders.

BLED 40523: Practicum in Teaching English as a Second Language 1 s.h.
Corequisite: BLED 40520
This course is offered as a co-requisite to Teaching ESL: Process and Practice (BLED 40.520). The course will consist of a field experience in teaching English as a Second Language (ESL) and an accompanying class that focuses on reflective evaluation of that field experience. Candidates currently teaching English language learners will use their own classes for the field experience. Candidates not currently teaching English language learners will be assisted in placement for the field experience.

BLED 40524: Clinical Internship in English as a Second Language 6 s.h.
Prerequisites: BLED 40510 AND BLED 40512 ANDBLED 40515 AND BLED 40520 AND BLED 40523AND BLED 40522 (40522 may be taken concurrently)
This field-based course provides the teacher education candidate with opportunities to demonstrate the subject content, professional knowledge, pedagogical skills, and dispositions that are developed in program course work. The Clinical Internship experience is a supervised, full-time activity conducted in a public elementary, middle or high school ESL classroom. Successful completion of the Internship 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. Admission to this course requires completion of all previous Teaching ESL coursework, including a minimum program grade point average of 3.0.

CURR 29515: Introduction to Planning and Teaching 4 s.h.
Students will begin their development of the skills necessary to enhance the planning, teaching, and learning processes. Students will be expected to ground their future classroom practice in a strong research base through a study of planning and teaching models and the latest literature on effective teaching.

CURR 29550: Public School Curriculum K-12 3 s.h.
A course that deals with a critical appraisal of current public school curriculum practices. Emphasis will be placed on the following aspects of the K-12 curriculum: the subject matter curriculum, the humanistic curriculum, role of subject matter specialist, the nature of the disciplines, the taxonomies of educational objectives (affective, cognitive, psychomotor). This is a basic course which is a prerequisite for any further study in curriculum. This course may not be offered annually.

CURR 29580: Fundamentals of Curriculum Development 3 s.h.
This course provides background in goals, objectives, assumptions, values, issues, and theory related to modern curriculum. Topics include learning and curriculum, the nature and structure of knowledge and curriculum design, criteria for staff, lay advisers, committees, and consultants for the purpose of curriculum planning. This is a basic course which is a prerequisite for further study in curriculum.

CURR 29590: Curriculum Evaluation 3 s.h.
Emphasis will be on identification, organization, and practical applications of selected curriculum evaluation models. This course is designed to enable a student, or a team of students, to determine what and when to evaluate, whom to evaluate, and how to evaluate. Students will be expected to demonstrate a knowledge base in curriculum theory and development. A curriculum evaluation project is required. This course may not be offered annually.

CURR 29600: Specialization Seminar and Investigation I 3 s.h.
The student must complete a special project in the field of specialization which demonstrates his ability to apply theory and research. Focuses upon applying general and specialized knowledge to the examination of proposals and research on the processes of change and innovation.

CURR 29601: Specialization Seminar and Investigation II 3 s.h.
The student must complete a special project in the field of specialization which demonstrates his ability to apply theory and research. Focuses upon applying general and specialized knowledge to the examination of proposals and research on the processes of change and innovation.

ECED 23510: Curriculum Development in Early Childhood Programs 4 s.h.
This course is focused on the content and characteristics of developmentally appropriate curriculum to support growth, development, and learning of young children. Factors that influence early childhood curriculum development, the important role of family and culture, the integration of play, literacy, and assessment are studied. Students learn to apply the recommended standards for developmentally appropriate practices and curriculum. This course also includes a field experience with visitations to early childhood classes/programs.

ECED 23511: Understanding Child Development and Behavior in the Classroom 3 s.h.
This course focuses on two main components: understanding child development and behaviors and guiding young children's behaviors in the preschool classroom. Teacher candidates will understand and apply knowledge of child development and behaviors to instruction and classroom management in preschool settings. They will learn about and experience factors influencing child development, child development theories and their implications for teaching and learning, developmental milestones and academic standards, developmentally appropriate play and play materials, approaches to guide young children's behaviors, and effective strategies of classoom management. Completing field-based assignments will be required.

ECED 23512: Understanding and Designing Curriculum for Young Children 4 s.h.
Prerequisites: ECED 23.511
This course is focused on understanding curriculum models and designing developmentally appropriate curriculum for young children, which supports their growth, development and learning. For this, teacher candidates will identify ideas, principles, and social issues influencing practice of early childhood education as well as importance of play in young children's development and learning. In addition, they will examine curriculum models widely used in the field of early childhood educaiton. Finally, candidates are prepared to develop innovative lesson plans and curriculum and take leadership roles in the field of early childhood education. Candidates will be required to develop and teach lessons in the preschool classrooms and to develop a theme-based unit plan built on the students data collected from the preschool classroom.

ECED 23513: Assessment in Early Childhood Education 3 s.h.
Prerequisites: ECED 23512
This course focuses on analyzing assessment methods in early childhood education. Candidates will examine different methods and tools of assessment, explore the concept of assessment driven instruction, and learn to develop differentiated instructional strategies based on student assessment data. They will also learn to share the data with families and other professionals in the field. In addition to assessing students, candidates will explore early childhhood program assessment tools such as teh Early Childhood Environmental Rating Scale-Revised (ECERS-R), the Classroom Assessment Scoring System (CLASS), and the Assessment of Practice in Early Elementary Classrooms (APEEC), in order to ensure comprehensive quality of the education. Conducting a case on one child in preschool level will be required for this course.

ECED 23514: Family, Community, and Professional Ethics 3 s.h.
Prerequisites: ECED 23513
This course focuses on parent-child relationships and partnerships between parents and their schools and communities. The course examines the role of the parent and the development of young children (P-3). Issues related to P-3 children will be studied along with topics such as family dynamics, curriculum, parental roles, and cultural diversity. Professional ethics will be integrated throughout this course in relation to working with young children and their families both in individual and group settings. Techniques for involving parents and families in school environments will be examined through discussion and lecture. Developing a plan for collaborating with diverse families will be required for this course.

EDST 24502: Initiation of Internship Project 1 s.h.
see EDST24.608

EDST 24565: Analysis and Application of Research 3 s.h.
Students will develop skills necessary to critically analyze and interpret educational research. Interpretation of statistics, analysis of research design, and the use of educational data bases will be components of the course. Emphasis will be on the application of educational research to actual classroom problems through a case study method as well as student-designed projects.

EDST 24602: Development of Internship Project 1 s.h.
See EDST24.608

EDST 24608: Internship Project Report 2 s.h.
Students will design and complete an individual internship project applying scientific inquiry and research methodology to an identified problem of interest in an area related to instructional practice, curriculum development and/or learning. These courses, Initiation of Internship Project (1 S.H.), Development of Internship Project (1 S.H.) and the Internship Project Report are completed during Phases II, III and IV of the Master of Science in Teaching Program.

EDTC 33510: Computers and the Curriculum 3 s.h.
The philosophical, psychological, sociological and educational implications of the computer and its impact on the public school curriculum are explored. Current relationships between theory and practice, along with future technologies, are examined.

EDTC 33580: Introduction to Educational Technology 3 s.h.
This course is intended for educators at all levels who place a high value on successful teaching and learning. The purpose of the course is to help educators incorporate media and technologies for learning into their repertoire--to use them as learning tools. The course will draw examples from elementary, secondary, and postsecondary education as well as corporate training and development. This course will provide the initial opportunities necessary to begin technology infusion in the school curriculum.

EDTC 33584: Desktop Publishing in the Educational Environment 3 s.h.
The primary objective of this course is to provide a comprehensive introduction to desktop publishing using desktop publishing programs that can be used in the educational setting. This course provides a hands-on approach to desktop publishing using both high-end and low-end publishing programs. The experiences in this course will help students to become more involved with the visual impact of their ideas on the readers. Students will learn to integrate ideas with words, typestyle, graphics and other features involved in the production of publications with a high level of visual impact.

EDTC 33585: Internet in the Classroom 3 s.h.
Prerequisites: EDTC 33.580
This course provides and introduction to the Internet emphasizing its value in teaching and learning. In this course students will discover how to use some basic Internet navigation programs to locate and gather information from the Internet. Lessons will include finding and subscribing to listserv lists in education, using ERIC online, accessing and employing web search engines., locating and downloading files, handling files with e-mail, discovering and capturing multimedia elements on the web, developing a personal web page, and analyzing the implication of the Internet for lifelong learning in education.

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 01500: Trends and Practices in Classroom Teaching 3 s.h.
Corequisites: ELEM 02511
This course focuses on emerging trends in elementary and subject matter classroom practices. Topics include standards and accountability, constructivist and experiential teaching, inclusion and differentiation, culturally responsive teaching, and collaboration with families and communities. Special emphasis is placed on the background of each trend, related issues, and implications for practice.

EDUC 01601: Clinical Internship I 5 s.h.

EDUC 01603: Clinical Seminar I 2 s.h.
Students will complete a field experience focusing on sequenced observations and supervised beginning teaching experiences in a variety of school settings. Specific competencies shall be developed in: 1) teaching and learning, 2) curriculum, 3) pupil guidance, and 4) classroom organization and management. Concurrent seminar study will focus on knowledge of the special needs of students, applications of educational technology and student assessment and evaluation.

EDUC 01605: Clinical Internship II 7 s.h.

EDUC 01607: Clinical Seminar II 1 s.h.
Students will complete a supervised semester-long teaching internship in an assigned classroom and school setting. They will research and apply general and specialized knowledge to the processes involved in full-time classroom teaching and other teacher responsibilities. Seminar study will emphasize effective teaching practices that extends their previous learning and current intern teaching.

EDUC 01610: TCHNG FOR EQUIT/ACHIEV DVRS CL 3 s.h.
This course focuses on issues and concepts in critical multicultural education and their implications for teaching and learning in diverse school settings. Students will critically examine influences on students' schooling experiences and the historic and current challenges of non-dominant students in the U.S., such as racism, discrimination, school organization, and the social and political contexts of school and society. The course will also focus on methods to build a multicultural classroom that supports equity and achievement for all students.

EDUC 01624: Educational Change 3 s.h.
Prerequisite: ELEM 02550 with a minimum grade of B
To assume leadership roles and to become change agents for their respective schools, teachers will analyze the influences, trends, social and political forces that generate and impact educational change at varying levels, i.e., at the classroom, school, community, state, and national levels. They will develop knowledge of the stages of systemic education change and strategies to achieve and sustain momentum for change. Various field work components will be integrated throughout this course.

EDUC 01700: Leadership through Professional Learning Communities 3 s.h.
This course is designed to provide Ed.D. students with the opportunity to plan and put into practice their knowledge, skills, and dispositions for providing leadership through Professional Learning Communities. This course will begin by examining the critical stages of group development in establishing Professional Learning Communities, through the lens of detailed school-based examples. Students will follow this examination by engaging in their own identification of an educational issue, and complete a subsequent PLC plan, implement the plan, document and analyze experience and report.

EDUC 02602: MST Professional Seminar 2 s.h.
Prerequisites: EDUC 01610 and SELN 42954and EDUC 01601 and either ELEM 02513 orSMED 60501. Corequisites: EDST 24504and EDUC 01605
This course provides support to MST candidates as they undergo their student teaching experience (Clinical Internship II). Candidates are required to reflect regularly on their teaching and school experiences and use these reflections as a basis for discussion in the course. Throughout the semester, they will make connections between the course readings and discussions and their professional practice. Specific course topics will include classroom management, assessment, inclusion, culturally responsive teaching, motivating students, working with families and communities, the job search, and professional development.

ELEM 02338: Practicum in Mathematics and Literacy 1 s.h.
Corequisites: ELEM 02336 and READ 30351 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 02511: Learning Community Classrooms 3 s.h.
This course focuses on identifying the characteristics of a learning community classroom, the propensities of learning community teachers, and the stages of group development in establishing a learning community. Course activities include study of personal planning, implementing, and reflecting strategies for establishing a learning community classroom.

ELEM 02512: Teaching Math, Science, and Health in Elementary Classrooms 3 s.h.
Prerequisites: ELEM 02511 and EDUC 01500Corequisites: READ 30555
This course focuses on understanding and developing inquiry-based, interdisciplinary instruction based on national and state standards in mathematics, science, and health at the elementary school level. Students will critically examine the principles of inquiry-based instruction and develop interdisciplinary lesson plans along with performance-based assessments. As a culminating project, students will develop a hands-on learning kit for the elementary classroom.

ELEM 02513: Teaching Language Arts, Social Studies and the Arts in Elementary Classrooms 3 s.h.
Prerequisites: READ 30515 and ELEM 02512Corequisites: EDUC 01601 and EDUC 01610and SELN 42954
This course examines the use of established elementary education content standards and teaching methods in social studies, the arts, and language 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, the arts, and language arts. Students also apply instructional knowledge and skills they are developing related to inquiry-based interdisciplinary instruction, assessment, and differentiating that instruction for elementary students in the co-requisite field internship.

ELEM 02539: Contemporary Curriculum Processes/Elementary Language Arts 3 s.h.
This course examines current theory and practice in the teaching of all of the language skills of the elementary school. Criteria are developed for evaluating teaching practices in terms of today's demand for improved and expanded communications skills. This course may not be offered annually.

ELEM 02540: Contemporary Curriculum Processes/Elementary Mathematics 3 s.h.
The primary purpose of this course is to examine and evaluate practices of teaching and criteria of evaluating mathematics in the elementary grades. Criteria will be obtained by studying research findings and examining the recommendations of authorities in the field. Courses of study will be evaluated using established criteria. This course may not be offered annually.

ELEM 02550: Analysis of Classroom Teacher Behavior 3 s.h.
Through a review of the literature and self-analysis, students will examine relationships between teacher personality characteristics, classroom processes, and pupil achievement. All students will have opportunities to identify variables which research reveals as significantly correlated with pupil growth. Ample opportunity will be provided for students to develop expertise in the use of a low-inference, relatively objective, and highly reliable system of analyzing classroom interaction. This course may not be offered annually.

ELEM 02552: Research on Children's Mathematical Learning 3 s.h.
This course introduces the graduate student to theories of how elementary and middle-school students learn mathematics and to current research on children's thinking and learning of mathematics. It surveys research findings on the child's understanding of mathematical concepts such as number, operations, fractions and proportions, measurement, and space. The focus of the course is how children learn mathematics, and it will enable the graduate student to see mathematics from the standpoint of the elementary and middle school child. This course will aid the teacher in discerning a child's understanding of mathematics as a basis for determining the type of mathematics instruction for which he/she is ready.

ELEM 02556: Principles of Identification and Treatment of Mathematics Deficiencies 3 s.h.
This course introduces the student to the principles of identifying, prescribing, planning and teaching for mathematics deficiencies in elementary school children. Students have the opportunity to design a diagnostic instrument and plan an individualized instructional program based upon findings. This course may not be offered annually.

ELEM 02601: Seminar in Elementary Teaching 3 s.h.
Each student is expected to conceive, conduct and report an investigation that will display sound knowledge of educational theory, appropriate research procedures and skill in communication.(ELEM02.600 offered in fall only; ELEM02.601 offered in spring only.)

FNDS 21150: History of American Education 3 s.h.
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.

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.

FNDS 21530: Foundations of Multi-Cultural Education 3 s.h.
This course is designed to focus on the key relationships between formal education as a social and cultural institution in American society and multicultural education as a response to contemporary societal needs. The course examines the areas of curriculum, pedagogy and evaluation in multicultural education as they affect and are affected by the education professional. The course requires empirical investigation and subsequent analysis through selected topics in research in Intercultural Education.

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 government 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, commerical sites, community sites, campus-based laboratories (when appropriate) and/or museums.

SECD 03350: Teaching Students of Linguistic and Cultural Diversity 1 s.h.
Corequisites: ECED 23446 and ECED 23447 or ELEM 02445 and ELEM 02448 or SECD 03435 and SECD 03436
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.

SMED 31450: Clinical Practice in Art Education 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 wil 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 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 33502: Processes & Principles of School Mathematics 3 s.h.
In this course, designed for certified teachers of secondary school mathematics, students will expand their pedagogical repertoires to include the mathematical processes of communicating,representing, making connections, problem solving, and reasoning and proving. The principles of curriculum, teaching, technology, equity,learning, and assessment will provide a framework for the study of the processes and students?current practice. These processes and principles will be studied entirely within the context of school mathematics content.

SMED 33510: Computers and the Curriculum 3 s.h.
The philosophical, psychological, sociological and educational implications of the computer and its impact on the public school curriculum are explored. Current relationships between theory and practice, along with future technologies, are examined.

SMED 33600: Problems in Mathematics Education I 3 s.h.
Investigates recent developments and relevant research in mathematics education. The student will determine a problem and investigate the problem as a project. The project must deal with a problem in mathematics, mathematics education, or computer science education. This project may be local or national in scope.

SMED 33601: Problems in Mathematics Education II 3 s.h.
Investigates recent developments and relevant research in mathematics education. The student will determine a problem and investigate the problem as a project. The project must deal with a problem in mathematics, mathematics education, or computer science education. This project may be local or national in scope.

SMED 60500: Teaching Methods I: Subject Matter 3 s.h.
Prerequisites: ELEM 02511 and EDUC 01500Corequisites: READ 30515
This course is the first of two subject-specific methods courses required for secondary candidates in the Master's of Science in Teaching program. MST Teacher candidates will learn to organize instructional materials into standards-based units and daily lessons appropriate for K-12 learners. This course focuses on learning theory, standards-based lesson and unit planning, pedagogy, classroom management, and learner diversity.

SMED 60501: Teaching Methods II: Subject Matter 3 s.h.
Prerequisites: SMED 60500 and READ 30515Corequisites: EDUC 01601 and EDUC 01610and SELN 42954
This course is the second of two subject-specific methods courses required for secondary candidates in the Master's of Science in Teaching program. Candidates will continue to learn ways to organize instructional materials into standards-based units and daily lessons approporiate for K-12 learners. In conjunction with a co-requisite Internship I experience, this course covers a range of topics necessary to building a learning community in secondary classrooms, such as learning theory, standards-based lesson and unit planning, pedagogy, classroom management, and learner diversity.

THD 07501: Introduction to Graduate Theatre Study 2 s.h.
This course examines basic tools for graduate research in theatre. Students learn to analyze, support and present written research at the level expected of a graduate student. Their writing style will be evaluated and writing exercises will be critiqued. In addition, students will review scholarly documentation and look at various approaches the writer can take to assemble a thesis proposal.

THD 07502: Studies in World Theatre History and Criticism 3 s.h.
Through the study of landmark works of drama and dramatic theory, this course investigates style, form and production methodology in selected periods of European and Asian theatre from the Classical Age to 1915. A research paper is required.

THD 07503: Studies in American Theatre History and Criticism 3 s.h.
Building on student background and interest, this course will focus on the history of theatre in America from the colonial period through America's emergence as a world theatre force (the work of O'Neill and others) to the post-modern experiments of today. Students will investigate the work of major playwrights, critics, theatre practitioners and theorists across a broad cultural and social spectrum.

THD 07505: Independent Study in Graduate Theatre and Arts Administration 1 to 3 s.h.
Prerequisite: Permission of the departmentGraduate Committee
Students will pursue research in an area of theatre study determined by the student in consultation with the adviser. The project can include examination of performance activities, historical or critical concerns or any other area of concern to the student.

THD 07507: Challenges in Design & Technical Production 3 s.h.
The activity in this course will examine specific set, costume and lighting design and technical production challenges presented by the stylistic and physical demands of a script. The student will be required to research and create practical solutions within an overall design concept.

THD 07508: Seminar in Directing: Working With the Actor 3 s.h.
This course explores techniques employed by the director working with actors during the rehearsal period. Topics include: conducting efficient rehearsals, improving physical and vocal effectiveness, guiding characterizations, stimulating emotional credibility and creating ensemble. Examination of source works on acting and directing is augmented by observation and demonstration.

THD 07509: Special Problems in Directing 3 s.h.
Utilizing research, discussion and a laboratory format, the student will explore advanced concerns of staging and style. This course will focus on topics selected from the following: specialized blocking situations; regionalisms, dialect and verse dialogue; historical production styles; non-realistic production styles; post-modern approaches to acting and directing; the role of gender in directing; the semiotics of directing. The course culminates in a final scene project.

THD 07511: Production/Performance/Arts Administration Project 3 to 6 s.h.
Prerequisite: Permission of the departmentGraduate Committee
This course enables students to use production or arts administrative work as a centerpiece for a reflective and faculty supervised research project. Students may write, design, direct, choreograph, perform or conduct practical field research in arts administration either on the Rowan campus or at a faculty approved professional arts venue. Combined with further research and writing, the project provides the student with an in-depth look at production activity in a wider context. The prospective project must be approved by and supervised by department faculty. This project may also serve as the capstone experience for the M.A.in Theatre: Arts Administration or the Graduate Certificate in Theatre.

THD 07515: Internship in the Arts 3 to 6 s.h.
Prerequisite: Permission of the departmentGraduate Committee
This course offers credit for faculty supervised, practical experience with a theatre or arts-related company, in acting, directing, design/production, management or dramaturgy. In general, 3 semester hours are given for a full semester or summer in such a setting and students must complete a comprehensive, reflective report and/or journal of their activities. The course may be repeated to a maximum of 6 S.H.. The prospective internship and duties must be approved by and supervised by department faculty in advance.

THD 07520: Thesis Research and Writing 3 to 6 s.h.
Completion of 17 s.h. in the theatre program and approval of advisor is required. This credit is earned for time spent researching and writing the master's thesis under the supervision of a faculty adviser. The student reports to the adviser on a regular basis during this period. The finished thesis must be approved by a committee composed of the adviser and two other faculty designated by the department. The 6 s.h. of credit may be taken all at one time or be divided between two terms (3 s.h. each).

THD 07525: Theory and Practice in Teaching Theatre K-12 3 s.h.
This course presents teaching/learning theory and its application in K-12 theatre education. Students will learn to design and teach theatre arts experiences, observe and evaluate teaching, and develop resources, including instructional plans for a multi-week unit, for teaching at the elementary and secondary level. Through this course, students will actively learn the knowledge and skills needed to teach an effective K-12 theatre curriculum.

THD 07530: ARTS ADMINISTRATION LEADERSHIP 3 s.h.
This course provides an overview of the administrative functions of non-profit arts organizations and explores the theories and practices behind decision-making in arts organizations today. The course will focus on analyzing concepts for managing arts organizations, including organizational plans, managing boards, fund-raising, human resources, facilities, program development, and effective evaluation.

THD 07531: Producing and the Arts 3 s.h.
This course examines the relationship between the artistic quality and the financial reality of an arts organization. Through lecture, discussion, and projects, students learn about basic accounting, short- and long-term budgeting and planning, and financial managment in relation to arts organizations.

THD 07532: Arts Planning: An Elegant Process 3 s.h.
The purpose of this course is to introduce students to the artistic process as it relates to planning. By applying the artistic process to planning as the unifying principle, students will understand how artistic behaviors inform organizations to achieve health and dynamic balance. Through lectures, written assignments and discussion students will be led through a planning process and examine professional leadership, vision, core beliefs and values, internal and external relationships, organizational format and equation, planning, assessment and adaptive processes.

THD 07533: Audience Development 3 s.h.
The purpose of this course is to provide an overview of basic arts and audience development, behavior and research. Coursework assists students in forming a comprehensive understanding of audience development, while providing frameworks for the practical application of audience development in non-profit arts organizations.

THD 07534: Education & Outreach Programs in the Arts 3 s.h.
Education programs allow arts institutions to interact with their communities in a deeply connected manner, build future audiences and provide both children and adults with a deeper appreciation for the place of the arts in their lives. This course studies the development and implementation of such programs within arts institutions ranging across the span of all the artistic disciplines.

THD 07535: Curatorial Practice in the Arts 3 s.h.
This course focuses on the dynamic field of curatorial practice in contemporary art and performance. Through the study of the changing perception of the role of the curator as one who has traditionally "cared for" objects of art, to one who innovates, mediates, critiques and produces, students will gain knowledge of how exhibitions bring works of art and performance to the public. In addition students will research the role of technology and other evolving forms of curatorial practice.

MAWR 01546: CONTEMPORARY RHETORIC 3 s.h.
This course introduces students to rhetorical theory, classical through modern. Against a backdrop of Sophistic, Greek, and Roman rhetorics and their contemporary applications, students will consider major contemporary rhetorical theories by I.A. Richards, Kenneth Burke, James Kinneavy, and others. In addition to responses to these theoretical works, students will produce a rhetorical analysis of a text or texts from their own area of interest, investigating how the application of rhetorical strategies produces particular outcomes with particular audiences.

MAWR 01549: Issues in Composition Studies 3 s.h.
Issues in Composition Studies examines the dominant theories, texts and ways of knowing that are fundamental to the discipline of composition/rhetoric. Topics include current and historical perspectives on the composing process, the formation and functions of discourse communities, writing as a social process and methods of assessment. The course will demonstrate various avenues for research and teaching in composition and rhetorical studies, will provide students with knowledge necessary to construct a theoretical model for the everyday teaching of writing and will assist students in applying and refining that model.

MAWR 01554: Core I: Theories and Techniques of Writing 3 s.h.
Core I offers an indepth examination of theories of composing, focusing on the interdisciplinary nature of writing through inquiry into rhetorical elements common to all writers, for example, genre, tone, audience, point of view, and voice. It also considers basic principles and techniques of writing, including narration, dialogue, exposition and style. Students will examine many genres of writing and compare and contrast the application of techniques to the differing genres.

MAWR 01555: Writing for Electronic Communities 3 s.h.
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.

MAWR 01556: Assessment of Writing 3 s.h.
Assessment of Writing examines the dominant methods, issues and concerns that are central to the discussion and evaluation of students' written work. Topics include current and historical perspectives on writing assessment, the use of various models of writing assessment, the political and legal issues connected to writing assessment, and the validity and reliability of assessment models. The course will introduce students to the types of assessment models used in the field of composition, will explore the effectiveness of comments on papers, and will examine how to assess errors in writing. This class will also provide students with knowledge necessary to apply a range of assessment models in the application of writing across multiple workplace situations, and will assist students in applying and refining those models to new developments in computer-assisted writing.

MAWR 01557: Writing Freelance Features 3 s.h.
Students in this graduate level writing course will learn how to develop ideas for feature-length stories (such as profiles, trend pieces and human interest pieces) and how to research and write features on a variety of topics. They will learn how to structure feature stories, including longer (8,000-plus words) stories; how to write feature leads and "nut grafs;" and how to edit their own work to prepare it for submission. Finally, they will learn how to develop and present stories and story ideas to editors at both print and digital publications and how to submit their completed work for publication.

MAWR 01558: Fiction Workshop 3 s.h.
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.

MAWR 01559: Core II: Research Methods for Writers 3 s.h.
Prerequisite: MAWR 01554
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.

MAWR 01560: Managerial Communication 3 s.h.
Managerial Communication introduces students to the theoretical and practical insights of corporate communication. The course helps students develop leadership communication skills and is designed to improve communication skills for managers, information workers, and other professional writers. Students will learn about rhetorical theories and rhetorical strategies for responding to communication situations, current forms of corporate communication, effects of technology and globalization on corporate communication, and guidelines for ethical communication. Students will prepare a variety of professional quality documents in response to real world, case-based assignments.

MAWR 01561: Seminar I 3 s.h.
Prerequisites: MAWR 01554 and MAWR 01559
Seminar I addresses the "professionalizing" aspects of writing and demystifies the publication process; students will learn how to negotiate contractual agreements, how to prepare writing for publication, how to handle publishers' copy editing tactfully, whether to use a literary agent, and the publishing differences across the writing markets (scholarly versus trade, specialized trade publications, textbooks, creative outlets, Internet publishing, and so on). In addition, the class will have a short unit on grants and funding, as many writers need external financial support for their work. Students will explore the benefits of joining writers' associations and guilds and the types of responsibilities writers take on when writing for publication. Seminar I also introduces students to the Master's Project requirement and all students are expected to complete a written prospectus and begin the preliminary stages of their Master's Project.

MAWR 01564: Information Architecture 3 s.h.
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.

MAWR 01565: Technical Writing 3 s.h.
Technical Writing introduces students to the rhetorical, ethical, and professional issues associated with technical communication. It focuses on the rhetorical principles behind standard formats and styles of technical documents. It explores topics such as, document design; ethics (including issues of product liability); editing, style, and mechanical correctness; the role of technology; and the impact of the global marketplace.

MAWR 01566: Editing the Literary Journal 3 s.h.
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.

MAWR 01571: Seminar II 3 s.h.
Prerequisite: MAWR 01561
Seminar II prepares students to complete the required Master's Project. Students will develop their projects from the prospectus created in Seminar I, select Master's Project Advisors, and write the rough drafts of the first three installments of their projects under the guidance of the Graduate Program Coordinator. Students will then work with their Advisors to revise and polish their projects to present to the faculty and students in a symposium format.

MAWR 01615: INDEPENDENT STUDY 3 s.h.

MAWR 01618: Special Topics 3 to 6 s.h.

MAWR 01620: Internet and Writing Studies 3 s.h.
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.

MAWR 01621: Visual Rhetoric and Multimodal Composition 3 s.h.
This is a theory driven seminar course with a pracitcal component. Students will read scholarly texts that introduce them to theories on multimodality, semiotics, visual rhetoric, copyright, and remix. Students will use these theories to both analyze and compose visual texts using multiple modes of communication.

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 01623: Writing Stories for Children and Young Adults 3 s.h.
Students in this course will study the rich variety of fiction and nonfiction narrative published for audiences ranging in age from juvenile to young adult. Students will learn to recognize the elements of a good story for children, to evaluate children's literature based on a knowledge of these elements, and to write stories for this audience. Students will read outstanding examples in the genre and write their own stories, working methodically from story idea through revision to completed manuscript. (Students may choose to write fiction or nonfiction and may focus on short or long form narrative.) Students will critique each other's stories in workshop sessions. Students will also study the contemporary scene in children's publishing and will learn how to submit their stories to magazine and book publishers.

MAWR 01630: Writing Difference 3 s.h.
This course contrasts writing in academic genres against a variety of other forms, such as personal, imaginative, and popular writing. Students examine perspectives on language difference from sociolinguistic, literacy, feminist and composition studies perspectives, and produce writing in hybrid, multigenre or mixed-genre styles.

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 02521: Writing and Publishing the Nonfiction Book 3 s.h.
Writing and Publishing the Nonfiction book is about the culture and commerce of publishing, as well as the process of writing a nonfiction book. Students finish a proposal for a nonfiction book by the end of this semester and submit it to a commercial publisher. They receive guidance and criticism from the instructor throughout the entire process, submitting and re-submitting the proposals and sample chapters several times during the semester. In addition, students analyze book markets, prepare detailed proposals for their book idea, and present their idea to a mock editorial board making decisions about the publishing promise of the book. During lecture, students develop a clear understanding of the symbiotic relationships among ideas, authors, agents, publishers, and the buying public.

MAWR 02522: Nonfiction Workshop 3 s.h.
The Nonfiction Workshop provides an in-depth examination of nonfiction genres, including news reporting, features, opinion, immersion journalism, biography, criticism, and social commentary and analysis. Lectures cover the methods, techniques, and ethics of nonfiction. Various nonfiction markets and market requirements are discussed. Students read model selections in various nonfiction genres and experiment with writing their own similar selections, which are discussed and critiqued. Students complete substantial published articles and/or book selections in their chosen nonfiction genres.

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.

MAWR 07500: The Essay: Art and Craft 3 s.h.
This course introduces students to the essay as genre, its evolution, and current status. Emphasis is on esthetics, craft, and technique. Students will engage in both analysis and essay writing as means toward achieving a theoretical understanding of the form.

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 cousework.

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 enrollmentallowed, 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 on line.

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 45 credits required
Emphasizing prose style, this course builds upon the skills of organization and development covered in College Composition I and II. It gives special attention to tone, diction, sentence structure, audience, and ultimately, to the evolution of a personal voice. Students write frequently, receive instructor and peer feedback, and learn to analyze and edit both professional and non-professional essays.

WA 01370: Professions in Writing Arts: Post-Graduate Options 1 s.h.
Prerequisites: WA 07200 and 30 earned hours
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.

WA 01400: Writing for the Workplace-WI 3 s.h.
Prerequisites: 75 credits required
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.

WA 01401: The Writer's Mind 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 01405: Senior Seminar: Evaluating Writing 3 s.h.
Prerequisites: COMP 01112 and WA 07200and 90 credits required
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.

WA 01409: Tutoring Writing 3 s.h.
This course provides students theory and practice in turoring 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

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 turoring 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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Administration of the University

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Shreekanth Mandayam	Associate Provost for Research
Scott Muir	Associate Provost for Library Information Services
Tyrone W. McCombs	Assistant Provost and Dean, Rowan at Camden
John Pastin	Dean, College of Performing Arts
Anthony Lowman	Dean, College of Engineering
Parviz H. Ansari	Dean, College of Science & Mathematics
Lorin Basden Arnold	Dean, College of Communication & Creative Arts
Robert Beatty	Dean, Rohrer College of Business
Monika Williams Shealey	Dean, College of Education
Horacio Sosa	Dean, College of Graduate & Continuing Education
Cindy Vitto	Dean, College of Humanities & Social Sciences
Paul Katz	Founding Dean, Cooper Medical School of Rowan University
Thomas A. Cavalieri	Dean, Rowan University School of Medicine

Executive Administration

Amico, Peter L — Deputy Emergency Management Coordinator

Angelastro, John F. — Director of Information Security

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Betts, Albert — Director of Admissions
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Blank, Kenneth J. — Vice President for Health Sciences

Blow, Dennis — Associate Bursar
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De, Arijit Campus Planning

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Turner, Vanetta — Director of Pension and Benefits

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Vanston, Patricia Davis — Associate Dean for Program and Business Development, Cooper Medical School

Veacock, Peggy — Director of Advancement/Administration
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Wheatcroft, Melissa — Associate General Counsel

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Woodruff, John — Director of Academic Success Center
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Woodside, Scott — Director for Student Health Services
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Zazzali, Robert — Vice President Employee and Labor Relations/COS
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diNovi, Kristen — Assistant Dean, College of Humanities and Social Sciences
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General Information

Campus Buildings

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 and the University Research Office.

Bole Hall
Robert D. Bole Hall is the administrative center of the University. It contains the offices of the President, Provost and University finances. 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 houses the College of Business, as well as 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 First National Bank (Camden)
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.

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.

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. The apartments are carpeted, furnished and air-conditioned. All apartment buildings are co-ed and managed as a private, garden apartment complex. Limited parking is available for residents.

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
Education 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 the Human Resources Office, the Student Health Center, Facilities Management and the offices of the vice president for Administration and Finance.

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.

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.

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.

The North Halls: Chestnut, Magnolia and Willow Halls
These buildings house 750 students. Small groups of students share a fully carpeted suite with their own entrance, living room and bath. In addition, the complex includes a laundry room.

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.

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 laboratories, classrooms, a lecture hall for 110 students, faculty offices, a large exhibit gallery, the graphics communication technology center and a darkroom

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, Music Department, and the Law and Justice Studies Department also are located in the building.

Winans Hall
Seymour Winans Hall is named for a former faculty member and was the former home to the University bookstore

Administrative Offices Telephone Numbers

Academic Affairs	256-4011
Academic Success Center	256-4259
Admissions (Undergraduate)	256-4200
Admissions (CGCE)	256-5637
Bursar	256-4150
Camden Campus	361-2900
Career Management Center	256-4456
Community Standards & Commuter Services	256-4242
Conference and Event Services	256-5446
Counseling and Psychological Service Center	256-4222
Dean, Business	256-4025
Dean, Communication & Creative Arts	256-4340
Dean, Education	256-4750
Dean, Engineering	256-5300
Dean, Performing Arts	256-4550
Dean, Graduate & Continuing Education	256-4129
Dean, Humanities & Social Sciences	256-5840
Dean, Science & Mathematics	256-4850
Development Office	256-5419
Disability Resources	256-4234
EOF/MAP	256-4080
Financial Aid	256-4250
Information Resources	256-4401
Library	256-4800
Main Switchboard	256-4000
Multicultural Affairs	256-4448
President	256-4100
Provost	256-4108
Public Safety	256-4922
Recreation Center	256-4900
Registrar	256-4350
Registration (registration assistance for CGCE undergraduate, post-bac and graduate level students)	256-5435
Residential Learning & University Housing	256-4266
Service Learning and Volunteerism	256-4595
Student Activities	256-4696
Student Center	256-4601
Student Health Center	256-4333
VP Administration and Finance	256-4125
VP for Student Life/Dean of Students	256-4283
VP University Advancement	256-4095
VP University Relations	256-4236

Directions to the Glassboro Campus

Rowan University is located in the southern New Jersey town of Glassboro, 18 miles southeast of Philadelphia. The campus is easily reached from the New Jersey Turnpike, the Atlantic City Expressway or any of the Delaware River Bridges. The Welcome Gate is located at **257 Mullica Hill Road, Glassboro, NJ 08028**. For a detailed campus map go to http://www.rowan.edu/campus_map

From the North

(Northern New Jersey, New York, etc.) Take the NJ Turnpike South to Exit 4 (73 North). In approximately 1 mile, take I-295 South. Follow I-295 to Route 42 South (Atlantic City). Exit Route 42 South onto Route 55 South. Follow Rte. 55 South to exit 50A (Glassboro-Mullica Hill). Take Route 322 East (2 miles) to the campus. After you cross the railroad tracks, make the second right into the Welcome Gate, 257 Mullica Hill Road. The guard will direct you to parking during normal business hours. If the guard is not present, call 856-256-4922 for assistance.

From Philadelphia

Take the Walt Whitman or Benjamin Franklin Bridge to I-676 South toward Atlantic City. Shortly after I676 becomes Route 42 South, exit right onto Route 55 South. Take Rte. 55 South to exit 50A (Glassboro-Mullica Hill). Take Route 322 East (2 miles) to the campus. After you cross the railroad tracks, make the second right into the Welcome Gate, 257 Mullica Hill Road. The guard will direct you to parking during normal business hours. If the guard is not present, call 856-256-4922 for assistance.

From the West

Take I95 to the Commodore Barry Bridge. Follow Route 322 East (15 miles) to the campus. After you cross the railroad tracks, make the second right into the Welcome Gate, 257 Mullica Hill Road. The guard will direct you to parking during normal business hours. If the guard is not present, call 856-256-4922 for assistance.

From Central New Jersey

Take Route 70 West to I-295 South. Follow I-295 to Route 42 South (Atlantic City). Exit Route 42 South onto Route 55 South. Follow Route 55 South to exit 50A (Glassboro-Mullica Hill). Take Route 322 East (2 miles) to the campus. After you cross the railroad tracks, make the second right into the Welcome Gate, 257 Mullica Hill Road. The guard will direct you to parking during normal business hours. If the guard is not present, call 856-256-4922 for assistance.

From the East

Take the Garden State Parkway to the Atlantic City Expressway. Take the Expressway West to Exit 38 (Williamstown). Turn left after exiting and follow Route 322 West (8 miles) to the campus. After you pass the large Rowan sign on your left, make the first left into the Welcome Gate, 257 Mullica Hill Road. The guard will direct you to parking during normal business hours. If the guard is not present, call 856-256-4922 for assistance.

From the South (Maryland, Delaware, etc.)

Take I-95 North to the Delaware Memorial Bridge. Take the New Jersey Turnpike North to Exit 2 and take Route 322 East. At the first traffic light (3 miles) turn right and then bear left (.4 miles) to stay on Rt. 322. Continue on Rt. 322 (7 miles) to the campus. After you cross the railroad tracks, make the second right into the Welcome Gate, 257 Mullica Hill Road. The guard will direct you to parking during normal business hours. If the guard is not present, call 856-256-4922 for assistance.

Directions to the Camden Campus

Rowan University at Camden is located in the University District of the City of Camden on the corner of Broadway and Cooper Streets. It can easily be reached from Route 295, the Atlantic City Expressway Route 42, I-676 or any of the Delaware River bridges.

From South Jersey

Follow Route 42 toward Walt Whitman Bridge. Take I-676 North to last exit before the Ben Franklin Bridge (exit 5B, Linden Street). At the light, turn left, at next light turn left and cross overpass. At next light (Cooper Street), turn right. Campus is at corner of Broadway and Cooper Street.

From Philadelphia

Take the Ben Franklin Bridge. Take exit for Broadway. Campus is located on the left on the corner of Broadway and Cooper Street.

From the North and South

Take the New Jersey Turnpike (North or South) to exit 4. Take 73 North to 38 West to 30 West. Route 30 becomes Admiral Wilson Blvd. As you approach Camden, remain in right lane proceeding to Ben Franklin Bridge. At the last light before the bridge, turn left and drive over the overpass. At next light (Cooper Street) turn right. Campus is at the corner of Broadway and Cooper Street.

From the West (Routes 70 & 38)

Proceed West toward Philadelphia to 30 West. Route 30 becomes Admiral Wilson Blvd. As you approach Camden remain in right lane proceeding to Ben Franklin Bridge. At the last light before the bridge, turn left and cross the overpass. At next light (Cooper Street) turn right. The campus is on the corner of Broadway and Cooper Street.

Directions to CMSRU Medical Education Building

Via NJ Route 130, Route 38 and Route 70</

From Routes 38 and 70 West, or Route 130 North/South, take Route 30 (also known as the Admiral Wilson Boulevard) west for approximately 2 miles. Take the exit for ML King Boulevard/Campbell Place on the right. Make a right at the top of the ramp onto South 11th Street. Keep left at the fork after the 2nd traffic light, continuing onto Martin Luther King Boulevard. Pass Cooper University Hospital on the left at Haddon Avenue. Make a left onto Broadway. The CMSRU Medical Education Building is one block south on Broadway on the left Public (paid) parking is available at the Camden County Improvement Authority garage adjacent to the hospital. Garage access is from Martin Luther King Boulevard (first left at the traffic light past the hospital)

Via Route 42 North and the Walt Whitman Bridge:

Follow I-676 North for several miles to exit 5A (ML King Boulevard/Campbell Place). Make a right at the bottom of the ramp onto Martin Luther King Boulevard. Pass Cooper University Hospital on the left at Haddon Avenue. Make a left onto Broadway. The CMSRU Medical Education Building is one block south on Broadway on the left. Public (paid) parking is available at the Camden County Improvement Authority garage adjacent to the hospital. Garage access is from Martin Luther King Boulevard (first left at the traffic light past the hospital)

Via the Ben Franklin Bridge:

Keep right after crossing the bridge and follow route I-676 South to the first exit (Sixth Street/Broadway). Take the second right from the exit ramp onto Broadway (just past the Camden County College garage on the left). Follow Broadway south for one-half mile. The CMSRU Medical Education Building is one block south on Broadway on the left. Public (paid) parking is available at the Camden County Improvement Authority garage adjacent to the hospital. Garage access is from Stevens Street or Benson Street (first two left turns past Martin Luther King Boulevard before the CMSRU building).

Directions to Rowan University School of Osteopathic Medicine Stratford Campus

From the North:

Take the New Jersey Turnpike to Exit 4 to Route 73 North to Route 295 South. Follow Route 295 South to Exit 29. Turn left onto access road to Route 30. At light turn left onto Route 30 East (White Horse Pike).

Follow directions from Route 30 below.

From the South:

Follow Route 295 North to Exit 29A to Route 30.

Follow directions from Route 30 below.

From Route 30:

Follow Route 30 East (and the blue hospital signs) for 3.3 miles to the traffic light at Laurel Road. Turn right onto Laurel Road. Take first left into the School of Osteopathic Medicine Complex and continue straight into Lot A for patient/visitor parking.

Mass Transit:

The PATCO High Speed Line and the Atlantic City Rail Line serve the Stratford Campus. Use the Lindenwold Station.

Directions to Graduate School of Biomedical Sciences – At Rowan University

From the North:

Take the New Jersey Turnpike to Exit 4 to Route 73 North to Route 295 South. Follow Route 295 South to Exit 29. Turn left onto access road to Route 30. At light turn left onto Route 30 East (White Horse Pike).

* Follow directions from Route 30

From the South:

* Follow Route 295 North to Exit 29A to Route 30.

* Follow directions from Route 30 below.

From Route 30:

* From Route 30 East (follow the blue hospital signs) for 3.3 miles to the traffic light at Laurel Rd. Turn right onto Laurel Rd. Take first left into the Stratford Campus Complex and continue straight into Lot A for patient/ visitor parking.

Mass Transit:

The PATCO High Speed Line and the Atlantic City Rail Line serve the Stratford Campus. Use the Lindenwold Station.

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., Yale University

Amme, Linda (1968-1990) — Assistant Professor
Special Education Services and Instuction
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

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

Bisazza, Gaetano R. (1966-2000) — Assistant Professor
Biological Sciences
B.S., LaSalle College; M.S. Villanova University

Blanken, Maurice (1957-1982) — Associate Professor
Economics and Political Science
B.A., Drew University; M.A., Columbia University

Blough, Robert (1963-1995) — Professor
Elementary Education
B.S., Juniata College; M.Ed., Temple University; Ed.D., University of Pennsylvania

Bolay, Brenda (1968-1997) — Associate Professor
Health and Exercise Science
B.A., University of Michigan; M.Ed., State University of New York, Buffalo; Ph.D., University of Maryland

Borgen, Evelyn (1965-1991) — Professor
Elementary and Early Childhood Education
B.S., Monmouth College; M.A., Glassboro State College; Ed.D., Fairleigh Dickinson Univ.

Borowec, Alexander (1956-1988) — Professor
Physical Sciences
B.S., Trenton State College; M.S., University of Pennsylvania; Ed.D., Temple University

Brent, George (1971-2003) — Professor
Elementary/Early Childhood Education
B.A., Ed.M., Boston University; Ed.D., University of Massachusetts

Breslin, Frederick (1960-1991) — Professor
Psychology
B.A., Queens College; M.A., Ph.D., New York University

Brinker, Beula (1960-1984) — Assistant Professor
Elementary Education
B.S., Glassboro State College; M.A., New York University

Britton, Pearl E. (1968-1977) — Professor
Health and Physical Education
B.S., Cortland State College; M.Ed., Ed.D., University of Buffalo

Brooks, Ellain (1965-1983) — Assistant Professor
Math and Computer Science
B.S., North Carolina State; M.A., Columbia University

Brown, Estelle (1962-1992) — Professor
Reading and Speech Correction
B.S., M.A., Glassboro State College; Ed.D., Temple University

Butcher, Ronald (1991-2009) — Executive Director
Education Institute
B.S., Western Michigan University; M.A., Eastern Michigan University; Ph.D., University of Michigan

Buzash, Gabriel (1964-1981) — Professor
Elementary Education
B.S., Slipper Rock State College; M.S., Westminster College; Ed.D. Penn State University

Byrer, Josep (1968-1995) — Assistant Professor
Technology
B.S., M.S., Indiana State University

Calliari, Carl (1968-2004) — Professor
Education
B.A., M.A., Glassboro State College; Ed.D., Temple University

Cammarota, Marie (1988-2008) — Associate Professor
Special Education Services/Instruction
B.A., M.A., Glassboro State College; Ed.D., Nova Southeastern University

Capasso, Ronald (1996-2002) — Associate Professor
B.A., M.A., Montclair State College; Ed.D., Columbia University

Cell, Howard R. (1967-2000) — Professor
Philosophy and Religion
B.S., University of Wisconsin; M.A., San Jose University; Ph.D., Temple University

Chamberlain, Mark M. (1969-2000) — President Emeritis
B.S., Franklin and Marshall College; Ph.D., University of Illinois

Chaskes, Jay 1969 — Professor
Department of Sociology and Anthropology
B.A., University of Toledo; M.A., Ph.D., Temple University

Cimprich, Jack R. (1973-1998) — Associate Professor
Computer Science
B.A., Boston College; M.S., University of Pennsylvania

Cinaglia, Marianne B. (1994-2007) — Assistant Professor
Secondary Education
B.S., Drexel University; M.A., Ph.D., University of Delaware

Clapp, Robert A. (1969-2000) — Assistant Professor
Theatre and Dance
B.A., Pennsylvania State University; M.A., Syracuse University

Clark, Carol (1977-2010) — Librarian
Library
B.A., Regis College; M.S.L.S., Syracuse University; M.Ed., University of Lowell

Cohen, Stanley (1961-1984) — Professor
Educational Administration
B.S., Rutgers University; M.Ed., Ed.D., Temple University

Collins, John (1963-1994) — Professor
Communications
B.S., West Chester State College; M.A., Penn State University; Ed.D., Temple University

Collins, John J. (1969-1999) — Professor
Educational Leadership
B.A., M.A., Glassboro State College; J.D., Rutgers University

Combs, Ethel (1967-1995) — Associate Professor
Reading and Speech Correction
B.A., Douglass College; M.A., Glassboro State College; Ph.D., Temple University

Conrad, George (1958-1979) — Professor
Art
B.S., New York University; M.A., Ed.D., Columbia University

Corison, Cynthia 1984-2009 — Associate Professor
Communication Studies
B.A., Lewis and Clark College; M.A., Ph.D., University of Oregon

Covi, Adelyne (1964-1984) — Assistant Professor
Elementary Education
B.S., Washington University; M.A., Glassboro State College

Craver, Rhys (1963-1994) — Associate Professor
Chemistry and Physics
B.S., Millersville State College; M.S., University of Delaware; Ph.D., Walden University

Creamer, Marvin C. (1948-1977) — Professor
Department of Geography and Environment
B.S., L.H.D., Glassboro State College; M.S., University of Pennsylvania; M.S., University of Wisconsin

Darrah, Gladys L. (1967-1979) — Assistant Professor
Health and Physical Education
B.S., M.S., University of Wisconsin

Davis, Donald (1969-2002) — Assistant Professor
B.S., Allen University; M.Ed., Temple University; Ed.D., Rutgers University

Dear, Edward C. (1969-2000) — Associate Professor
Health and Exercise Science
B.S., Temple University; M.A., East Stroudsburg State College; D.A., Middle Tennessee State University

Delaney, Lawrence (1964-1988) — Professor
Physical Sciences
B.S., Trenton State College; M.S., Ed.D., University of Pennsylvania

Detrick, Fred (1964-1987) — Associate Professor
Foundations of Education
B.A., M.S., Rutgers University

DiObilda, Nicholas 1972-2012 — Professor
Reading
B.S., West Chester University; M.Ed., Univ. of Delaware; Ph.D., Ohio State University

Dinsmore, Lee (1971-2002) — Professor
Chemistry and Physics
B.S., M.A., Glassboro State College

Donaghay, Robert (1963-1992) — Assistant Professor and Coordinator
Academic Advising
B.S., University of Minnesota; Ph.D., University of Texas

Donahue, Charles T. (1960-2000) — Professor
Department of English
B.A., Texas A & M University; M.A., University of Texas; Ph.D., Temple University

Doskow, Minna (1986-2002) — Professor
English and Dean
B.S., M.S., City College of N.Y.; M.A., University of Connecticut; Ph.D., University of Maryland

Douglas, Herbert (1980-2002) — Professor
B.S., Duquesne; M.S., Glassboro State College; Ph.D., University of Toledo

Duff, Elizabeth R. (1959-1984) — Professor
Psychology
B.S., Kent State Univ.; M.A., New York Univ.; Ed.D., University of Maryland

Dugan, Ruth (1964-1981) — Professor
Psychology
B.A., Washington Square College; M.A., Ph.D., New York University

Elliott, Gene V. (1963-1998) — Professor
Psychology
B.S., M.A., Michigan State University; Ph.D., University of Maryland

Emerson, Robert (1966-1992) — Assistant Professor and Assistant Director
Professional Lab Exper.
B.R.E., United Wesleyan College; M.A., Glassboro State College

Engebretson, Herschel (1969-1988) — Assistant Professor
Communications
B.A., Taylor University; M.A., University of Pennsylvania

Enslin, William L. (1974-2000) — Associate Professor
Management and MIS
B.E., University of Pennsylvania; Ed.D., Rutgers University

Falzetta, John (1969-1988) — Professor
Secondary Education
B.A., LaSalle College; M.A., Niagara University; Ed.D., Temple University

Fanslau, Martha C. (1971-1980) — Librarian and Instructor
Library
B.A., University of Pennsylvania; M.A., Glassboro State College

Foster, Bruce (1970-2005) — Professor
Reading
B.A., Trenton State College; M.S.Ed., Bucknell Univ.; Ed.D., Florida State University

Fox, John (1964-1990) — Assistant Professor
Health and Physical Education
B.A.P.E., M.S.P.E., West Virginia University

Frankl, Razelle (1983-2000) — Professor
Management and MIS
B.A., Temple University; M.B.A., Drexel University; M.A., Ph.D., Bryn Mawr College

Friebis, George (1969-1993) — Director
Educational Media
B.S., M.Ed., Temple University; M.A., Glassboro State College; Ed.D., Nova University

Frisone, John (1973-2002) — Associate Professor
Psychology
B.A., Queens College; Ph.D., City University of New York

Fulginiti, Anthony (1976-2009) — Professor
Public Relations and Advertising
B.A., Laurel Hill College; M.A., Villanova University; M.A., Glassboro State College; APR Fellow PRSA

Gallinelli, John (1969-2009) — Professor
Art
B.Ed., Keene State College; Ph.D., University of Maryland

Gardiner, Dickinson (1967-1991) — Professor
Secondary Educartion and Educational Foundations
B.A., Western Maryland College; M.Ed., Ed.D., Temple University

Garrabrant, William (1973-2003) — Head of Circulation
Interlibrary Loan and Science Librarian
B.A., Hamilton College; M.S.Ed.,M.S.L.S., Syracuse University

Garrahan, John (1965-1982) — Associate Professor
Special Education
B.A., City College of New York; M.S., Ed.D., University of Pennsylvania

Gates, Rodney E. (1968-2000) — Assistant Professor
Art
B.S., Univ. of Maryland; M.A., Glassboro State College

Gaynor, William (1965-1987) — Assistant Professor and Librarian
Library
B.A., Georgetown University; M.A., Fairfield University; M.S., Villanova University

Gephardt, Donald L. (1990-2009) — Professor
Music
B.M.E., Drake University; B.S., M.S., The Juilliard School; Ed.D., Washington University

Gillespie, John (1972-1992) — Associate Professor
Communications
B.S., M.A., Glassboro State College

Glassberg, Rose (1964-1991) — Professor
Secondary Education and Educational Foundations
B.S., West Chester State College; M.A., Middlebury College; Ph.D., Temple University

Goldberg, Leon (1968-1988) — Associate Professor
Physical Science
B.S., City College of New York; M.S., New York University

Goodfellow, Frank (1965-1999) — Associate Professor
Secondary Education
B.A., College of Wooster; M.S.L.S., Drexel Institute of Technology

Grace, James H. (1969-2000) — Professor
Philosophy and Religion
B.A., M.Th., Drew University; M.A., Ph.D., Temple University

Grazian, Frank (1968-1991) — Associate Professor
Communications
B.A., Rutgers University; M.S., Columbia University

Green, Charles H. (1962-1993) — Professor
Life Sciences
B.S., Penn State University; M.S., University of Delaware; Ph.D., Purdue University

Grupenhoff, Richard (1981-2009) — Professor
Radio, Television, and Film
B.A., Xavier University; M.A., Purdue University; Ph.D., Ohio State University

Guerard, Michael P. (1971-1995) — Associate Professor
Technology
B.S., M.Ed., Ph.D., Texas A & M University

Gundaker, Isabelle (1983-2003) — Instructor
Composition and Rhetoric
B.A., Chestnut Hill College; M.A., Rutgers

Gurst, Lawrence (1966-1993) — Assistant Professor
Elementary Education
MA.A., M.Ed., Temple University

Haba, James (1972-2003) — Associate Professor
Department of English
B.A., Reed College; Ph.D., Cornell University

Hamlet, Carolyn (1984-2012) — Assistant Professor
Special Education Services and Instruction
B.S., University of Tennessee; M.Ed., Memphis State University; Ph.D., Temple University

Haynes, Robert (1960-1991) — Professor
Art
B.F.A., Colorado State College; M.A., Ed.D., Columbia University

Henderycksen, M. Huguette (1969-1991) — Associate Professor
Department of Foreign Languages and Literatures
Licence, Aix en Provence University; B.S., Shippensburg State College; M.Ed., Temple University; M.A., University of Pennsylvania; Ph.D., Rutgers University

Hewsen, Robert H. (1967-1999) — Professor
Department of History
B.A., University of Maryland; M.S., Catholic University; Ph.D., Georgetown University

Hitchner, Benjamin G. (1964-1998) — Assistant Professor
Economics and Political Science
B.S., Temple University; M.S., University of Pennsylvania

Humbert, John J. (1969-1995) — Professor
Technology
B.S., University of Maryland; M.Ed., Pennsylvania State University; Ed.D. Texas A&M University

Husain, Syed (1960-1994) — Professor
Biological Sciences
I.Sc., City Science College, Hyderabad; B.Sc., College of Agriculture, Osmania University,Hyderabad, India; M.S., Oklahoma State University; Ph.D., Cornell University

Jaeger, Peter (1966-1981) — Associate Professor
Communications
B.A., Mexico City College; M.Ed., University of Houston

Jam, Habib O. E. (1979-2013) — Associate Professor
Economics and Political Science
B.A. 1965 Texas Tech. University Economics;M.A. 1967 Texas Tech. University, Economics;Ph.D. 1975 Southern Illinois University, Economics

James, Herman (1982-2007) — President Emeritis
B.S., Tuskegee Institute; M.A., St. John's University; Ph.D., University of Pittsburgh

Jeffrey, Linda (1973-2002) — Professor
B.A., University of Nebraska; M.A., Teacher's College Columbia University; M.A., University of Chicago; Ph.D., Rutgers University

Jensen, Ivar I. (1959-1981) — Professor
Foundations of Education
B.Ed., Univ. of Connecticut; M.A., Middlebury College; Ed.D., Columbia University

Johnson, Richard J. (1971-2000) — Associate Professor
Political Science
B.A., M.A., Cert. of Russian Institute; Ph.D., Columbia University

Johnson, Theodore B. (1990-1999) — Associate Professor
Educational Leadership
B.S., M.A., Temple University; Ed.D., Rutgers University

Johnson, Christine (1989-2002) — Professor
B.A., M.A., University of Wisconsin; Ed.D., Rutgers University

Jones, John (1968-1990) — Assistant Professor
Department of Foreign Languages and Literatures
B.A., M.A., University of Alabama; Diplome, Institut de Touraine, Tours, France

Kapel, David (1988-2002) — Professor
Secondary Education and Foundations
B.S., M.Ed., Ed.D., Temple University

Kardas, William (1968-2000) — Head Reference Librarian
Library
B.S., M.L.S., Villanova University

Keller, Horace (1960-1986) — Professor
Psychology
B.S., West Chester University; M.Ed., Ed.D., Temple University

Kelly, Michael F. (1961-1998) — Professor
Theatre and Dance
B.A., Elmhurst College; M.A., Ph.D., State University of Iowa

Kershner, E. Theodore (1968-1998) — Assistant Professor
Health and Exercise Science
B.S., Ursinus College, M.Ed., Temple University

Kirner, Clara (1971-1994) — Librarian
Library
B.A., Rutgers University; M.A., Drexel University

Klanderman, John (1986-2005) — Professor
Special Education
B.A., Calvin College; M.A., Ph.D., Michigan State University

Kress, Lee 1973-2011 — Associate Professor
Department of History
B.A., Johns Hopkins University; M.A., Ph.D., Columbia University

Kushner, William (1970-1999) — Professor
Communication Studies
B.A., Montclair State College; M.A., Temple University; Ph.D., Indiana University

Leder, George (1972-2000) — Assistant Professor
B.S., Brooklyn College; Ph.D., Rutgers University

Lee, Elaine (1967-1994) — Associate Professor
Elementary/Early Childhood Education
B.S., M.A., Trenton State College; Ed.D., Temple University

Leshay, Steven V. (1978-1999) Associate Professor
Marketing
B.A., Lenoir Rhyne College; M.A., Glassboro State College; Ph.D., Temple University

Libro, Antoinette (1968-2002) Dean and Professor
Communication
B.A., Glassboro State College; Ph.D., New York University

Lint, Jerry N. (1964-1998) Assistant Professor
Department of Geography and Environment
B.S., Clarion State College; M.Ed., Pennsylvania State University

Lisa, Anthony (1978-2000) Athletics Assistant Director
Athletics Department
B.A., M.S., Glassboro State College

Loigman, Barry M. (1970-1999) Associate Professor
Psychology
B.A., M.A.,Temple University; Ph.D., Rutgers University

Longacre, David (1961-1989) Assistant Registrar
Education
B.A., Gettysburg College; M.S., University of Pennsylvania

Lynch, Robert D. (1973-1999) Professor
Management and MIS
B.S., M.S., Ph.D., Carnegie-Mellon University; SPHR

Markowitz, Diane 1993-2011 Associate Professor
Department of Sociology and Anthropology
B.A., Tufts University; D.M.D., Tufts University School of Dental Medicine; Ph.D., University of Pennsylvania

Martin, Doris (1976-1987) Assistant Professor
Home Economics
B.S., Penn State University; M.S., Cornell University; Ed.D., Temple University

Martin, Marilyn (1995-2004) Dean
Library Services
B.A., M.L.S., University of Washington; M.A., University of Arkansas; Ph.D., Texas Woman's University

Martínez-Yanes, Francisco (1966-2008) Professor
Department of Foreign Languages and Literatures
M.A., University of Rome, Italy; Diplôme, Alliance Française, Paris, France; Ph.D., University of Pennsylvania

Masat, Francis E. (1972-1998) Professor
Mathematics
B.A., Blackburn College; M.S., Kansas State University; Ph.D., University of Nebraska

McConnell, Helen (1965-1995) Professor
Home Economics
B.S., State University College, Oneconta, NY; M.A., Columbia University; Ph.D., Michigan State University

McCrann, Virginia E. (1968-1985) Assistant Professor
Home Economics
B.A., M.Ed., Rutgers University

McHenry, Sandra L. 1993-2000 Associate Professor
R.N., Helene Fuld School of Nursing; B.A., Rowan College of NJ; M.S., University of Delaware; D.N.Sc., Widener University

McKenzie, James J. (1954-1980) Professor
Department of English
B.A., Canisius College; M.A., Ph.D., Harvard University

McLean, Desmond (1966-2002) Associate Professor
Art
B.A., Newark State College; M.A., Hunter College

McMeniman, Linda 1986-2000 — Associate Professor
B.A., New York University; M.A., Ph.D., University of Berkeley

Meagher, Richard (1969 -2008) — Professor
Biological Sciences
B.S., M.S., Fairleigh Dickinson University; Ph.D., St. Bonaventure University

Mercier, J. Denis (1967-2002) — Professor
Communication
B.A., Marian College; M.A., Niagara University; Ph.D., University of Pennsylvania

Meyers, Dorothy (1967-1985) — Assistant Professor and Librarian
Library
B.A., State University of Iowa; M.L.S., Rutgers University

Mical, Agnes (1968-1996) — Assistant Professor
Health and Exercise Science
B.S., M.S., West Chester University

Michaelson, James (1967-1991) — Assistant Professor
Secondary Education and Education Foundations
B.S., M.A., Temple University

Micklus, Samuel C. (1968-1991) — Professor
Technology
B.S., Philadelphia College of Art; M.A., Trenton State College; Ed.D., New York University

Miller, Allen 1976-2000 — Chief Engineer, WGLS, College of Communication
College of Communication
B.S., M.S., SUNY-Oswego

Mitchell, Robert D. (1965-1997) — Associate Professor
Mathematics
B.S., M.A., University of Texas

Mohammad, Rashiduzzaman (1973-2013) — Associate Professor
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

Monahan, Thomas (1984-2009) — Professor
Educational Leadership
B.A., LeMoyne College; Ed.M., Ed.D., Rutgers University

Monroe, Gerald (1968-1986) — Associate Professor
Art
B.S., M.A., Ed.D., New York University

Moore, Elizabeth (1972-2002) — Professor
Biological Sciences
B.Sc., Rollins College; M.S., Ph.D., Cornell University

Moore, Oscar (1971-2003) — Assistant Professor
Health and Exercise Science
B.S., M.S., Southern Illinois University

Morford, Ida B (1956-1981) — Professor
Psychology
B.S., Geneseo State College; M.A., Ph.D., Ohio State University

Mosto, Patricia (1993-2009) — Professor
Biological Sciences
National Teacher Certification, Teachers College N6; 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

Moyer, Mel (1967-2000) — Associate Professor
Psychology
B.A., Glassboro State College; M.Ed., Temple University; Ed.D., Rutgers University

Murashima, Kumiko (1971-2007) — Associate Professor
Art
B.F.A., Women's College of Fine Arts, Japan; M.F.A., Indiana University

Myers, John (1973-2011) — Professor
Department of Sociology
B.S., Drexel University; M.A., Ph.D., Fordham University

Neff, George (1962-2000) — Professor
Art
B.S., Kutztown University; M.A., Columbia University; Ed.D., Pennsylvania State University

Newland, Robert — Professor Emerti
Department of Chemistry & Biochemistry
B.A., Kalamazoo College; Ph.D., Wayne State University

Nichols, Lola (1960-1986) — Assistant Professor
Elementary Education
B.S., Trenton State College; M.A., Columbia University; M.A., Glassboro State College

Ognibene, Gerald (1972-2008) — Professor
Special Education
B.A., Niagara University; M.S., Canisius College; Ph.D., Ohio State University

Okorodudu, Corann (1968-2011) — Professor
Psychology
B.A., Cuttington College, Liberia,; M.Ed., Ph.D., Harvard University

Orlando, Frank J. (1972-2008) — Associate Professor
Foundations of Education
B.S., M.S., SUNY-Buffalo; Ed.D., West Virginia University

Pagell, Francesca Louise (1998-2012) — Assistant Professor
Department of Health and Exercise Science
B.A., M.Ed., Ed.D., Temple University

Palladino, Mary Anne (1964-1994) — Professor
Communications
B.A., Immaculata College; M.A., Villanova University

Patrick, Barbara 1991-2010 — Associate Professor
Department of English
B.A., M.A., Ph.D., University of North Carolina at Chapel Hill

Perry, Wilhelmina E. (1968-1997) — Professor
Sociology
B.A., Tilotson College; M.A., Howard University; Ph.D., University of Texas

Pickett, Ethel (1968-1987) — Assistant Professor
Home Economics
B.S., University of Delaware; M.Ed., University of Maryland

Pike, Frank (1964-1987) — Assistant Professor
Department of English
B.A., Suffolk University; M.A., Boston College; M.Ed., State College at Boston

Pittard, Norma (1968-1987) — Assistant Professor
Art
B.A., Adelphi University; M.A., Columbia University; Ph.D., University of Maryland

Porterfield, Richard (1961-1998) — Associate Professor
Department of History
B.A., Johns Hopkins University; M.A., University of Pennsylvania; Ph.D., Temple University

Prieto, Andrew (1971-2008) — Professor
Biological Sciences
B.A., Rutgers University; M.S., New Mexico State University; Ph.D., University of Missouri

Pritchard, Robert 1971-2011
Department of Accounting and Finance
B.S., M.B.A., Drexel University, M.A., Ed.D., University of Pennsylvani

Pujals, Enrique J. (1969-2000) Professor
Department of Foreign Languages and Literatures
B.A., M.A., Indiana State University; Ph.D., Rutgers University

Putman, Mary Lee 1971-2011 Associate Professor
Department of Health and Exercise Science
B.S., SUNY College at Cortland; M.A., University of Maryland; Ph.D., Temple University

Putman, Mary Lee (1971-2008) Associate Professor
Health and Exercise Science
B.S., SUNY College at Cortland; M.A., University of Maryland; Ph.D., Temple University

Reeves, Edwin C. (1968-1996) Assistant Professor
Reading
B.A., M.A., Glassboro State College

Reinfeld, George (1956-2002) Professor
Communication
B.A., M.A., Montclair State College

Resnik, Benjamin (1965-1991) Assistant Professor
Communications
B.A., M.A., Glassboro State College

Richardson, Herbert A. (1966-1998) Assistant Professor
Department of History
B.M., M.M., Yale University; M.A., Ph.D., University of Pennsylvania.

Robinette, Joseph (1981-2005) Professor
Theatre and Dance
B.A., Carson-Newman College; M.A., Ph.D., Southern Illinois University

Robinson, Randall 1965-2000 Associate Professor
B.S., Ohio State University; M.S., University of Pennsylvania; Ed.D., Temple University

Rosenberg, Jerome J. (1973-2008) Associate Professor
Special Education
B.A., Oswego State Teachers College; M.A., Columbia University; Ed.D., Temple University; Ph.D., Heed University, West

Rowand, Edith T. (1966-2000) Assistant Professor
Health and Exercise Science
B.S., The King's College; M.S., West Chester State College

Sakiey, Elizabeth (1974-2000) Professor
Reading
B.S., Eastern Michigan University; M.Ed., Ed.D., Rutgers University

Schreiber, Elliott (1967-1995) Associate Professor
Psychology
B.A., Upsala College; M.A., Bradley University; Ed.D., West Virginia University

Schultz, Charles 1972-2000 Professor
B.S., University of Michigan; M.S., Ohio State University; Ph.D., University of Michigan

Schwarz, Charles (1967-1999) Assistant Professor
Mathematics
B.A., St. John's University; M.S., Fordham University; M.S., Adelphi University; Ed.D., Rutgers University

Scott, Joanne (1989-2009) Associate Professor
Biological Sciences
B.S., M.S., Bucknell University; M.A., Lehigh University; Ph.D., University of Texas, Medical Branch at Galveston

Scott, Richard 1972 Professor
Department of Geography and Environment
B.A., University of Cincinnati; M.A., Ph.D., Syracuse University

Serfustini, Leonard 1971-1986 — Professor
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) — Professor
Life Sciences
B.S., Central Missouri State College; M.Ed., University of Missouri; Ed.D., Columbia University

Shontz, Marilyn L. (1999-2009) — Associate Professor
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) — Demonstration Teacher
Early Childhood Education
B.S., M.S., Glassboro State College

Simpson, Eugene (1975-2000) — Professor
Music
B.M., Howard University; B.M., M.M., Yale University; Ed.D., Columbia University

Sizemore, Warner (1966-1987) — Assistant Professor
Philiosophy and Religion
B.A., East Tennessee State; M.A., Bob Jones University; M.A., Temple University; B.D., Lincoln University Theological Seminary

Smith, Steward (1968-1983) — Assistant Professor
Elementary Education
B.A., Rutgers University; M.Ed., Temple University

Sorrentino, Carmela 1965-2009 — Assistant Professor
Teacher Education (Early Childhood, Elementary Education, Subject Matter)
B.S., West Chester State College; M.Ed., Temple University

Spear, Miriam (1967-1983) — Assistant Professor
Secondary Education
B.A., M.S., Glassboro State College

Stanley, Daniel (1966-1991) — Professor
Health and Physical Education
B.Ed., University of Buffalo; M.Ed., State University of New York; Ed.D., Temple University

Stansfield, Charles 1966-2007 — Professor
Department of Geography and Environment
B.S., West Chester University; M.S., Pennsylvania State University; Ph.D., University of Pittsburgh

Stevens, Kathleen (1972-1998) — Associate Professor
Communication
B.A., Georgian Court College; M.A., Glassboro State College (Rowan)

Stone, Don C. (1968-2000) — Associate Professor
Computer Science
E. Eng. Phys., Cornell University; M.S.E., Ph.D., University of Pennsylvania

Sullivan, Jane E. (1972-1999) — Professor
Reading
B.S., Seton Hall University; M.S., Ed.D., State University of New York, Albany

Taney, Mary C. (1967-1991) — Professor
Department of History
B.A., College of Saint Teresa; M.A., Ph.D., Catholic University; Litt.D., Universita Cattolica del Sacro Cuore, Milan, Italy

Tannenbaum, Margaret D. (1971-2000) — Professor
Secondary Education
B.A., Bryan College; M.Ed., Ed.D., Temple University

Tannenbaum, Theodore (1973-1998) — Professor
Sociology
B.A., M.A., Brooklyn College; Ph.D., Purdue University

Taylor, Albert (1964-1987) — Professor
Foundations of Education
B.S., Trenton State College; M.Ed., Ed.D., Rutgers University

Tener, Morton (1968-2008) — Professor
Secondary Education
B.S., Rider College; M.S., University of Pennsylvania; M.S., Ed.D., Temple University

Thyhsen, John (1969-2000) — Professor
Music
B.M., M.M., Eastman School of Music

Tishler, Joseph (1964-2000) — Professor
Art
Cresson Scholar, Pennsylvania Academy of Fine Arts; B.F.A., M.F.A., University of Pennsylvania; D.A., Carnegie-Mellon University

Tomei, Mario (1964-1995) — Professor
Educational Administration
B.A., Montclair State College; M.S., University of Pennsylvania; Ed.D., Temple University

Tracey, James H. (1994-2000) — Dean/Professor
College of Engineering
B.S.E.E., M.S., Ph.D., Iowa State University

Travis, William (1971-2007) — Professor
Art
B.F.A., Philadelphia College of Art; M.F.A., Tyler School of Art

Tsuji, Thomas (1969-1995) — Professor
Technology
B.S., M.S., Stoudt State College; Ph.D., Michigan State University

Vivarelli, Thomas (1967-2004) — Assistant Professor
Special Education
B.A., Trenton State College; M.A., Glassboro State College

Vogal, Hal (1984-2005) — Professor
Public Relations and Advertising
B.A., Temple University; M.A., William Paterson College; Ph.D., Antioch University; APR

Wackar, Richard (1956-1988) — Professor
Health and Physical Education
B.S., M.A., Rutgers University

Wade, Thomas 1976-2009 — Assistant Professor
Music
B.M., Oberlin College; M.M., University of Connecticut

Ward, Hugh J. (1959-1976) — Associate Professor
Foundations of Education
B.S., M.A., Glassboro State College

Waring, Joseph C. (1966-1991) — Associate Professor
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) — Associate Professor
Teacher Education (Early Childhood, Elementary Education, Subject Matter)
B.A., Brooklyn College; M.Ed., Ed.D., Temple University

Wasserman, Burton (1960-2003) — Professor
Art
B.A., Brooklyn College; M.A., Ed.D., Columbia University

Weatherford, Bernadyne (1987-2012) — Associate Professor
Economics and Political Science
B.A., M.A., Texas Tech University; Ph.D., University of New Mexico

Weiss, Leigh 1968-2011 — Associate Professor
Computer Science
B.S., M.S., Buffalo State University

Welsh, Charles (1973-1992) — Professor
Marketing
B.S., Villanova University; M.B.A., Ph.D., University of Pennsylvania

Westcott, Patrict (2003-2013) — Associate Professor
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 Columiba University

Whitcraft, John (1963-1987) — Professor
Philosophy and Religion
B.A., Asbury College; M.A., Temple University; B.D., Asbury Seminary; S.T.M., Boston University

White, Edward H. (1973-2000) — Professor
Educational Leadership
B.A., Keene State College; M.S., Indiana State University; Ph.D., University of Maryland

Williams, Leonard J. (1990-2009) — Associate Professor
Psychology
B.A., University of Delaware; M.A., McMaster University, Hamilton, Ont.; Ph.D., University of South Carolina

Winand, Lois (1971-1991) — Assistant Professor
Home Economics
B.S., M.S., Drexel University; Ed.D., Pennsylvania State University

Wolfe, Edward (1959-1994) — Professor
Department of English
B.A., M.A., Ph.D., University of Pennsylvania

Wood, A. Tage (1968-1987) — Associate Professor
Speech, Theatre, and Dance
B.S., East Stroudsburg State College; M.Ed., University of South Dakota

Woods, Wellington (1967-1998) — Associate Professor
Chemistry and Physics
B.S., Glassboro State College; M.Ed., Rutgers University; Ph.D., Walden University

Wriggins, Thomas (1967-1992) — Assistant Professor and Director of Support Services
Education
B.A., Glassboro State College; M.Ed., Temple University

Young, Walter Byron (1972-1997) — Professor
Art
B.A., M.A., Glassboro State College; Ed.D., Pennsylvania State University

Zahn, Richard (1960-1987) — Professor
Foundations of Education
B.S., West Chester State College; M.Ed., Ed.D., Temple University

Zalusky, Donald (1966-1991) — Associate Professor
Physical Sciences
B.S., M.A., University of Missouri; Ph.D., University of Delaware

Zimmerman, Donald (1961-1992) — Professor
Elementary and Early Childhood Education
B.S., M.A., State University of New York, Buffalo; Ed.D., Temple University

Zimolzak, Chester 1974-2007 — Associate Professor
Department of Geography and Environment
B.A., Pennsylvania State University; M.A., University of Wisconsin

Accreditations

Middle States Commission on Higher Education
ABET
American Chemical Society
Association to Advance Collegiate Schools of Business
Commission on Accreditation of Allied Health Education Programs
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
American Association of Colleges of Nursing
Public Relations Society of America

Memberships

American Council on Education
American Association of State Colleges and Universities
American Association for Adult Continuing Education
American Association for Engineering Education
AACSB: The International Association for Management Education
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
American Association of Colleges for Teacher Education
New Jersey Association of Colleges for Teacher Education

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