



# Undergraduate Catalog

2007  
2008



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# Rowan University

## Undergraduate Catalog 2007-2008

### Introduction

#### Rowan University In Brief

##### Type

Comprehensive, coeducational, non-sectarian, state-supported, founded in 1923

##### Colleges

Business, Communication, Education, Engineering, Fine and Performing Arts, Liberal Arts and Sciences, Professional and Continuing Education

##### Degrees

Bachelor of Arts, Bachelor of Fine Arts, Bachelor of Music, Bachelor of Science, Master of Arts, Master of Business Administration, Master of Music, Master of Science, Master of Science in Teaching, Educational Specialist, and Doctor of Education

##### Campuses

Glassboro, NJ—Main (approximately 20 miles southeast of Philadelphia, PA) Camden, NJ—Branch

##### Size

Approximately 7,318 full-time and 2,370 part time students; approximately 611 full-time equivalent (FTE) faculty

#### Average Costs (2006-2007)\*

<b>Tuition &amp; Fees</b>	<b>Room &amp; Board</b>	<b>Total</b>
In State		
\$9,330.30	\$8,742.00	\$18,072.30
Out of State		
\$16,128.30	\$8,742.00	\$24,870.30

*\*subject to annual change.*

## Introduction

### **Administrative Offices Telephone Numbers**

Academic Affairs	256-4011
Academic Success Center	256-4259
Admissions	256-4200
Bursar	256-4150
Camden Campus	756-5400
Career & Academic Planning	256-4456
Counseling & Psychological Service Center	256-4222
Dean, Business	256-4025
Dean, Communication	256-4340
Dean, Education	256-4750
Dean, Engineering	256-5300
Dean, Fine and Performing Arts	256-4550
Dean, Liberal Arts and Sciences	256-4850
Dean, Professional and Continuing Education	256-4129
Dean of Students	256-4040
Development Office	256-5410
Disability Resources	256-4234
Financial Aid	256-4250
Information Resources	256-4401
Judicial Affairs	256-4242
Library	256-4800
Main Switchboard	256-4000
President	256-4100
Provost	256-4108
Public Safety	256-4922
Recreation Center	256-4900
Registrar	256-4350
Specialized Services	256-4233
Student Center	256-4601
Student Health Center	256-4333
University Relations	256-4240
VP Administration and Finance	256-4140
VP Student Affairs	256-4283
University Advancement	256-4095

## **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 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 training. To counter the trend, the state decided to build a two-year training school for teachers, known then as a normal school, in southern New Jersey.

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 South Jersey 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 they selected Glassboro as the site.

The land tract included the Whitney mansion 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.

In September 1923, Glassboro Normal School opened with 236 young women arriving by train to convene in the school's first building, now called Bunce Hall. Dr. Jerohn Savitz, the University'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 to Glassboro State College to better reflect its mission.

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

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. With a 1978 Division III National Championship in baseball—the first of 11 national championships—the athletic program established itself as one of the premier athletic programs in the country.

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The fifth president, Dr. Herman James, assumed the leadership of the college in 1984. Under his direction Rowan expanded by establishing the first doctorate program among the state's public institutions and adding the colleges of engineering and communication. Dr. James was also responsible for the construction of Campbell Library, the Student Recreation Center and Rowan Hall.

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. The college achieved university status in 1997 and changed its name to Rowan University.

To lead Rowan University into the 21st century, the Board of Trustees named Dr. Donald J. Farish as the sixth president in July 1998. Under his leadership, the university is working on an aggressive improvement plan that will give the university a national reputation for excellence and innovation and will make it the public university of choice in the region. The plan calls for a greater campus-wide focus on academic and student support initiatives as well as more than \$500 million being spent on campus construction and renovation projects.

Recent campus improvements include the construction of the university townhouses, Science Hall, Education Hall and the Innovation Center, the first building of the South Jersey Technology Park at Rowan University. The University has also seen a marked increase in private and alumni giving, as well as its student and institutional profile.

These efforts have caught the attention of national organizations that evaluate colleges and universities. US News & World Report ranks Rowan University in the "Top Tier" of Northern Regional Universities. Kaplan included the University in "The Unofficial, Biased Insider's Guide to the 320 Most Interesting Colleges." Also, Kiplinger's named Rowan University one of the "100 Best Buys in Public Colleges and Universities" and the Princeton Review included Rowan in the latest edition of "The Best Northeastern Colleges."

Rowan University is divided into six academic colleges: Business, Communication, Education, Engineering, Fine & Performing Arts, and Liberal Arts & Sciences, a graduate school and the College of Professional and Continuing Education. Rowan's nearly 10,000 students can select from among 36 undergraduate majors, seven teacher certification programs, 26 master's degree programs and a doctoral program in educational leadership.

From the modest normal school begun more than 80 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.

### **The Rowan University Mission**

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

### **The Rowan Vision**

Rowan University, at the next level, will continue to focus on its commitment to learning and teaching, combining liberal education with professional preparation. Rowan will advance through the rankings of regional universities on the strength of its excellent undergraduate programs and its noteworthy development of a learning-centered environment. At the same time and without compromising the primacy of its focus on

## Introduction

residential, undergraduate education, Rowan University will continue to build on its growing leadership in graduate and continuing professional education.

### **The Rowan Experience**

The pursuit of high qualitative standards for academic programs for Rowan University will be carried forward in the context of a philosophy that the ideal educational experience focuses on the development of students as whole persons while they are engaged in rigorous academic pursuits. While cultivating the complete intellectual, physical, emotional, social and cultural well being of all members of the University community, the Rowan experience is built upon residential learning communities, mentoring programs, a commitment to service learning and volunteerism, a required Rowan Seminar for incoming freshmen, and awareness of current findings in the study of student life. Additionally, the Rowan experience provides the opportunity for students to work closely with faculty and professional staff in research and professional activities. A principal goal at Rowan is to motivate all students to take responsibility for their own learning, which is the outlook most conducive to the strongest intellectual growth and development.

### **Organization Of The University**

Rowan University is led by a board of trustees made up of 15 lay citizens, two full-time, undergraduate students (one is a non-voting member), and the president of the university.

The institution is organized into five divisions—Academic Affairs, Student Affairs, Administration and Finance, University Advancement, and University Relations.

Academic Affairs, led by the provost, is comprised of six academic colleges—Business, Communication, Education, Engineering, Fine & Performing Arts and Liberal Arts & Sciences—a graduate school, and a college of Professional and Continuing Education. Student Affairs provides a variety of student and academic support services including housing and security. Administration and Finance ensures the day-to-day operations of the university, including budget management, capital construction and campus maintenance. University Advancement raises funds through private giving and builds ties with alumni. University Relations manages the institution's publications, marketing, web services, public relations, and media and community relations.

The University also has a very active Student Government Association. It oversees the activities of nearly 150 clubs and organization.

In addition to its Glassboro campus, the University maintains a branch campus in Camden, N.J. It also recently purchased 600 acres of land, located one mile from the main campus, for the future development of a west campus.

## Selected Financial Information

### Fees at Rowan

The following is a summary of fees charged at Rowan. Tuition and other charges are subject to change at any time in accordance with policies established by the board of trustees of Rowan University. The fees do not include the cost of textbooks and personal expenses. Fees at Rowan for academic year 2006-07 are:

#### Admissions Application

(Graduate and Undergraduate):	\$50
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#### Meal Plans:

19 Meal Plan with \$300.00 Flex	\$3,050
14 Meal Plan with \$300.00 Flex	\$2,820
10 Meal Plan with \$300.00 Flex	\$2,530
7 Meal Plan with \$300.00 Flex	\$2,030
Unlimited Meal Plan \$300.00 Flex	\$3,460

#### Freshman Acceptance Fee

(not refundable)	\$100
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#### Housing in

Residence Hall	\$5,692-\$6,656
Residence Hall Security Deposit	\$200
Residence Hall Lock-Out Fee	\$5
Housing in Edgewood Park Apartments	\$5,956
Housing in Mansion Park Apartments (+electricity)	\$5,106
Housing in Triad Apartments	\$5,956
Housing in Town House	\$6,908
Apartment Security Deposit	\$200
Identification Card	\$10
ID Card Replacement	\$25
Deferred Payment Plan Fee	\$30
Late Payment Fee	\$25-50
Late Registration Fee	\$75
Returned Check Charge	\$25-50
Parking Fee	\$40
Student Accident and Health Insurance (subject to change)	\$136
Student Activity	
(p-t)	\$3.75/credit
(f-t flat rate)	\$56.25/semester

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Student Center Fee	
(p-t)	\$19.70/credit
(f-t flat rate)	\$236.50/semester
General Services Fee	
(p-t)	\$25.45/credit
(f-t flat rate)	\$305.40/semester
Instructional Technology Fee	
(undergrad. matric & p-t)	\$11.70/credit
(f-t flat rate)	\$140/semester
Facilities Fee	
(p-t)	\$48/credit
(f-t flat rate)	\$528.00/semester
Student Teaching	\$180
Transcript	\$10/15
Music Practice Room Key Deposit	\$10
Library Fines	
First Notice	\$1
2 <sup>nd</sup> Notice	\$3
3 <sup>rd</sup> Notice	\$6

Library fines are imposed on users who are delinquent in the return of library materials. The cost of repair or replacement of lost or damaged materials will be charged to users. Current fines and other charges are posted on the Library Services website.

Library and other services may be denied if fine obligations are not met.

### **Tuition**

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

### **Undergraduate tuition rates (2006–07) are:**

New Jersey resident (p-t)	\$262/credit
(f-t flat rate)	\$3,399
Non-resident (p-t)	\$524/credit
(f-t flat rate)	\$6,6798

### **Graduate tuition rates (2006–07) are:**

New Jersey resident (p-t)	\$549/credit
(f-t flat rate)	\$4,941
Non-resident (p-t)	\$549/credit
(f-t flat rate)	\$4,941

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### Expenses

The Business Office is responsible for all billing of students and for the collection of payments. A statement of expenses for the fall semester will be mailed by July 6. A similar statement will be mailed by November 30 for the spring semester.

All charges must be paid in full each semester on or before the date stipulated in the statement of expenses given each student. Students who do not pay their bills will be withdrawn from classes in accordance with the University policy on outstanding financial obligations. Credit may be extended to students engaged in negotiations concerning state scholarships, loans or grants. Questions regarding university expenses should be discussed with personnel in the Bursar's Office (256-4150).

Checks in payment of all charges should be made payable to Rowan University. Payment may also be made with Master Charge, Visa, Discover or American Express. Detailed information on use of these credit cards is available to students prior to the beginning of each semester. All students qualify for the deferred payment program. Information on the deferred payment plan is available on the University invoice and in the Bursar's Office. Tuition and fees, regulated by Rowan University, are subject to change without notice to individual students.

### Summary of Expenses

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

	<i>Yearly Residents</i>	<i>Commuters</i>
Tuition (30 cr/year is average load)	\$6,798.00	\$6,798.00
General Service Fee	610.80	610.80
Instructional Technology Fee	280.00	280.00
Student Activity Fee	112.50	112.50
Student Center Fee	473.00	473.00
Facilities Fee	1,056.00	1,056.00
Room and Board	\$8,742.00*	
<b>Total expenses</b>	<b>\$18,072.30</b>	<b>\$9,330.30</b>

\*Based on the following:

Residence Room (double)	\$5,592.00
19 Meal Plan	\$3,050.00

Tuition and fees for full-time out-of-state students is \$16,128.30/year based on an average 30 credit hours a year. Tuition and other charges are subject to change at any time in accordance with policies established by Rowan University.

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### **Food Services**

Students living in a residence hall must purchase a unlimited, 19, 14, 10 or 7 Meal Plan. Students living in apartments or off-campus also may purchase a Meal Plan, but it is not required.

### **Residence Hall**

Residence halls and apartments are available to Rowan University students at the rental of \$2,846 (double) per semester for residence halls and \$2,978 per semester for Edgewood Park and Triad Apartments. Rates, which here are reported for 2006-2007, are subject to change as approved by the Board of Trustees. The apartment rate is based on an occupancy of four persons per apartment. Also, apartments are available in our Mansion Park Apartment Complex at a rate of \$2,553 per semester plus utilities.

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

### **General Services Fee**

This fee is charged to all students at \$25.45 per credit hour with a maximum of \$305.40 semester for general services that include: health examinations, use of health center, access to medical help, placement service, counseling service, graduation expenses (including the diploma) and other services not funded by the state.

### **Instructional Technology Fee**

This fee is charged to all students at \$11.70 per credit hour with a cost to full-time students of \$140/semester for technological services which includes new equipment and maintenance of current equipment.

### **Student Activity Fee**

This fee is charged only to undergraduate, matriculated students at \$3.75 per credit hour with a maximum of \$56.25 per semester. The fee has been established and regulated by vote of the student body. The Student Government Association directs the budget of the monies received from this fee. The funds pay for student organizations, athletics and social functions.

### **Student Center Fee**

This fee is charged to all students at \$19.70 per credit hour with a maximum of \$236.50/semester. Total construction costs for the Student Center building, including costs of the bond sale and assumed interest rate, were approximately \$6,000,000. Therefore, it is necessary to assess the student body a fee to cover the operating expenses and amortization cost of the building, as well as use of the Recreation Center.

### **Recreation Center**

Access to the recreation center is available to all enrolled students. Associate memberships for faculty, staff, and alumni are also available. For information on associate memberships, contact the recreation center at 256-4900.

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### **Facilities Fee**

This fee is charged to all students at \$48.00 per credit hour with a cap of \$528.00 /semester. The facilities fee is to help defray the cost of the debt service on recently constructed or renovated buildings plus the operation and maintenance cost of newly constructed buildings.

### **Late Payment Fee**

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

### **Late Registration Fee**

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

### **Parking**

Commuting students may park on campus after purchasing a Rowan University parking decal. Decals are \$40. Students with a commuter decal may park in a designated white lined space in Lots A, B, C, D, M, R and Y.

Freshmen living on campus are NOT permitted to purchase a decal or have a vehicle on campus. Sophomores, juniors and seniors residing on campus may purchase a decal and will be permitted to park only in designated resident lots.

Vehicles parking without a decal or in other than a designated space will be subject to a fine and having the vehicle towed at owner's expense. Handicapped spaces are provided for individuals whose physical handicaps require their use. A handicapped parking decal from Rowan must be displayed. This rule is vigorously enforced.

### **Returned Check Charge**

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

### **Identification Cards**

The University requires that all matriculated students carry an official identification card at all times. This card is needed for library use, student activities, registration, cashing checks, recreation center and security purposes. The initial charge for an ID card is \$10, and a \$25 charge is made for each replacement of a lost card.

### **Student Insurance**

New Jersey State law requires that all matriculated, fulltime students have health insurance coverage. To that end, all matriculated fulltime students will be automatically charged a Student Health Insurance fee (\$136 fee 2006-2007). To waive this fee, the student must complete a waiver identifying their current insurance coverage. This waiver must be completed, signed and returned to the Bursar's office prior to the start of the student's first semester and every Fall semester thereafter. Waivers may be downloaded from the bursar's website at [www.rowan.edu/bursar](http://www.rowan.edu/bursar).

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

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

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### **Student Teaching Fee**

All teacher preparation students pay a student teaching fee of \$180 which covers the normal expenses incurred in the program, including a payment to the cooperating teacher. Students will be billed for this fee prior to the semester in which they are enrolled for student teaching.

### **Transcript Fee**

A transcript is provided to each student upon graduation. Additional transcripts are available through the Registrar's Office for \$10/15 each.

### **Refund Policy**

Refunds will be prepared for all students who officially withdraw from the University. Requests for official withdrawal must be made through the Counseling Center. This procedure assures that students will receive the proper refund for tuition, fees, room and board charges.

### **Approved Refund Schedule**

**Tuition, General Services Fee, Student Center Fee, Technology Fee, Student Activity Fee and Facilities fee only.**

**Part-Time students:** Written notice, using a Withdrawal Form (available from the Registrar's Office) must be submitted to the Registrar. The date of receipt of the Withdrawal Form in the Office of the Registrar will be used in computing the refund.

**Full-Time students:** Refunds will be processed only for students who officially withdraw from all of their courses. There is no refund for withdrawal from individual courses.

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

Withdrawal before end of Add/Drop

Registration	100%
First third of semester	40%
Withdrawal after first third of semester	None

### **Room and Board**

Refunds for residence halls and for meal plans will be calculated as of the Sunday and Friday (respectively) immediately following the date of the student's official withdrawal. Refunds for room shall be pro-rated on a weekly basis until the end of the fifth week of the semester, at which point there will be no refund for the remaining weeks of the term.

## **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, Business Office, or the dean of students in Savitz Hall.

# Admissions

## Office of Admissions

**Al Betts, Jr., Director**  
**Savitz Hall**  
**(856) 256-4200**  
**admissions@rowan.edu**

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

### Freshman Admissions

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

Deadlines for submitting freshman application and official records:

**January** - Applicants should take the SAT I or ACT exam no later than the January testing date to ensure receiving all test scores by the admission deadline date. This is also the appropriate time to request that mid-term senior grades be sent to the Admissions Office. Priority Admission: all complete applications received by January 31<sup>st</sup> will receive a decision by March 1st.

**March** - All applications, official high school transcripts and SAT I/ACT scores, must be complete and received by the Admissions Office by March 15.

### Electronic Application

Freshman and transfer students have the option to apply electronically for admission to Rowan University through the links provided on the Rowan web site.

Electronic application requires credit card payment of the application fee at the time of application submission. Other types of fee payment such as personal check or money order require using the paper application. Once received, electronic applications are processed according to the same standards, procedures, policies and timelines as paper application.

## **Eligibility for Admission**

Applicants for admission to Rowan University must present certificates or transcripts proving graduation from an approved secondary school, or they must indicate that graduation is scheduled during the current scholastic year. GED equivalencies are considered in lieu of high school diplomas. Applicants should ensure that this information is forwarded to the Admissions Office.

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

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

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

## **Entrance Examinations**

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

### **Scholastic Assessment Test**

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

### **American College Testing Program**

Student registration manuals are available in most high schools. Materials can also be obtained from ACT, P.O. Box 168, Iowa City, Iowa 52240, or online at [www.act.org](http://www.act.org).

## **Early Admission**

Rowan will consider an applicant just completing their junior year in high school. Students applying for early admission should be exceptionally well qualified, and have the support of family and high school officials. An interview is required for early admission.

## **Deferred Admission**

Rowan University is aware and, in many cases, approves of the feeling of many high school seniors that a year's experience between high school and college would be beneficial. A year away from formal academic work frequently sharpens the student's sense of direction and purpose. Any student who is accepted, pays the admission deposit, and then chooses to defer registration in courses at Rowan, must request deferred admission status before or during the semester for which he/she was accepted.

In order to undertake such a plan, the University recommends one of two procedures. The first is simply to take a year off and apply to Rowan University for admission in the fall of the year following graduation. The second is to apply during the fall term of the senior year, outlining a tentative plan of work, travel or other activity for the intervening year and requesting a decision on the regular date, but for deferred entrance. Candidates so admitted must file a form confirming their intent to enroll with an admission deposit by the following December.

Deferred admission is not an option for those admitted to special admission programs or the EOF program.

## **Out-Of-State Applicants**

Rowan University welcomes applications from out-of-state students.

## **Advanced Placement**

Rowan University awards credit for the College Entrance Examination Board Advanced Placement examinations for scores of 3, 4, or 5. Candidates must arrange to have official score results forwarded to the University Registrar. Upon written request, degree credit equivalent to one semester's work (3 s.h.) will be awarded in that particular subject or its equivalent. Advanced placement credit is recognized as fulfilling general education requirements where applicable and will be considered as un-graded, transfer credit.

The College-Level Examination Program (CLEP) is a series of examinations that allow students to demonstrate their knowledge in a wide range of subjects and receive credit. (See additional information in Course Credit by Examination.)

## **Campus Visits & Interviews**

Students applying for admission to Rowan University are encouraged to visit the campus. Campus tours are offered twice a week throughout most of the year. The University also holds several open house programs throughout the year. Specific dates are listed in admissions publications and on the Rowan University website [www.rowan.edu](http://www.rowan.edu). Individual interviews are not required unless specifically requested by the Admissions Office. If applicants feel an interview would be helpful, they can arrange an appointment time by calling (856) 256-4200.

## **Transfer Admission**

Students who have completed a minimum of 12 semester hours of transferable credit by the application deadline, are classified as transfer applicants. Rowan University admits transfer students on a competitive, space available basis. The cumulative GPA for all college work is the primary consideration for Rowan University's admission decisions. Although most programs require a 2.5 minimum GPA, some majors may also require completion of specific courses prior to admission. Transfer applicants should complete the following steps:

1. File an application for admission with all required documents and the \$50 non-refundable application fee by March 15 for September entrance (February 15 for Elementary Education majors) or November 1 for January entrance. Late applications for September may be considered on a space-available basis.
2. Arrange to have official transcripts of all previous academic work sent from each college attended to Rowan's Admissions Office. Students with fewer than 24 credits completed by the deadline are also required to submit SAT I or ACT scores and their high school transcripts.
3. Payment of a non-refundable enrollment deposit after being offered admission and then enrollment in courses, completes the admission process.

All potential transfers are accepted based on their academic credentials and choice of major. Candidates are given priority as follows: (1) completion of an associates degree or 60 transferable credits, (2) completion of 40-59 transferable credits, (3) completion of 24-39 transferable credits. County college transfer students are encouraged to complete the associate degree before transferring. Transfer students are encouraged to take advantage of information available through their community college transfer counselor, the Rowan University transfer equivalent information available on our website, and the NJ Transfer initiative ([njtransfer.org](http://njtransfer.org)).

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

## **Mid-Year Admission**

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

## **Application Fee/ Enrollment Deposit**

A \$50 non-refundable application fee is required of all applicants. After notification of admission to Rowan University, applicants must send a \$100 non-refundable enrollment deposit by the deadline given in the admission letter. This deposit reserves a place for students in the formal enrollment process.

## **Fee Waiver**

The \$50 application fee may be waived by the University upon written certification by the applicant's school counselor or other school official that payment would constitute a financial burden to the applicant. Such requests must accompany the application.

## **Matriculation**

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

## **Special Admissions – Adult Learners**

Rowan University has a special admission program designed to provide adult students who have been out of high school for three years or more with an opportunity to be evaluated for admission on more than the traditional academic information. Adult students' life and work experiences, special talents and motivation supplement traditional academic records in the evaluation of their chances for success at Rowan University. The specific requirements include: high school diploma or GED and SAT I or ACT results; resumé of work, home or military experience, three letters of recommendation and a personal interview.

## **Special Admissions – Maximizing Academic Potential**

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

## **Educational Opportunity Fund (EOF) Program**

In September 1968, Rowan University instituted the Martin Luther King Scholars Program. This program provides access to college for students who are educationally and economically disadvantaged, and who are motivated and have the potential for success.

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

The Admissions Office in conjunction with the EOF Office selects students.

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

Students who successfully complete the Pre-College Institute are invited to return for the fall semester and are fully integrated into the University and enrolled as matriculated students. The program staff provides a comprehensive program of guidance and counseling for EOF students.

Information concerning financial aid available to EOF students can be found under or by contacting the Rowan University Admissions Office.

## **International Admissions**

Rowan University welcomes international applicants. Please contact the Office of International Student Services by phone 856-256-4239 or email [internationalstudents@rowan.edu](mailto:internationalstudents@rowan.edu) or visit our website [www.rowan.edu/internationalstudents](http://www.rowan.edu/internationalstudents) for detailed information.

## **Placement/Basic Skills/ Testing Requirements**

All freshmen and transfer students with less than 25 credits are required to take placement tests prior to registering for course work. These tests are designed to determine competency levels in the cognitive skill areas of mathematics, reading, and writing. Instructions for taking the placement examinations are included in the admission acceptance package. Students who are required to enroll in basic skills courses must complete such courses within one year. If the requirement is not satisfied within the required time, students are recommended for suspension. Basic skills courses do not count toward the minimum number of semester hours needed to complete the students major and/or degree requirement.

Students majoring in mathematics, engineering, physical or computer science must also take a calculus-ready test.

Students may also choose to take a Computer Competency Exam at the same time as the placement tests for reading and mathematics. The computer competency requirement may be fulfilled in one of three ways:

1. pass the Computer Competency Exam.
2. pass a three-credit Computer Literacy course.
3. transfer credit for a Computer Literacy course.

## **Post-Baccalaureate Certification Program**

The Post-Baccalaureate Certification Program is a non-degree, undergraduate program that enables bachelor degree holders to obtain professional certifications in teaching, school nursing and cartography/ geographical information systems (GIS). The requirements and curricula of the post-baccalaureate programs are similar to the requirements and curricula listed for the corresponding undergraduate degree programs. The teacher and school nurse certification programs offered under the Post Baccalaureate Certification Program have the same national accreditation and/or state approval as the undergraduate programs listed under College of Education. Admission to post-baccalaureate programs is coordinated through The Graduate School. Please see The Rowan University Graduate Catalog for more information or [www.rowan.edu/graduateschool](http://www.rowan.edu/graduateschool).

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

Students who have lost their matriculated status due to inactivity, withdrawal or dismissal before completing their major programs and/or being awarded their bachelor's degrees must apply for readmission to the University, following the reentrant application procedures, in order to regain matriculated status, become eligible to enroll in restricted course work, and request a Rowan degree. Students who lost their matriculated status due to graduation and would now like to return to Rowan to pursue a second bachelor's degree in an unrelated area must follow transfer application procedures (see Transfer Admission).

Students seeking re-entrance to the University must file the "Re-Entrant Application" by May 1 for fall semester entrance or November 1 for spring semester entrance. Any additionally required application materials must also be received in the Admissions Office by these deadline dates.

As part of the application process, students who were officially dismissed from the University must submit a written statement describing their activities since dismissal and three letters of recommendation. They must also arrange an interview with an authorized Admissions Office staff member. Students who have been dismissed for academic reasons may not register for any Rowan University courses, except basic skills course work. Students dismissed for disciplinary reasons may not take any Rowan courses until formally readmitted and re-matriculated to the University. Completed re-entrant applications are reviewed and evaluated by the Admissions Committee and, in some cases, the applied major's academic department. Readmission to some majors requires departmental approval.

# Financial Aid

## Financial Aid

**Luis Tavarez, Director**  
**Savitz Hall**  
**Phone: (856) 256-4250**  
**Fax: (856) 256-4413**  
**financial\_aid@rowan.edu**

Rowan University believes that all qualified students should have the opportunity to attend the University regardless of their financial resources. Rowan University offers financial assistance through scholarships, grants, loans and work programs. The cost of tuition at Rowan University is far less than that of many other colleges because of the substantial subsidy received from the State of New Jersey.

Students seeking assistance must file the Free Application for Federal Student Aid (FAFSA). The FAFSA is also used to determine eligibility for federal and New Jersey state aid. The FAFSA may be obtained from any secondary school guidance office, on the Web, or by contacting the Rowan University Office of Financial Aid.

Rowan encourages applicants to file their FAFSA on the web ([www.fafsa.ed.gov](http://www.fafsa.ed.gov)). It is very important to designate Rowan University as a college choice by using Rowan University's federal school code 002609 on the FAFSA.

As the result of completing and filing the FAFSA, the student will receive a Student Aid Report (SAR) from the Federal Processor. Students should read and follow all instructions on the SAR.

### **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/studentaffairs/financialaid/application\\_requirements/withdrawal/index.html](http://www.rowan.edu/studentaffairs/financialaid/application_requirements/withdrawal/index.html)

### **Federal Pell Grant Program**

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

1. Students must matriculate in an eligible program.
2. Students must be U.S. citizen or an eligible non-citizen.
3. Students must demonstrate financial eligibility as determined by the need analysis formula and Pell Grant table.

### **Federal Supplemental Educational Opportunity Grants**

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

## Financial Aid

### **Federal Stafford Student Loan**

Through the Federal Direct Student Loan program matriculated students enrolled at least half time may borrow a maximum of \$3,500 for their freshman year, \$4,500 for their sophomore year, and up to \$5,500 for both their junior and senior years. Students apply by completing the Free Application for Federal Student Aid (FAFSA), indicating that they are willing to accept financial aid in the form of a loan. There are two types of Federal Stafford Loans:

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

### **Federal Parent Loan for Undergraduate Students (PLUS)**

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

### **Federal Work Study Program**

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

[www.rowan.edu/studentaffairs/financialaid/types/work\\_study/index.html](http://www.rowan.edu/studentaffairs/financialaid/types/work_study/index.html).

### **Institutional Work Study Program**

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

[www.rowan.edu/studentaffairs/financialaid/types/work\\_study/index.html](http://www.rowan.edu/studentaffairs/financialaid/types/work_study/index.html).

## **Financial Aid Programs Available to Residents of New Jersey**

### **Tuition Aid Grants (TAG)**

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

## Financial Aid

### **Bloustein Scholars Program**

The Distinguished Scholars Program provides a \$1,000 annual scholarship award for up to four years of undergraduate study at a New Jersey college or university and is renewable as long as satisfactory academic progress is made. Students are selected by their high schools and the New Jersey Office of Student Assistance.

### **Educational Opportunity Fund**

Established by the New Jersey State Legislature in early 1968, the Educational Opportunity Fund (EOF) helps disadvantaged students. Eligibility is judged on financial need and motivation for future academic work, not just on past grades or test scores. Students must live in New Jersey for twelve months before receiving this aid. To be considered for this program, students should write to request application forms from the Director of Admissions, Rowan University, Glassboro, NJ 08028. Rowan University's Educational Opportunity Fund Office can provide more information.

### **Satisfactory Academic Progress**

Satisfactory academic progress (SAP) towards the degree is necessary in order to receive financial aid from the state and federal programs. Satisfactory academic progress towards the degree is determined by the completion of coursework as well as the cumulative grade point average.

### **Satisfactory Academic Progress Requirements**

Each year a student's progress will be measured by comparing the number of attempted credits with the credit hours earned. This includes any course for which the student has remained enrolled past the Drop/Add period, also courses not completed such as (W, WP, WF, NC, NA, INCs).

A student must complete 70% of credits attempted at Rowan University to maintain satisfactory academic progress. (Audited courses are not considered credits attempted.) A student is eligible to receive funding up to 171 attempted credit hours. Special Admission Programs are allowed to receive funding up to 180 credits. Some programs limit funding on a semester basis. Transfer credits are counted toward the 171/180 limit. *Additionally, students must maintain minimum GPA that exceeds the Academic Dismissal. See Academic Dismissal/Academic Warning in this catalog.*

Students who progress at the minimum rate established herein will run out of eligibility for certain state financial aid programs prior to completing their degree. These guidelines apply to all undergraduate programs. Students may appeal the removal of financial aid if there are mitigating circumstances. If the appeal is approved, aid will be reinstated. A brochure further detailing the SAP requirements is available in the Financial Aid Office.

### **Rowan University Scholarships**

Rowan University applauds and rewards academic success through an extensive scholarship program. Scholarships are awarded to qualified first-year students. In many cases, the award continues through four years. Departments and committees make scholarship awards based on eligibility criteria and may require more detailed information from each student applicant. The Office of Admissions reviews each applicant's academic record and recommends candidates to the individual committees for selection and approval. Additional information regarding scholarships may be obtained by contacting the Office of Admissions.

## Rowan University Outstanding Scholars Recruitment Program

This is a merit-based scholarship program to reward recent high school graduates who have achieved academic distinction as indicated by high school percentile rank and SAT I (math + critical reading) score. The following chart shows the amount of the scholarship based on a student's academic record.

SAT I Range	Class Rank Range	New Jersey Residents	Non-Residents
1,500-1,600	95-100	\$10,900	\$10,900
1,400-1,490	95-100	\$10,400	\$10,400
1,350-1,390	95-100	\$ 9,000	\$ 9,000
1,300-1,340	95-100	\$ 8,500	\$ 8,500
1,250-1,290	95-100	\$ 4,700	\$ 4,700
1,500-1,600	90-94	\$10,400	\$10,400
1,400-1,490	90-94	\$ 9,000	\$ 9,000
1,350-1,390	90-94	\$ 8,500	\$ 8,500
1,300-1,340	90-94	\$ 8,400	\$ 8,400
1,250-1,290	90-94	\$ 4,400	\$ 4,400
1,500-1,600	85-89	\$ 4,700	\$ 4,700
1,400-1,490	85-89	\$ 3,800	\$ 4,400
1,350-1,390	85-89	\$ 3,300	\$ 4,000

### Trustee Scholarships

Offered to students ranking in the top fifth of senior class and scoring 1,150 or better on SAT I. New Jersey residents receive at least \$2,000 per year for four years and out-of-state residents receive at least \$4,000 per year for four years credited to tuition.

### Trustee Minority Scholarships

Offered to minority students with outstanding academic records. New Jersey residents receive up to \$4,000 per year for four years and out-of-state residents receive up to \$8,000 per year for four years credited to tuition.

### Doris V. Broome Scholarships

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

### Alumni/Broome Scholarships

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

### Rowan University Foundation Scholarships

\$500 yearly for four years offered to outstanding freshmen students. 3.0 GPA required for renewal.

### William H. Myers Memorial Scholarships

Offered to first-time, full-time minority students with outstanding academic record. The scholarships are for \$1000 yearly for four years.

## Financial Aid

### **Art, Music and Theatre Department Scholarships**

Variable award amounts offered to incoming freshmen and transfer art, music and theatre arts majors with demonstrated talent and academic achievement.

### **Frances R. Lax Scholarships in Fine & Performing Arts**

Awarded competitively to freshmen fine and performing arts majors with demonstrated talent and significant academic achievement. \$1,000 yearly for four years. 3.0 GPA required for renewal.

### **William G. Rohrer Scholarships**

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

### **Transfer Trustee Scholarships**

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

### **Glassboro High School Scholars Program**

Graduating Glassboro High School Seniors who match certain criteria (see [www.rowan.edu/studentaffairs/admissions/applications](http://www.rowan.edu/studentaffairs/admissions/applications)) are eligible to receive one of three annual scholarships in the GHSS program. As an added incentive, students meeting these criteria also qualify for the Rowan University Scholars Program. The combined scholarships are enough funds to cover all academic expenses such as tuition, fees, room, and board, for a fulltime undergraduate student who chooses to live on campus.

### **Army Reserve Officers' Training Corps (ROTC)**

Rowan University participates in the U.S. Army Reserve Officers Training Corps (ROTC) Program in conjunction with Drexel University. The primary purpose of Army ROTC is to provide leaders of character for the 21st century. Students can enroll in ROTC and participate in a uniquely interactive program focused on leadership development with emphasis on self-discipline, integrity, confidence, and responsibility. Our intent is to help the student improve whether they decide to pursue a career as an officer in our Army or in the private sector.

Students can join the program without any obligation either to complete it or to serve in the Army. Qualified students only sign a contract to serve in the Reserve Forces or Active Army when they begin their junior year or upon receiving an ROTC scholarship.

Army scholarships offer an excellent incentive to join the ROTC program. The Army ROTC scholarship program provides financial assistance for the education and training of highly qualified and motivated students who desire to be commissioned as officers in the Army after graduation from college. Scholarships pay full tuition and fees at Rowan University. An additional scholarship benefit is a \$600 yearly book allowance. Army scholarship winners also receive a tax-free stipend of \$300- \$500 per a month, depending on academic year, for up to 10 months for each year the scholarship is in effect and the student is in school. Non-scholarship students receive the book allowance and the stipend if they contract their junior year.

Students with prior service or who are currently in the National Guard or Army Reserves may enter the program as Simultaneous Membership (SMP) cadets when they begin their junior year. SMP cadets receive an SMP Kicker of \$350 a month from the Reserve Component plus an additional \$350-500 per month from ROTC as well as any benefits received from the Guard or Reserve. SMP cadets earn their commission in two years. Certain stipulations apply.

## Financial Aid

If interested, students may contact CPT DiDonato at the campus ROTC Office in the Carriage House at (856)256-4014/5445. For additional information, refer to [www.taskforcedragon.com](http://www.taskforcedragon.com), or [www.armyrotc.com](http://www.armyrotc.com).

### **Air Force Reserve Officers' Training Corps (ROTC)**

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

For further information on the cross-enrollment program, scholarships, and career opportunities, contact the Professor of Aerospace Studies, AFROTC Det 750, Saint Joseph's University, Philadelphia, PA 19131; 610-660-3190; [rotc@sju.edu](mailto:rotc@sju.edu).

### **Upperclass Scholarships**

Scholarships are available to upperclass students through the University Scholarship Committee. Information is available in the Dean of Students Office. Applications are available at the beginning of the spring semester.

AFT Martin Luther King, Jr. Memorial Scholarship

AFT Memorial Scholarships

AFT John J. Schaub Memorial Scholarship

AFT Paul K. Tong Memorial Scholarship

Robert Becker Memorial Scholarship

Marion and William Bickley Memorial Scholarship

Robert D. Bole Memorial Scholarship

Elizabeth M. Bozorth Recruitment Grant

Conectiv Electric Scholarship

Dr. L. Ward Broomall Memorial Scholarship

Marian E. Englehard Scholarship

Sharon Edwards Scholarship

Broome Alumni Association Undergraduate Scholarships

Marius H. Livingston Memorial Scholarship

AFL-CIO Peter J. McGuire Scholarships

Irving Shipkin Scholarship

Mabel Spencer Scholarship

Mildred King Sangree Scholarship

Albert J. Taylor AFL-CIO Scholarship

Hazel P. Valiant Scholarship

Beatrice Miller Van Doren Memorial Scholarship

## **Student Affairs**

### **Student Affairs**

**Carmen Jordan-Cox**  
**Vice President for Student Affairs**  
**(856) 256-4283**  
**@rowan.edu**

**Joanne K. Damminger**  
**Executive Assistant to the Vice President for Student Affairs**  
**(856) 256-4453**  
**damminger@rowan.edu**

### **Savitz Hall**

The Division of Student Affairs directly supports the recruitment, retention, graduation, and satisfaction of Rowan University students by providing comprehensive and integrated student services programs for all students.

The goal of the Division of Student Affairs is to provide comprehensive academic and student support programs and services to provide the environment for students to clarify their educational, career and life goals, and in the development of educational plans that will assist them in their attainment of academic success. The programs and services of the Division of Student Affairs assist students with their transitions into, through, and out of Rowan University.

The departments within the Division of Student Affairs include: Athletics, Academic Success Center (Basic Skills/Tutoring and Disability Resources) Career and Academic Planning (CAP) Center, Counseling and Psychological Services, Dean of Students, Department of Athletics, Dining Services, EOF/MAP, International Student Services, Judicial Affairs, Multicultural Affairs, Public Safety, Recreation Center, Residence Life and University Housing, Service Learning and Volunteerism, Student Center, Student Health Center, and Student Information Services. These departments are responsible for numerous programs including Greek Life, Intramurals, Mentoring, Orientation, Student Leadership and the Student Government Association.

### **Residence Life and University Housing**

**George Brelsford, Associate Vice President for Student Affairs/Dean of Students**  
**Savitz Hall**  
**(856) 256-4266**  
**brelsford@rowan.edu**

**Mark Wagener, Director of Housing and Business Services for Student Affairs**  
**(856) 256-4266**  
**wagener@rowan.edu**

### **Mission Statement**

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

### **Mandatory Housing**

All freshmen and sophomores not living at home must live in campus housing. Additional information is available in the Residence Life and University Housing Office.

## **Residence Facilities**

Rowan University offers two types of on-campus housing, co-ed residence halls and furnished apartments.

**All residence halls are substance and smoke free**

- Evergreen Hall
- Laurel Hall
- Mullica Hall
- Magnolia Hall
- Mimosa Hall
- Oak Hall
- Chestnut Hall
- Willow Hall

In addition to the Rowan Townhouses, the University owns and operates three fully furnished apartment complexes:

- Edgewood Park
- Mansion Park
- Triad Apartments
- Rowan Townhouses

On-campus apartments are reserved for upperclassmen. Students with questions concerning housing facilities, arrangements or contract agreements should be directed to the University Housing Office, Savitz (856) 256-4266.

## **Residence Hall Programming**

Residence Life and University Housing coordinates a program designed to ensure a high quality of life in all on-campus residences. Each residence is staffed with student staff members who assist resident students in developing intellectually, morally, vocationally, physically and socially. The Residence Life staff works to provide a living/ learning environment in each residence using the vehicle of residence programming. Each Residential and Campus Life staff member has close contact with the students. The staff's primary function is to know the residents and to impart a personal touch of friendship and assistance to build a sense of community within the residence. In addition the Office coordinates student leadership development, programs in commuter affairs, alcohol/drug awareness, and Greek affairs. The staff also assists faculty/staff advisors throughout the year as they work with student organizations.

Concerns dealing with housing or residence life should be directed to Residence Life, Savitz (856) 256-4266.

## **Student Rights and Responsibilities**

**George Brelsford, Dean of Students**  
**Savitz Hall**  
**(856) 256-4040**  
**brelsford@rowan.edu**

Rowan University's primary concern is the student. The University provides an environment where students can pursue academic endeavors, social growth and individual self-discipline. To foster this type of development, students can exercise certain rights and must meet certain responsibilities.

In all matters, both academic and co-curricular, students have the right to fair and impartial treatment. They have the right to freedom from unlawful discrimination based on race, color, creed, religion, age, sex, sexual orientation, national origin or physical disability.

Students have the right to engage in the free and peaceful expression of ideas. They may speak, write or publish freely on any topic in accordance with the guarantees of federal and state constitutions. As members of the Rowan University community, students have the right to participate in discussions at the University. They have the right to engage in peaceful and orderly picketing demonstrations and protests so long as they do not violate public law or disrupt functions of the University.

Students at Rowan University (including their persons, living quarters, papers and personal effects) are secure and free from illegal searches and seizures.

It is the responsibility of the student to become knowledgeable of, and to observe, all University policies, regulations and procedures. The University is under no obligation to waive a requirement or grant an exception because a student pleads ignorance of a policy, regulation or requirement or because a student asserts that he/she has not been informed of such policy, regulation or requirement.

It is the student's responsibility to become familiar with, and to remain informed about, all academic, administrative, financial or other policies, regulations or requirements concerning admission, registration, payment of tuition or fees, continued enrollment, grades and satisfactory program progress, graduation requirements or any other matter which affects the student. Students are especially expected to know the requirements of the program in which they are enrolled. While the faculty and staff will endeavor to assist in every manner possible, students are responsible for becoming and remaining informed of current program and graduation requirements, their status in the program and their progress toward graduation.

### **Sexual Harassment**

Harassment on the basis of sex violates Section 703 of Title VII of the Civil Rights Act of 1964 and is not tolerated on the Rowan University campuses. Unwelcome sexual advances, requests for sexual favors and other verbal or physical conduct of a sexual nature constitute sexual harassment when:

- submission to the sexual advances is a condition of employment (or academic success) expressed in explicit or implicit terms;
- employment decisions (or academic decisions) are based on an employee (or a student) submitting to or rejecting sexual advances;
- such conduct has the effect of substantially interfering with an affected person's work performance or of creating an intimidating, hostile, or offensive work (or learning) environment. Students who feel they may have been sexually harassed, as a first step, may (1) file an incident report with the Office of Residence Life and University Housing

## Student Affairs

in Savitz; or (2) file an incident report with the Office of Public Safety in Bole Annex; or (3) file an incident report with the Office of Judicial Affairs in Savitz.

### **Student Code of Conduct**

**Joe Mulligan, Assistant Dean of Students**  
**Savitz Hall 339**  
**(856) 256-4242**  
**mulligan@rowan.edu**

Rowan University is an academic community and as such the University has instituted a Student Code of Conduct to set forth the standards and expectations that are consistent with its purpose as an educational institution. A0 The University reaffirms the principle of student freedom, coupled with an acceptance of full responsibility for one's behavior and the consequences of such behavior. A0 Rowan University recognizes the rights of its students guaranteed by the Constitution of the United States and the State of New Jersey, which include a student's rights within the institution to freedom of speech, inquiry, assembly, peaceful pursuit of an education, and reasonable use of services and facilities of the university. While it is the goal of the student disciplinary process to educate students as to the purpose and importance of abiding by the Code of Conduct, the University will also issue sanctions as are appropriate and necessary to ensure continued and/or future adherence to this Code, and to protect the university community from disruptive behavior. The Code of Conduct has been developed to guarantee procedural fairness to students when there has been an alleged failure to abide by Rowan University's policies and regulations. Procedures may vary in formality given the gravity and nature of the offense and the sanctions that may be applied.

The Office of Judicial Affairs is responsible for coordinating and adjudicating all University policy violations through oversight of the Campus Hearing Board and Administrative hearing officers as well as the Appeals process. Judicial Affairs is also responsible for tracking the completion of all disciplinary sanctions and addressing any noncompliance. Each student is responsible for reading and complying with the Code of Conduct which is published in the Student Information Guide and available at [http://www.rowan.edu/studentaffairs/main\\_office/Publications/Infoguide.pdf](http://www.rowan.edu/studentaffairs/main_office/Publications/Infoguide.pdf).

### **Hazing**

The University expressly forbids the practice of hazing students in the process of initiation into fraternities, sororities or other student organizations. Such action is a criminal offense in New Jersey.

### **Student Government Association**

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

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

The SGA is administered by an elected executive board and senate consisting of student representatives of academic departments, classes and bureaus. Students interested in

## Student Affairs

running for or being appointed to a position in SGA may seek information in the SGA suite on the main floor in the Student Center or contact Nancy Fox extension 4540.

### **Other Student Organizations**

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

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

Student organizations are financed from fees charged to all matriculated undergraduate students. The current student activity fee is \$3.75 per credit hour. The Student Government Association assumes the responsibility for distributing all monies to the various organizations.

### **All-University Committees**

In recent years all-University committees have become another effective governance force. Composed of students, faculty and administrators, all-University committees are appointed by the president of the University. All members of these committees have equal vote.

### **Orientation Program**

The University holds an orientation program during the month of June for all incoming freshmen and parents. During this time freshmen and their parents learn more about Rowan's academic programs, student services, university life in general and the Rowan University campus.

A one-day orientation for all transfer students is held each winter and spring. While participation is not required, transfer students are encouraged to participate in this program in order to get further information about their academic programs and the Rowan University community. Transfer students can direct any requests for specific information to the Office of the Vice President for Student Affairs located in Savitz.

### **Counseling and Psychological Services Center**

**Z. Benjamin Blanding, Assistant Vice President for Student Development & Director, Health Counseling & Psychological Services**

**Savitz Hall**

**(856) 256-4222**

**blanding@rowan.edu**

In the Counseling and Psychological Services Center, professionally trained counselors provide confidential personal counseling to students. The Center provides individual and group counseling, workshops and presentations, mediation and student leadership training. Some common concerns for college students include: academic/personal skill building, sexual assault and other trauma, substance use and abuse, eating and body image issues, stress, anxiety, isolation, interpersonal difficulties as well as situations involving depression, grief and loss.

The Center also provides exit interviews to assist students in their decision making regarding leaves of absence and withdrawals from the University.

The University's Critical Incident Response Team is coordinated through the Center and each of the staff is a member of the team. This university-wide group responds to crises by meeting with various groups on campus in order to provide time to process responses to a crisis.

## **Health Services Center**

**Nancy M.H. Pontes, Director**  
**Linden Hall**  
**(856) 256-4333**  
**Fax (856) 256-4427**

Rowan University Student Health Services provides Health Care Services for all students. These services supplement the complete health services provided by the student's primary care provider while away from home. Services are provided for acute injuries and illnesses and health promotion needs.

The Health Center is staffed with Registered nurses Monday Through Saturday, with physicians and a nurse practitioner available Weekdays during normal business hours. These consultations are provided without charge. Immunizations, some lab tests, and tuberculosis screenings are available for a fee. The student is responsible for the costs of any off-site tests or specialty referrals.

All incoming students are given a packet of required health forms upon admission to the university. These forms include personal information, health history, physician exam, tuberculosis screening and immunizations, and they are required prior to starting classes. NJ State law requires that all matriculated students show proof of immunity against measles, mumps and rubella (2 MMR vaccines). All students residing in campus housing are required to have vaccination against meningitis (menomune® or Menactra® vaccine). Failure to submit these required forms will prevent students from residing in campus housing and will prevent them from registering for courses or receiving course grades.

New Jersey State law requires that all matriculated, fulltime students have health insurance coverage. To that end, all matriculated fulltime students will be automatically charged a Student Health Insurance fee (\$136 fee 2006-2007). To waive this fee, the student must complete a waiver identifying their current insurance coverage. This waiver must be completed, signed and returned to the Bursar's office prior to the start of the student's first semester and every Fall semester thereafter. Waivers may be downloaded from the bursar's website at [www.rowan.edu/bursar](http://www.rowan.edu/bursar).

## **International Student Services**

**Craig Katz, Director of International Student Services**  
**Savitz Hall**  
**(856) 256-4239**  
**katz@rowan.edu**

The Office of International Student Services is responsible for the recruitment, admission, and support of International Students and Scholars at Rowan University. We ensure student and institutional compliance with visa requirements and immigration regulations. The Office works to foster an environment which supports individual and departmental initiatives in the area of International Education at Rowan University. We also coordinate programs and activities and provide a variety of support services for foreign-born students and scholars at the University.

## Policies and Procedures

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

### Basic Skills Requirement

Instruction in basic skills provides assistance for entering students needing skill development in reading, mathematics, writing or computer competency. All freshmen and transfer students with less than 25 credits are required to take placement tests to determine their level of proficiency in mathematics, reading, writing, and computer. Instructions for taking the placement examinations are included in Admission materials. Students who are required to enroll in basic skills courses must complete such courses within one year. If the requirement is not satisfied within the specified time, students are recommended for suspension. Basic skills courses do not count toward the minimum number of semester hours needed to complete the student's major and/or degree requirement.

### Registration Procedures

WEB Telephone registration for matriculated students is usually conducted in April and May for the Fall semester, in October and November for the Spring semester and in March for the Summer sessions. Matriculated students may not register for more than 18 s.h. per semester unless approval is obtained from their academic dean, or, for undeclared majors, from the Office of Career & Academic Planning. Payment of tuition and fees for those students who use touch-tone or WEB registration must be made by the date indicated on the course confirmation invoice. Students who do not pay by the date indicated on the invoice will have their confirmations canceled. Students wishing to re-register after such a cancellation may do so at final registration by making selections from courses with seats remaining and paying tuition and fees at that time. WEB Telephone registration course confirmation invoices for students receiving scholarships, VA benefits, graduate assistant stipends and other financial aid must be validated by the Bursar's Office by the date indicated on the invoice. Students are responsible for this validation regardless of who is paying the bill. If such validation has not been completed by the due date on the invoice, the confirmation will be canceled. If students wish to reregister after such a cancellation, they may do so at final registration by making selections from courses with seats remaining and presenting evidence of financial aid at that time.

### Extended and Final Registration

#### (Matriculated and Non-Matriculated Students)

**Extended** registration is usually conducted prior to the **beginning** of a semester or summer session. **Final** registration is conducted prior to the first week of a semester or summer session at which time a late registration fee is charged. Payment of tuition and fees for students who register during **Final** registration is due at the time of registration.

### Matriculated/Non-Matriculated Status

Matriculated students are those who have formally been admitted to the University through the Admissions Office, have confirmed their intention to enroll in either a certificate granting program or a degree program, and who subsequently register and attend classes. Matriculated students regularly enroll in classes on either a full-time or part-time basis.

## Policies and Procedures

Non-matriculated students are those who have not been formally admitted to the University through the Admissions Office. Non-matriculated students may enroll in courses until they have attempted a total of 24 credits. After attempting 24 s.h., students may not enroll for additional credits without fully matriculating or receiving permission of the academic dean. Furthermore, non-matriculated students may enroll in classes only on a part-time basis (not more than 11.5 credits per semester).

### **Undeclared Major**

Matriculated students may enroll in courses as undeclared until they earn 60 credits. After students have earned 60 credits, they must either declare a major or receive approval from the undeclared major Status Appeals Committee to take additional courses.

### **Deferred Payment Plan**

A deferred payment plan is available to students. For details, students may contact the Bursar's Office.

### **Course Withdrawal System**

Registration in a given Rowan University course implies the student's obligation to complete its requirements. Provisions for withdrawal are made for special circumstances. Except in extreme circumstances when the department chair and the dean of a particular college allow, students are not permitted to withdraw from the same course more than two (2) times.

The notation of W, withdrawal, is not a grade. The notation of W is made by the Registrar on the basis of information supplied by the student. Students should follow the regulations stated below in order to receive the notation of W.

- a. To drop a course during the drop/add period only, students must secure a Drop/Add Form from the Registrar's Office. When students withdraw from a course during the drop/add period, neither the course nor the drop will be recorded on the transcript.
- b. To withdraw from a course between the drop/add period and mid-semester, students must secure a Withdrawal from Course Request Form A from the Registrar's Office. The reason for the request may be stated on the form and must be signed by both the student and the course professor, who must note the student's last date of attendance in class on the form. Upon receipt of the signed Withdrawal from Course Request Form A, the Registrar's Office will enter a W on the official transcript.
- c. To withdraw after mid-semester, the same process as stated in item b above will prevail, except that the reason(s) for the request must be stated and approval must be obtained from the professor and respective department chairperson. If the approval is granted, the professor will indicate that the student is withdrawing with a passing grade (WP) or withdrawing with a failing grade (WF). The professor will also note the student's last date of attendance in class on the form. Upon receipt of the properly approved form, the Registrar's Office will enter a WP or WF on the official transcript.
- d. Withdrawals during the last four weeks of the semester are considered exceptional and may occur only with the approval of the professor, department chairperson and dean and only for good and sufficient reasons beyond the control of the student. (WP/WF remains in effect.)

## Academic Advising Policy

Providing academic advisement at Rowan University is a partnership between advisor and advisee to provide information and support that will assist students in creating and accomplishing their educational and career goals.

The University will make academic advising available to each matriculated student. Students have the responsibility and right to meet with the advisor for information relevant to their academic and career goals. Academic and career information is also provided to students by sources such as websites (e.g., University, College, Department, Career and Academic Planning Center, and Registrar's Office websites), published materials, and e-mail announcements, as well as through individual and group meetings with advisors.

### *Advising that Contributes to the Teaching and Learning Mission*

- Is a student-centered process
- Facilitates problem-solving, decision-making and evaluation skills
- Encourages both short-term and long-term goal-setting
- Stresses the shared responsibility between students and their advisors

### *Implementation:*

- Academic advising will be available to all students upon matriculation at Rowan University. Students who have declared a major should contact their departments to obtain advising. Students who have not declared a major should contact the Career and Academic Planning Center for advising.
- Students are encouraged to meet with the advisor each semester prior to registration.
- Advisors will provide available times for individual or group meetings to advise students.

### *Responsibilities of advisors*

(The following responsibilities are illustrative as opposed to exhaustive):

Make reasonable efforts to be:

- accessible to and an advocate of the students
- knowledgeable of university policies and procedures
- helpful to students in defining and developing realistic goals
- participatory, and inform students, when applicable, of special research and learning opportunities, honors programs and accelerated degree options, remediation or special assistance, and opportunities in a community of learners
- helpful in assisting students with their planning programs consistent with their abilities and interests
- a source of information to students about matters such as course sequencing, grade point average, and special requirements for graduation for their majors
- a resource concerning the linkage between academic preparation and the worlds of work and graduate studies

## Policies and Procedures

### *Responsibilities of advisees*

(The following responsibilities are illustrative as opposed to exhaustive):

Make reasonable efforts to be:

- responsible and understand requirements for educational progress
- clear about personal values and goals
- knowledgeable about college programs, policies, and procedures
- an active learner by participating fully in the advising experience
- proactive in seeking out their advisor, prepared, and accurate
- actively engaged in monitoring their academic progress and following through on the advisor's recommendations

## Curricular Definitions

### **Major**

A major is a grouping of selected, related and approved courses that leads to a baccalaureate degree. The major has stated goals, requirements and a suggested sequence of courses.

The University has established a set of policies and procedures for admission, continuance, and dismissal from an academic major. For more information on these policies and procedures, contact the Office of the Vice President for Student Affairs.

### **Minor**

A minor is a grouping of selected, related and approved courses that originate under a major degree program. The minor has stated goals and a suggested distribution and a sequence of courses to include lower and upper level. Minors shall consist of a minimum of eighteen (18) semester hours in a specified field other than one's major.

### **Concentration**

A concentration may generally be defined in two ways. It is a coordinated grouping of courses in disciplines that do not have major programs. It is an interdisciplinary or multi-disciplinary grouping of courses focused on common subject matter. Concentrations shall have stated goals and a suggested distribution and sequence of courses.

Concentrations shall consist of a minimum of eighteen (18) semester hours of credit and a maximum of twenty-four (24) semester hours. These courses do not constitute a major and are not required for graduation in any degree program.

### **Specialization**

A specialization is a group of courses within an approved major degree program that are focused in a cohesive area of that major program. Specializations shall consist of a minimum of twelve (12) semester hours.

### **Full-Time Status**

A full-time undergraduate student is one who has enrolled for a minimum of twelve (12) credit hours per semester. A full-time graduate student is one who has enrolled for a minimum of nine (9) credit hours per semester.

## Grading System

The following are used to evaluate students' performances in courses:

<i>letter grade</i>	<i>point value</i>	
A	4.0	Excellent
A-	3.7	

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B+	3.3	
B	3.0	Good
B-	2.7	
C+	2.3	
C	2.0	Fair
C-	1.7	
D+	1.3	
D	1.0	
D-	0.7	
F	0.0	Failure
P		Pass
NC		No Credit
IN		Incomplete

The following notations are made by the registrar:

W	Withdrawal
NR	Not Recorded

The NR notation will be inserted by the registrar when instructors do not record grades for students in courses in which these students are registered. This notation may be changed later to a regular letter grade by instructors using the Change of Grade procedure. The symbol could be changed to a W if students present sufficient evidence of withdrawal from the course involved.

The use of P/NC (Pass/No Credit) in selected courses has been approved by the University Senate. A list of approved P/NC courses is published each semester in the Master Schedule of Classes. Students must accept the responsibility of reviewing that listing. P/NC grades will not contribute to the computation of cumulative grade point averages or the designation of graduation honors. Descriptive reports will accompany P/NC grades only at students' written requests and at the option of the instructor. If students do not request an option for P/NC before the end of the last day of the second week of class, they will be graded on the A-F scale. Transfer and first-year students registering during or after September 1995 will be permitted to take up to 10 percent of the credits earned as P/NC.

Students engaged in exchange programs are graded on the P/NC basis.

The interim grade of IN (incomplete) may be assigned by an instructor under certain circumstances. This grade must be removed before the end of the following academic semester. If students believe that circumstances warrant an extension, they may request the instructor, in writing, for such an extension. If approved, the instructor will renew the incomplete in the Registrar's Office when grades are due. Failure to remove the incomplete grade within the prescribed time will automatically change the IN to an F.

### Change of Grade Policy

Grades are subject to change under the following conditions:

**INCOMPLETES:** A grade of incomplete (IN) may be changed to a letter grade.

**ERRORS:** A grade calculated or recorded erroneously may be changed to the grade actually earned.

**DISPUTES:** A disputed grade may be changed if the student appeals it successfully. A disputed grade differs from a grade recorded in error in that disagreement over evaluation or application of criteria rather than miscalculation or clerical mistake is involved.

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The policies for these three conditions differ substantially. Students are advised to read each policy carefully, paying particular attention to the respective time lines.

A request for change of grade is appropriate only when an error has been made by the professor in calculating or recording a student's grade or when an "Incomplete" has turned into an "F" and the student has met all requirements, for the course. In cases of a need to change a final grade assigned for a course, the time limit for confirmed contact of the professor who awarded the grade is twenty (20) business days, not including summer, into the semester following the one in which the grade was recorded. If the professor is unavailable or fails to respond by the 30<sup>th</sup> business day of the semester, students have an additional ten (10) business days to contact the department chair. Where the department chair and the instructor are one and the same, twenty (20) business days suffice before the student can move on to the next step. Students should retain evidence of their attempts to reach either party, in extraordinary, rare, and compelling circumstances beyond the control of the student, these limits may be extended, and changes may be made only with the written approval of the course instructor, when available, the department chair, and the dean.

A change of grade is not a substitute for an "Incomplete." If a student has work missing at the end of a semester – exams, papers, assignments to be written or rewritten – an "Incomplete" may be assigned if circumstances warrant. It is not appropriate to use change of grade to alter P/NC to A-F grade or vice versa after the completion of the semester unless an error has been made. In designated courses a student may request a P/NC option before the end of the drop-add period during the semester in which the course is taken as noted in university policy. Students who do not declare an option for P/NC before the end of the drop/add period are to be graded on the A-F scale.

### **Process for Resolving Disputed Grades**

It is the responsibility of the classroom instructor to evaluate each student's work and to assign a grade which is a fair and valid measure of the student's achievement in the course. In the event of a dispute over an assigned grade, the student will document in writing the rationale for the grade dispute. The student must provide a copy of his or her perception of the dispute to the instructor and the department chair. It will then become part of the permanent record concerning the dispute. This document must be signed and the date of the transmittal to the instructor and the department chair noted on the document.

The time limit for initial confirmed contact of the professor who awarded the grade is twenty (20) business days, not including summer, into the semester following the one in which the grade was recorded. If the professor is unavailable or fails to respond by the 30<sup>th</sup> business day of the semester, students have an additional ten (10) business days to contact the department chair. Where the department chair and the instructor are one and the same, twenty (20) business days suffice before the student can move on to the next step.

#### 1. Department Level:

- a) The student and the instructor will meet to attempt resolution of the disputed grade. If the instructor is no longer accessible for any reason (e.g., prolonged illness, no longer at Rowan), the student may continue the process as noted in this policy by first meeting with the department chair (see 1 b),
- b) If the matter is not resolved, the student and the instructor will then meet with the department chair, who will act as a facilitator, to determine if resolution is possible. If the dispute cannot be resolved informally, faculty will continue to be available to assist in the resolution of the dispute.

#### 2. College Level

If the issue is not resolved at the department level, within ten (10) business days from the time the department chair is informed of the dispute, the student shall schedule a

## Policies and Procedures

meeting with the appropriate academic dean within five (5) business days of the departmental decision and will provide, in writing, the rationale for the grade dispute. The academic dean will attempt to effect a reconciliation between the two parties within ten (10) business days of receiving the student's written rationale for the grade dispute. Pertinent documentation provided by the instructor and the student shall form the basis for discussion at this stage.

### 3. Grade Grievance Committee Level

If the matter is still unresolved, ten (10) business days after the meeting with the academic dean, the student may pursue the matter with the associate provost for academic affairs. The associate provost for academic affairs will provide the Grievance Committee with the student's written grievance to determine whether a formal hearing is warranted. If the Grievance Committee determines a formal hearing is warranted, a date and time will be set for the hearing. The Grade Grievance Committee shall, at the conclusion of the hearing, have prepared a written recommendation to the provost. The recommendation shall be submitted within four working days after the hearing.

### 4. Provost Level

Within ten (10) working days of receiving the recommendation, the provost will take action and shall notify both parties in the grievance of the decision and action taken. This action is final.

The Grievance Committee shall be composed of two faculty members appointed by the Senate, two students appointed by the SGA, and two administrators appointed by the University president or his/her designee. A chairperson shall be elected from and by the membership and shall have the right to vote. The associate provost for academic affairs shall serve as an ex-officio member of the Committee without vote. A majority of the Committee membership must be present for all meetings of the committee.

Every effort will be made by the associate provost for academic affairs to schedule a grade grievance hearing at a time that is mutually convenient to the instructor and the student. This may, however, not always be possible. The associate provost for academic affairs will set the schedule for the meeting after careful consideration of the personal schedules of the parties involved. A hearing will not be set for a time when either the instructor or the student has a class at Rowan scheduled. One continuance is permitted if unforeseen events make one or the other party's attendance impossible. Thereafter, a new date for the hearing will be set, and the committee will be convened despite the absence of one or both of the parties to the dispute.

If any committee member has a direct personal or professional relationship with any individual(s) involved in a particular case, that committee member may disqualify him/herself from serving on the committee while the case is being heard. Further, if a charge of bias is raised by an individual, the contested committee member may disqualify him/herself from committee deliberations. Failing voluntary action in either situation, the committee itself must reach a decision as to the continuance of the individual so questioned. If a member is disqualified, another individual from the same constituency shall be appointed to serve in his/her place.

## **Repeating a Course**

In the event that a student must or voluntarily chooses to repeat a course, the grade received for the repeated course will constitute the final grade for that subject for cumulative G.P.A. purposes whether the grade is higher or lower than the grade received in the original course. The original grade, although not counted in the cumulative G.P.A., remains on the student's transcript. Herein, the University stipulates that the same course

## Policies and Procedures

may not be taken more than twice including withdrawals. However, except for general education courses, further restrictions may be determined by the individual departments/colleges, only to meet standards recommended by accrediting bodies, statutory regulations, and/or professional societies. Appeals may be made through the normal appeals process.

### **Viewing Final Exams and Papers**

Faculty members have the responsibility of making final exams and papers accessible to students for viewing for a period of one semester after a final grade has been issued, or when an Incomplete becomes a final grade.

## **Good Academic Standing**

### **Definition**

Rowan University has established standards for academic standing which apply to all matriculated undergraduate students as follows: Students who have earned 15 or more semester hour credits and have a cumulative grade point average (GPA) of at least 2.0 are considered to be in good academic standing.

## **Academic Suspension (For Failure To Meet Basic Skills Requirements)**

### **Definition**

Matriculated students must fulfill the basic skills requirements by the time they have attempted 30 credits at the university. Transfer students who enter with 30 or more credits must pass basic skills requirements by the end of their second semester at the university. Failure to meet this deadline will result in suspension.

### **Procedures**

Students who are academically suspended may not register for regular university level courses in either the summer or academic year terms, but may register for basic skills courses.

Students on academic suspension may not participate in extra-curricular or co-curricular activities sponsored by the university.

Students may be removed from academic suspensions at any time by presenting to the appropriate dean or, for undeclared students, the director of Career and Academic Planning, evidence of successful completion of all the basic skills requirements.

Students may not remain on academic suspension status for more than one academic year (Fall/Spring semesters). Students who are not removed from academic suspension after one academic year are subject to dismissal from the university. Exceptions may be made for special programs (e.g., EOF, Specialized Services).

## **Academic Probation (For GPA Falling Below 2.0)**

### **Definition**

At the end of each Spring semester, matriculated students who have earned 15 credits or more and have a cumulative GPA below 2.0 are placed on academic probation. This probationary period begins with the Fall semester. Students have one academic year in which to achieve a cumulative GPA of at least 2.0. Those who have not attained a cumulative GPA of at least 2.0 by this time will be dismissed from the university.

In addition,

1. Full-time students must attempt 12 or more credits each semester of probation. An attempted credit is defined as credit for any courses in which a student receives a grade of A, B, C, D, F, P, S, W, WP, or WF, or IN.
2. Students will be considered on probation until they attain a cumulative GPA of at least 2.0
3. Summer courses may be taken to help students reach the 2.0 cumulative GPA.

### **Procedures**

Students will receive a warning letter following any semester in which their cumulative GPA falls below 2.0

## Policies and Procedures

The College Deans or the Director of the Career and Academic Advising Center will notify students when they are placed on academic probation. Such notices will include a requirement that students consult an academic advisor in their college early in the first probationary semester and in no event later than the end of that semester. The Registrar's Office will notify the colleges of students who are placed on academic probation and will note the academic probationary status on the student's academic record.

Students will meet with their academic advisors to develop appropriate plans for achieving satisfactory academic performance.

Students on academic probation may not participate in extra-curricular or co-curricular activities sponsored by the university. These policies apply to all students.

### **Academic Dismissal**

#### **Definition**

As outlined above, academic dismissal takes place under the following circumstances: Students who have earned at least 15 credits and have been on probation for the academic year (Fall/Spring) will be dismissed from the University. Their dismissal is in effect as of the upcoming Fall semester.

#### **Procedures**

The Registrar's Office will notify the appropriate University officers when students are academically dismissed and will note the dismissal on the student's academic record.

The College Deans or the Director of the Career and Academic Advising Center will notify students in writing when they are dismissed. The notices will include a statement that registration for the next semester will be cancelled.

Students so dismissed cannot register in either academic year or summer terms, as full or part-time students, not as non-matriculated students.

Students who have been academically dismissed from the University may apply for readmission through the Admissions Office after one academic year.

Students who have been academically dismissed may not participate in extra-curricular or co-curricular activities sponsored by the university.

### **Appeal Process**

The Office of the Provost serves as the focal point for the academic suspension, probation and dismissal. The Office of the Associate Provost for Academic Affairs is responsible for the implementation of this process.

1. Written notification of the appeal process and dates will be sent to the student.
2. Student contacts the Dean's Office in the College of their major or the Career & Academic Planning Center for undeclared majors, to make an appointment with the appeal committee.
3. Student completes and returns the Request An Appeal Hearing form with any supported material.
4. Students who do not appeal and students whose appeal is denied will be dismissed from the University.

Decisions concerning academic dismissal are made independently of decisions governing financial aid awards. Appeals regarding the discontinuance of financial aid must be made to the Director of Financial Aid.

## **Official Transcripts**

Transcripts are prepared by the Registrar's Office in accordance with the policies of the American Association of Collegiate Registrars. Transcripts are sent only upon the written request of students. Where Rowan University transcripts show credit hours earned at other institutions, the official transcripts from those institutions have become a part of the student's permanent file in the Registrar's Office. Rowan University does not make copies of other institution's transcripts. It is necessary to obtain such transcripts directly from the institutions concerned. There is a \$5.00 (check or money order, not cash) charge to process a request for each official Rowan University transcript. Disclosure of information contained in students' official transcripts may only be done in accordance with the provisions of the Family Educational Rights and Privacy Act of 1974 (FERPA).

## **Senior Privilege**

Seniors at Rowan University who have at least a 3.0 GPA may request permission from The Graduate School dean to register for one graduate level course per semester. The total number of graduate credits taken shall not exceed 6 semester hours. Students may take a graduate course for application to either an undergraduate or a graduate degree, but may not apply the course to both. For a student to enroll in a graduate course, recommendations are required from both the student's undergraduate program advisor and the chairperson of the department(s) in which the graduate course(s) is/are housed. Furthermore, the final approval for exceptions to the policy must also be obtained from the dean of The Graduate School.

## **Family Educational Rights and Privacy Act of 1974**

In accordance with the provisions of the Family Educational Rights and Privacy Act of 1974, students have the right to inspect and review their own educational records. Records include permanent academic records in the Registrar's Office, student housing records in the Office of Residence Life, placement records and credentials (except those on file prior to January 1, 1975), and disciplinary records in the Office of Judicial Affairs. However, students must personally sign a release permitting the University the right to release copies of such records to outside individuals or agencies. Unless students sign such a release, records can be released only in accordance with the exceptions stipulated in the law. For details concerning this policy, contact the Associate Vice President for Student Affairs/Dean of Students in Savitz Hall.

## **Research Papers—The Term Paper Law**

New Jersey Public Law 1977-C-215 prohibits the preparation for sale and/or subsequent sale of any term paper, thesis, dissertation, essay or other assignment with knowledge that the assignment will be submitted in whole or in part for academic credit. The law provides a \$1,000 fine for any person or firm violating its provisions.

## **Academic Honesty**

The vitality of any academic program is rooted in its integrity. It is essential to Rowan University that the grades awarded to students reflect only their own individual efforts and achievements. Each segment of the academic community, i.e., faculty, students and administration, is responsible for the academic integrity of the University. Academic dishonesty, in any form, will not be tolerated. Students found to have committed an act of academic dishonesty may be subject to failure in the course, suspension from the University, or both.

## **Class Attendance**

Students are expected to be present at each scheduled class for which they are officially registered. Rowan's "community of learners" can be realized only when teachers and learners interact in ways deemed appropriate for any particular class. Because Rowan recognizes diversity in both teaching and learning styles-and even course design and delivery-rules may vary with the learning experience, e.g., online or distance learning courses.

Faculty establish the parameters of a particular learning experience and are expected to maintain the efficiency of the community and to keep accurate attendance records. Faculty are also expected to counsel students who develop a pattern of excessive and unexplained absences, and to request assistance from the dean of students if the pattern of absences continues.

Students who are absent for reasons of illness, death in the family, inclement weather, religious observances, official university activities or for matters of personal conscience should inform each of their instructors, ideally with a written excuse, before the fact or as soon as possible thereafter. Except in cases where classroom experience can not be repeated, faculty may provide these students the opportunity to make up written work, tests or other assignments at the earliest possible convenient time.

In any event, faculty are under no obligation to make special provisions for students absent for reasons other than those listed above.

Faculty may establish additional attendance criteria which are consistent with the above paragraphs. In learning communities, where attendance is critical to the functioning of the group, the rationale and justification for additional attendance requirements must be part of the syllabus provided for students prior to the end of the drop/add period.

## **Audit Policy**

Students who wish to attend classes in a particular course and not receive credit may do so by registering in person during final registration or Drop/Add at the Office of the Registrar. Auditors may choose whether or not to do the normally required course work; likewise, instructors may choose whether or not to formally evaluate auditors work. Auditors receive neither grade nor credit for any course. Courses designated "AU" (audit) on student's transcripts do not count in defining full-time/part-time status, financial aid or veterans benefits, or degree requirements. Students are not permitted to audit private lessons for credit in the Department of Music, internships, student teaching, independent study, or other experiential courses. Tuition for courses taken under the audit designation is established by the University's Board of Trustees.

## **Articulation With Area Community Colleges**

Rowan University has currently active agreements with the majority of New Jersey's community colleges. These agreements are for graduates of transfer programs who seek to complete a baccalaureate degree. These agreements help ensure that courses taken at a community college meet the sequence requirements of our majors, making transfer easier for students. As with the transfer of any credit from another institution to Rowan University, only the credits are transferable; the grade point average (G.P.A.) relating to the credits is not transferred.

## **Graduation Requirements**

Students must complete an academic major program to the satisfaction of the department administering the major. Students must successfully complete a minimum of 120 semester hours with a minimum cumulative grade point average of 2.00 (Some programs require

## Policies and Procedures

more than 120 semester hours or a higher G.P.A. See program advisors for specific requirements).

To be eligible for graduation, transfer and native first-year students will be permitted to take up to 10% of the credits earned here Pass/No Credit. Any exception to this regulation requires the prior written consent of the academic major program advisor and the respective academic dean.

A minimum of 30 credits of student's total degree program requirements must be taken in courses offered by Rowan University. This amount may be achieved through any combination of day, evening, on-campus and off-campus offerings and does not have to be the last 30 credits completed. All students planning to complete degree or teacher certification requirements at the end of the semester must complete the appropriate application at the Registrar's Office during the beginning of that semester. Diplomas will be available approximately eight weeks after the end of the term. The deadlines for filing are: October 15 for Fall Semester, November 15 for Spring Semester and July 15 for Summer Session.

The University reserves the right to modify its requirements for graduation, continued registration or appropriate progress towards the degree as directed by the Commission on Higher Education, the Presidents Council, or by the board of trustees of Rowan University. These modifications may include, but are not limited to, requirements for the demonstration of competence in college level basic skills, satisfactory mastery of subject matter in a major field or the acquisition of a broadly based liberal arts education.

### **Academic Honors**

Outstanding academic achievement is recognized when students have grade point averages of 3.450 or better. Students who achieve this average, based on 12 semester hours of letter grades, for any one semester will be placed on the Dean's List.

Rowan University recognizes exceptional academic achievement at graduation. Qualifications for academic honors at Commencement shall be based upon the student's academic average at the end of the first term of the senior year. The average shall be based upon a minimum of 36 semester hours of coursework completed at Rowan University at the time of computation. Honors are awarded according to the following schedule:

- 3.450-3.649 Cum Laude
- 3.650-3.849 Magna Cum Laude
- 3.850-4.000 Summa Cum Laude

Student's transcripts shall indicate academic honors based upon the cumulative grade point average achieved at the end of the senior year. Honors will be recalculated for grade changes that have been approved within 90 days after the end of the student's final semester.

### **Second Baccalaureate Degree**

The University shall appropriately and fully recognize the completion of degree and major program requirements according to college. Since different degrees, such as the B.A. and the B.S., are distinct educational packages, or frameworks, the recognition shall also be kept distinct. If a student has fully completed two major programs, this should be recognized. However, if both programs are within the same type of bachelor's degree framework (B.A., B.S., B.F.A., etc.), then only one bachelor's degree shall be awarded and a double major recorded. Education dual majors shall be considered a double major for a B.A. unless the requirements for a second degree in a different bachelor's framework are also fully met. To fully meet the requirements would include meeting all general education

## Policies and Procedures

requirements for each degree. If the two programs are not in the same degree framework, then a second bachelor's degree shall be awarded only if the student meets the following requirements:

1. Regular admission to and matriculation in both major programs.
2. Full completion of all requirements in both major programs and certification by both departments, or program coordinators, involved.

In addition to the above, which governs the award of concurrent bachelor's degrees, the University also has a policy for the award of successive bachelor's degrees. For more information, students are encouraged to contact the Registrar's Office.

### **Stop Out and Leave of Absence Policy**

Any student who does not register for two consecutive regular academic semesters will lose matriculated status at the end of the drop-add period of the third semester. Such students must then apply for readmission to the University through the Admissions Office and to a major program, and meet any new program requirements which have been officially instituted. Registration during a summer session will count toward registration; but failure to register during a summer session does not count as a third semester.

A student may apply for an Official Leave of Absence through the Rowan University Counseling Center. Students may apply for leaves for a period of up to four consecutive regular academic semesters. Students who fail to register for a fifth consecutive regular academic semester will lose their matriculated status. Students who stop attending without notifying the University may apply for leaves of absence before failing to register for a third consecutive regular academic semester. If a leave of absence is granted, students can maintain matriculated status. However, the total number of consecutive semesters missed (the stop out plus extension with the leave of absence) shall not exceed four.

### **Withdrawal or Leave of Absence From University**

If for some reason students decide to take a leave of absence or withdraw from the University, the following steps should be taken:

1. Obtain from the Counseling Center an official Leave of Absence or Withdrawal Form. It is the responsibility of the student to take this form to each office designated to complete the leave of absence or withdrawal procedure.
2. If, for reasons of illness, the student cannot return to the campus, the student should write a letter stating whether he/she wishes a leave of absence or withdrawal to Director, Counseling Center, Rowan University, Glassboro, New Jersey 08028

In writing such letters, students should give their full name, home address, social security number, effective date of absence or withdrawal and reason(s) for such action.

### **Leaves Of Absence Or Withdrawal From The University**

#### **Leave of Absence**

Students who are currently enrolled but do not intend to register for classes in an upcoming semester may maintain their matriculated status by applying for a Leave of Absence at the Counseling and Psychological Services Center located in Savitz Hall. A leave of absence would allow a student to maintain their matriculated status for four consecutive semesters. Students cannot apply for a Leave of Absence for a semester in which they are currently registered for classes. Leaves of Absence can only be approved for semesters that have not yet begun.

### **Withdrawal from Rowan**

To withdraw completely from Rowan University, a student must obtain a withdrawal from the Counseling and Psychological Services Center located in Savitz Hall. The student must complete the form in the Center. The date of actual withdrawal will be determined by the date the completed form is approved by the Counseling and Psychological Services Center. Students receiving financial aid may be required to return a portion of those funds if they withdraw prior to the mid-point of the semester, which is determined by federal guidelines. Students who fail to follow the withdrawal process will be assigned a grade of F or NR, depending on the faculty member's ability to assign a grade for the semester. A student could request an Incomplete from a professor. Students who withdraw completely from the University and wish to re-enroll in the next semester should complete a Reapplication form obtained from the Admission Office located in Savitz Hall.

### **Course Credit by Examination and Challenge Examinations**

Credit by Examination is credit granted for satisfying the requirements of a course by written or oral examination, without the student having been formally enrolled for the course. Rowan University's policy for credit by examination serves both traditional and non-traditional students. Policy is therefore established in three areas:

1. Credit by examination for life experience using established external processes and agencies,
2. Credit by examination for life experience using campus based assessment processes, and
3. Challenge exams to demonstrate proficiency in specific courses now offered by the University.

Students may wish to demonstrate sufficient proficiency by a challenge examination which exempts the student from further required coursework and/or credit hours only in the basic competency area of the curriculum. Successful challenge examinations may be used to meet general education distribution requirements. However, challenge examination does not reduce the total credit hours required for graduation from the University.

### **Credit by Examination for Life Experience, External Examination**

The University recognizes tests by external assessment agencies, e.g., College Level Examination Placement (CLEP) and Advanced Placement. Assignment of credit based upon external evaluation is considered as transfer credit. Credit assessments made by Thomas Edison College are accepted as transfer credit. No more than 30 hours total semester credit may be attained for life experience as determined by external assessment, other than from an accredited university or college, may count toward the total credit requirement for graduation from Rowan University. Courses taken in the armed services and recommended for credit by the American Council on Education have been accepted. When these courses are applied to meet the major requirements, the respective major department/ program advisor and dean must approve.

### **Credit by Examination for Life Experience, Internal Evaluation**

An internal assessment to award credit by examination is done only if there are not approved external agencies or processes available to the student and an internal process is requested by a particular academic department or division. Assessment processes are developed by the particular department or division. No more than 18 credits may be awarded in lieu of coursework by internal departmental assessment.

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Successful applicants receive a grade of pass and credit will be applied to the total credit required for graduation.

### **Challenge Examination**

Challenge examinations will be limited to University-wide basic competency courses or the introductory course(s) in a major sequence. A student meeting the minimum level of proficiency shall be exempt from the challenged course. No credit will be awarded.

Each department shall determine which courses may properly be challenged by students claiming proficiency.

# Academic Affairs

## Academic Affairs

**Ali A. Houshmand, Provost**  
**Bole Hall**  
**(856) 256-4108**  
**houshmand@rowan.edu**

**James Newell, Interim Associate Provost for Academic Affairs**  
**(856) 256-4012**  
**newell@rowan.edu**

**Robert Zazzali, Associate Provost for Faculty Affairs**  
**(856)256-4110**  
**zazzali@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, the Graduate School, Library and Rowan at Camden report to the Provost. The Registrar, the associate provost for academic affairs, the associate provost for faculty affairs, the associate provost for information resources 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.

## **Rowan University at Camden**

**Eric Clark, Dean**  
**clarke@rowan.edu**

**Vacant, Associate Dean**  
**@rowan.edu**

**Camden Campus**  
**(856) 756-5400**

Rowan University at Camden offers programs and services convenient for the residents of the City of Camden and surrounding counties. In a shared facility with Camden County College, Rowan University at Camden is located in the University District of Camden, New Jersey. Students attending Rowan at Camden can take general education courses and complete a full degree program in one of the following majors: Sociology, Elementary Education, and Law and Justice Studies.

The English as a Second Language (ESL) Program at Rowan at Camden is very unique. It provides non-native speakers of the English language with the opportunity to study English, improve their language and academic skills and take Rowan courses at the same time.

The Educational Opportunity Fund (EOF) Program of Rowan at Camden provides students who are financially or academically disadvantaged New Jersey residents the opportunity to pursue a degree. The EOF students are required to attend a summer pre-college program. During the program, students are enrolled in college preparatory and developmental courses. At the end of the summer program students are evaluated for acceptance to the University for the fall semester.

The courses at Rowan at Camden are offered in the day and in the evening for a diverse student body. The flexible course scheduling is designed for individuals who may work. In addition, Rowan at Camden also has a childcare facility for those students who may have family responsibilities. Rowan University at Camden also offers cross registration with Rutgers University-Camden and Camden County College-Camden. In addition, Rowan at Camden offers a limited number of support services in collaboration with the City institutions including the Library and recreation center.

Rowan at Camden also shares a new bookstore with the other two City institutions. The new bookstore which is named The University District Bookstore is located on the corner of Broadway and Cooper Street directly across from the Rowan at Camden facility. The bookstore carries all books for courses offered at Rowan at Camden.

## **Library Services**

**Bruce A. Whitham, Dean**  
**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 more than 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.

The Campbell Library and Instructional Technology Services partnership media and computer equipment, are available and may be checked out 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 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 sources.

## **Research**

**S. Jay. Kuder, Associate Provost**  
**Memorial Hall**  
**856-256-4053**  
**kuder@rowan.edu**

The Office of the Associate Provost for Research oversees research activities at the university, including the Office of Government Grants and Sponsored Projects and compliance activities such as the Institutional Review Board for Human Subject Research (IRB) and the Institution Animal Care and Use Committee (IACUC).

## **Information Resources**

**Anthony Mordosky, Associate Provost**  
**Memorial Hall**  
**(856) 256-4743**  
**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.

## **Undergraduate Programs**

Undergraduate studies at Rowan University are housed in six colleges: Business, Communication, Education, Engineering, Fine and Performing Arts, and Liberal Arts and Sciences. To receive a baccalaureate degree, the student must successfully complete a minimum of 120 semester hours of credit. Within this number must be included both the general education requirements plus the requirements of the academic major. Requirements for the major will vary from program to program, and some programs exceed 120 hours.

Rowan University's policy provides that students who transfer with the associate in arts degree from any New Jersey county college who enroll in a bachelor of arts degree program at Rowan will normally have 45 s.h. of general education toward general education requirements or 30 s.h for students with an associate in science degree enrolling in a bachelor of science degree program at Rowan. 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.

## **Graduate School**

**S. Jay Kuder, Dean**  
**Memorial Hall**  
**(856) 256-4053**  
**kuder@rowan.edu**

The Graduate School mission is to provide programmatic leadership, coordination and administrative support for quality graduate programs and experiences at Rowan consistent with national, state and regional educational needs. Through graduate degree programs at the master's, specialist, and doctoral levels and through graduate certificate programs and graduate courses, The Graduate School expands academic opportunities for students to meet workplace, professional and personal desires for lifelong learning. Led by the Graduate Council, graduate program advisors and faculty and the Dean and staff of The Graduate School, the Rowan graduate experience is an integral component of the overall University mission to provide an exceptional environment for achievement and fulfillment.

## **General Education**

General Education is designed to fulfill the aim of a liberal education: breadth of knowledge and balance of judgment. Courses in General Education are designed to create an interest in cultural and intellectual activities that will last throughout life. The General Education Banks all have specific goals. These goals for each individual bank are as follows:

### **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 give an oral presentation that is well reasoned ordered, correct and appropriate for the intended audience.
3. Students will develop the ability to research and properly reference the work of others.

### **Mathematics and Science 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, 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.

### **Artistic and Creative Experiences Bank Goals**

1. Students will 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.

2. Students will demonstrate a knowledge and understanding of the major artistic figures and their contributions to the field of study that is the focus of the course.
3. Students will develop the ability to access and use arts resources that will enable continuing growth and development of knowledge gained through the experience of exposure to the arts.

### **Non-Program Electives Bank Goals**

1. To 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. To enhance the major degree program and better prepare to meet future professional and life objectives.

### **First Year Experience Bank Goals**

1. Strengthen writing and critical thinking skills through their application to a specific course content.
2. Nurture library research skills within a course context
3. Reinforce the value of cooperative learning.
4. Strengthen classroom management skills.
5. Explore and more clearly define educational and professional goals.

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 written and oral communication; an exposure to university level science, mathematics, and literature; and an introduction to art and other cultures and locales.

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.
5. To help first year students make a smooth academic transition to the university community, serious scholarship, and the life of the mind.
6. 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.
7. 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.

Because 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. Consistent with this principle, students should take at least two disciplines in any bank requiring two or more courses.

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

- I. All students must take the following courses under the communication bank:
  - a. College Composition I or Integrated C.C.
  - b. College Composition II
  - c. Public Speaking (or its equivalent)
- II. All students must take at least one course in general education, or in their major, that is labeled as Writing Intensive (WI). The student has to have completed College Composition I and II before enrolling in a course designated as WI. This course must be taken at Rowan University.
- III. All students must take at least one mathematics course from the list of mathematics courses under Science and Mathematics.
- IV. All students must take at least one approved course that includes an in-class laboratory experience under Science and Mathematics. Transfer courses must include the in-class lab experience. Students may not test out of the lab experience (CLEP).
- V. All freshman must take a course designated as Rowan Seminar (RS). RS may be a course required in the major, chosen as part of Gen. Ed., or part of a student's choice for free electives. Therefore, depending on where or how it is taken, RS may or may not count towards the total Gen. Ed. Semester hours.
- VI. All students must take at least one course labeled as Multicultural/Global Studies (M/G). This course need not be a general education course or taken as part of the Gen. Ed. Model.
- VII. All students must take at least one broad based literature course that is labeled as Literature (LIT). This course need not be a Gen. Ed. Course or taken as part of the Gen. Ed. Model.
- VIII. 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
- IX. Students must demonstrate competency by passing a computer competency exam or an appropriate computer competency course by the end of their freshman year. Transfer students must also fulfill this computer competency.

### **General Education Credit Hour Distribution by Bank**

All of the semester hours listed below are considered minimum requirements.

#### **General Education Areas**

Communication	9
Science and Mathematics	7
Social and Behavioral Sciences	6
History, Humanities & Language	6
Artistic and Creative Experience	3
Non-Program Course	6
<b>Minimum Total*</b>	<b>42</b>

*\* Individual programs may expand requirements in the various General Education Banks*

Unless noted, all courses are 3 sh

^ All of these courses have prerequisites	
(H)	Honors Program
(WI)	Writing Intensive
(M/G)	Multicultural/Global
(Lab)	Laboratory Science
(LIT)	Broad-based literature course

## Approved General Education Courses Communication (Written/Spoken)

### *Communication Studies*

CMS06.202^ Public Speaking

### *Writing Arts*

COMP01.111 College Composition I

COMP01.112^ College Composition II

## Science And Mathematics

### *Biological Sciences*

BIOL01.100 Biology I (LAB)

BIOL01.101^ Biology II (LAB)

BIOL01.110 Human Biology

BIOL01.112 Biology: Environ. Focus (LAB)

BIOL01.113 Biology: Human Focus (LAB)

BIOL01.115 General Biology: Plants & People (LAB)

BIOL10.210 Human Anatomy & Physiology I (LAB)

BIOL20.100 Introduction to Natural Resources

BIOL20.150 Human Ecology: Evolution Approach M/G

### *Chemistry and Biochemistry*

CHEM05.102 Chemistry of Everyday Life (LAB)

CHEM06.100 Chemistry I (LAB)

CHEM06.101^ Chemistry II (LAB)

CHEM06.105^ Advanced College Chemistry I (LAB)

CHEM06.106^ Advanced College Chemistry II (LAB)

### *Computer Science*

CS01.102 Introduction to Programming

CS01.104 Introduction to Scientific Programming

CS01.200^ Computing Environments

CS04.103 Computer Science & Programming

CS04.110^ Intro to Programming Using Robots

CS04.140 Enterprise Computing I

### ***Geography***

GEOG06.101	Physical Geography	
GEOG06.103	Geology I	(LAB)
GEOG06.110	Investigations in Physical Geography	(LAB)

### ***Health and Exercise Science***

INAR06.200	Basic Nutrition	
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### ***Mathematics***

MATH01.115	Contemporary Mathematics	
MATH01.122	Pre-calculus Mathematics	
MATH01.123	College Algebra	
MATH01.130^	Calculus I	
MATH01.131	Calculus II	
MATH01.201	Structures of Mathematics	
MATH01.202	Introduction to Geometry	
MATH03.125	Calculus: Techniques & Applications	
MATH03.150	Discrete Mathematics	
MATH03.160	Discrete Structures	
STAT02.100	Elementary Statistics	
STAT02.260	Statistics I	
INTR05.180	Honors Mathematics	(H)

### ***Physics and Astronomy***

PHSC01.110	Principles of Physical Science	
PHYS02.120	Selected Topics In Physics	
PHYS02.140	Physics of Current Technologies	(LAB)
PHYS02.150	Physics of Everyday Life	(LAB)
PHYS02.175	Physics of Sound & Music	(LAB)
PHYS02.200-201^	Physics with Calculus I, II	(LAB)
PHYS02.202-203^	Physics non-Calculus I, II	(LAB)
ASTR11.120	Introduction to Astronomy	(LAB)
ASTR11.231^	M/T in Modern Astronomy	(LAB)
ASTR11.241	Astronomy & Astrophysics	(LAB)
ASTR11.221	Exploration of the Solar System	
ASTR13.101	Meteorology	(LAB)
ASTR17.110	Principles of Earth Science	

### ***Psychology***

PSY01.104	Introduction to Psychology: Brain, Mind and Behavior	
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### ***Interdisciplinary***

INTR01.132	Biology, History & the Fate Human Societies	(RS)
INTR01.138	Issues in Sustainable Development	(RS)
INTR01.140	Diverse Approaches to Environmental Literature	(RS)
INTR01.144	Human Ecology: An Evolutionary Approach	(RS)
INTR01.148	Environmental Ethics: Through the Lens of Diversity	(RS)
INTR05.185	Honors Natural Sciences	(H)
INTR01.200	Issues in Women's Health	

### **Social and Behavioral Sciences**

#### ***Communication***

CMS01.203^	Mass Media and Influence	
CMS01.205^	Mass Media and Influence	(WI)
CMS01.220	Intro to Communication Studies	
CMS01.300^	Communication Theory	
CMS99.462^	Public Opinion	
CMS06.205	Persuasion & Social Influence	
CMS06.206	Interpersonal Communication	

#### ***Economics***

ECON04.310^	Global Economics	
ECON04.100	American Economic System	
ECON04.101	Introduction to Economics-Macro	
ECON04.102	Introduction to Economics-Micro	

#### ***Education***

FNDS21.230	Characteristics of Knowledge Acquisition	
SPED08.130	Human Exceptionality	

#### ***Geography and Anthropology***

GEOG06.100	Intro to Geography & Earth Science	(M/G)
GEOG06.102	Cultural Geography	(M/G)
GEOG06.111	World Regional Geography	(M/G)
GEOG06.193	Intro to Mapping & Geographical Information Science	
GEOG06.201	Geography of U.S. and Canada	
ANTH02.201	Physical Anthropology	
ANTH02.202	Cultural Anthropology	(M/G)
ANTH02.203	Introduction to Archaeology	(M/G)
ANTH02.210	Natives of South America	(M/G)
ANTH02.215^	Medical Anthropology	(M/G)
ANTH02.310	Indians of North America	(M/G)
ANTH02.312^	Anthropological Perspectives in Physical Growth & Develop	(M/G)

ANTH02.350	Comparative Cultures	(M/G)
BIOL20.150	Human Ecology: Evolution Approach	(M/G)

***Health and Exercise Science***

INAR05.302	Contemporary American Family	
HLTH37.210	Consumer Health Decisions	

***Law and Justice***

LAWJ05.275	Survey of Criminal Justice	
LAWJ05.315	Criminal Justice/Social Conflict	
LAWJ05.330	Problems in World Justice	

***Management***

MGT06.240	Entrepreneurship and Innovation	
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***Political Science***

POSC07.100	Intro to Government Politics	(M/G)
POSC07.110	American Government	
POSC07.230^	Comparative Political Systems	(M/G)
POSC07.231	Contemporary World Problems	(M/G)
POSC07.310^	American Constitutional Law	

***Psychology***

PSY01.100	Intro to Psychology: Personal, Social, & Emotional Interactions	
PSY09.209	Child Development	
PSY09.210	Adolescent Development	

***Sociology***

SOC08.120	Introduction to Sociology	
SOC08.220	Urban Sociology and the Family	(M/G)
SOC08.221	Social Problems	
SOC08.230^	Sociology of Minority Groups	(M/G)
SOC08.269	Self and Society	
SOC08.399^	Sociology of the Holocaust	(M/G WI)

***Interdisciplinary***

INTR01.102	Intro to the Social Sciences: Self, Society & Power	
INTR01.104	Intro to African American Studies	(M/G)
INTR01.130	Women in Perspective	
INTR01.132	Biology, History & The Fate of Human Societies	(RS)
INTR01.138	Issues in Sustainable Development	(RS)
INTR01.140	Diverse Approaches to Environmental Lit	(RS)
INTR01.142	Three Generations of Family Life: Diversity & Democracy Through Family	(RS)
INTR01.146	Identity, Culture, & Democracy: Being An American	(RS)

INTR01.154	Emotions in Organizations	(RS)
INTR01.158	From Nancy Drew to Lara Croft-Historical & Critical Dimensions of Female Detective Genre	(RS)
INTR01.160	Growing Up Female in 20 <sup>th</sup> Century America	(RS)
INTR01.162	The Leadership of Ideas	(RS)
INTR01.168	What's Wrong With Normal?	(RS)
INTR01.170	Law and Order	(RS)
INTR01.178	In Search for Democracy: The Quest for Civil Liberties	(RS)
INTR01.200	Issues in Women's Health	
INTR01.265^	Computers and Society	
INTR01.266^	Computers and Society	(WI)
HONR05.190	Honors Social Sciences	(H)

## **History, Humanities and Language**

### ***Communication***

CMS05.280^	Semantics	
CMS05.281^	Semantics	(WI)
CMS05.380	Linguistics	

### ***Education***

FNDS21.150	History of American Education	
SECD03.120	Literacies in Today's World	

### ***English***

ENGL02.105	Masterpieces of Western Literature I	(LIT)
ENGL02.107	Masterpieces of Western Literature II	(LIT)
ENGL02.110	Readings in British Literature	(LIT)
ENGL02.112	Readings in Asian Literature	(LIT, M/G)
ENGL02.113	Readings in U.S. Literature	(LIT)
ENGL02.116	Readings in Non Western Literature	(LIT, M/G)
ENGL02.123	Experiencing Literature	(LIT)
ENGL02.150	Readings in Shakespeare	(LIT, M/G)
ENGL02.216	African American Lit Through Harlem Renaissance	(M/G)
ENGL02.217	U.S. Literature of Latino and Hispanic Peoples	(LIT, M/G)
ENGL02.316	African American Lit Since Harlem Renaissance	(WI)

### ***Foreign Languages and Literature***

FREN02.101,102	Elementary French I, II	
FREN02.201,211^	Intermediate French I, II	
GERM03.101,102	Elementary German I, II	
GERM03.201,211^	Intermediate German I, II	
ITAL04.101,102	Elementary Italian I, II	
SPAN05.101,102	Spanish I, II	
SPAN05.201^	Spanish III	

SPAN05.211	Spanish Reading & Conversation
SPAN05.212^	Spanish Reading & Composition
SPAN05.312^	Spanish for Business
RUSS06.101,102	Elementary Russian I, II
RUSS06.345	Russian Literature in Translation
CHIN07.101,102	Elementary Chinese I, II
CHIN07.201,211^	Intermediate Chinese I, II
LAT09.101,102	Elementary Latin I, II
AFRI16.101,102	Zulu I, II

### ***History***

HIST05.100	Western Civilization to 1660	
HIST05.101	Western Civilization since 1660	
HIST05.120	World History since 1500	(M/G)
HIST05.150	U.S. History to 1865	
HIST05.151	U.S. History since 1865	
HIST05.376	African-American History to 1865	
HIST05.377	African-American History since 1865	
HIST05.470	Issues in American History	
HIST05.302	Sport in History	

### ***Philosophy***

PHIL09.110	Logic of Everyday Reasoning	
PHIL09.120	Introduction to Philosophy	(M/G)
PHIL09.121^	Introduction to Philosophy	(M/G, WI)
PHIL09.128	Philosophy and Gender	(M/G)
PHIL09.130	Introduction to Symbolic Logic	
PHIL09.211	World Philosophy I	(WI, M/G)
PHIL09.213	World Philosophy II	(WI, M/G)
PHIL09.220	Survey of Western Philosophy	(M/G)
PHIL09.221^	Survey of Western Philosophy	(M/G, WI)
PHIL09.226	Philosophy of Mind	
PHIL09.227^	Philosophy of Mind	(WI)
PHIL09.240	Philosophy and Society	(LIT)
PHIL09.241^	Philosophy and Society	(LIT, WI)
PHIL09.250	Introduction to Ethics	(LIT)
PHIL09.251^	Introduction to Ethics	(LIT, WI)
PHIL09.310	Aesthetics	(LIT)
PHIL09.311^	Aesthetics	(LIT, WI)
PHIL09.329	Philosophy and Gender	(WI, M/G)
PHIL09.341	Biomedical Ethics	(WI)
PHIL09.346	Feminist Ethics	(WI)
PHIL09.368	Philosophy of Science	
PHIL09.369^	Philosophy of Science	(WI)

PHIL09.392	Contemporary Moral Problems	(M/G)
PHIL09.393^	Contemporary Moral Problems	(M/G, WI)

***Political Science***

POSC07.200	Survey of Western Political Theory	
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***Religion***

REL10.100	Introduction to Religion	
REL10.110	Introduction to the Bible	(LIT)
REL10.200	Religions of the World	(M/G)
REL10.210	Religion in America	(M/G)
REL10.220	Introduction to Buddhism	(M/G)
REL10.301	Introduction to Judaism	(M/G)
REL10.320	Introduction to Christianity	(M/G)
REL10.330	Introduction to Daoism	(M/G)
REL10.230	Religions of Asia	(M/G)

***Secondary Education and Education Foundations***

FNDS21.150	History of American Education	
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***Theatre and Dance***

THD07.339	History of Theatre to 1700	
THD07.340	History of Theatre from 1700-1956	
THD07.440	Contemporary World Theatre	(WI, LIT)

***Interdisciplinary***

INTR01.101	Intro to Humanities	
INTR01.120	Biology, History & Human Societies	(M/G)
INTR01.132	Biology, History & the Fate Human Societies	(RS)
INTR01.134	Readings in American Democracy	(RS)
INTR01.136	Gateway to Asia	(RS)
INTR01.140	Diverse Approaches to Environmental Literature	(RS)
INTR01.148	Environmental Ethics: Through the Lens of Diversity	(RS)
INTR01.150	Language, Rhetoric & Propaganda: The Weapons of the Cold War	(RS)
INTR01.156	Freedom & Artistic Expression-20 <sup>th</sup> Century America	(RS)
INTR01.158	From Nancy Drew to Lara Croft-Historical & Critical Dimensions of Female Detective Genre	(RS)
INTR01.160	Growing Up Female in 20 <sup>th</sup> Century America	(RS)
INTR01.164	Science Fiction as a Gateway to Human Diversity	(RS)
INTR01.172	Songs of Praise/Protest	(RS)
INTR01.174	Ethics and the Professions	
INTR01.178	In Search of Democracy: The Quest for Civil Liberties	(RS)
HONR05.105	Honors Humanities	(H)

## **ARTISTIC and CREATIVE EXPERIENCES**

### ***Art***

INAR39.330	General Photography
ARHS03.100	Introduction to Visual Arts
ART02.300	Workshop in Art
ARHS03.130	Art Appreciation
ARHS03.210	History of American Art
ARHS03.220	Modern Art
ART09.110	Experiencing Art

### ***Music***

MUS04.118	Music Fundamentals	
MUS04.127-428	Ensembles I-VIII (1 sh): Choral Union, String Ensemble, Wind Ensemble, College Band, Chamber Choir, Concert Choir, Opera Workshop, Percussion Ensemble, Contemporary Music Ensemble, Guitar Ensemble, Orchestra, (LAB) Band	
MUSG06.102	General Music History	
MUSG06.109	Music Appreciation	
MUSG06.115	Growth & Development of Jazz	(M/G)
MUSG06.117	Expressing Music	
MUSG06.214	Musical Styles and Forms I	
MUSG06.215	Musical Styles and Forms II	
MUSG06.335	Musical Styles and Forms III	
MUSG06.447	Music in World Cultures: Asia & Oceania	(M/G)
MUSG06.448	Music in World Cultures: Africa India, Near & Middle East	(M/G)

### ***Theatre and Dance***

THD07.130	Living Theatre	
THD07.135	Oral Interpretation of Literature	
THD07.195	Exploring Social Issues Through Theatre	
THD07.215	Experiencing Acting	
THD07.301	African, African-American Theatre: Intercultural Definitions	
THD07.339	History of Theatre to 1700	
THD07.340	History of Theatre from 1700-1956	
THD07.440	Contemporary World Theatre	(LIT, WI)
THD08.135	Elements of Dance	
THD08.146	World Dance Forms	(M/G)
THD08.202	Tap I	
THD08.236	Modern Dance I	
THD08.246	Ballet I	
THD08.256	Jazz Dance I	
THD08.311	African Influences in American Dance	(M/G)

THD08.315^ Creative Dance for Children  
THD08.436^ Dance History

***Radio/TV/Film***

RTF10.270-271^ Film History & Appreciation I, II  
RTF10.373 Communication Tech. in Film

***Interdisciplinary***

INTR01.152 Beyond Face Value: Critical Analysis of Texts and  
Images (RS)  
INTR01.166 Rhetoric of Music (RS)  
INTR01.172 Songs of Praise/Protest (RS)  
INTR01.176 Historical Aesthetics of Suffering (RS)

***NOTE: Courses listed above with LIT, (WI) or (M/G) fulfill the Writing Intensive, Literature or Multicultural/Global requirement in addition to the general education bank requirement.***

### **Writing Intensive Courses**

The following courses satisfy the requirement of one writing intensive course. They do not satisfy other general education “bank” distribution requirements. The student has to have completed College Composition I and II before enrolling in a course designated as WI.

#### ***Art***

ARHS03.252 Concepts in Art: Criticism

#### ***Biological Sciences***

BIOL01.440^ Special Topics in Biological Sciences

#### ***Chemistry and BioChemistry***

CHEM07.464^ Adv Organic Chemistry I

#### ***Communication Studies***

CMS06.246 Small Group Communication

CMS06.406^ Seminar in Communication Studies

#### ***Economics***

ECON04.492^ Seminar in Economics

#### ***Engineering***

ENGR01.402^ Senior Engineering Clinic II

#### ***English***

ENGL02.393^ English Seminar I

ENGL02.394^ English Seminar II

#### ***Foreign Languages and Literatures***

SPAN05.409^ Advanced Spanish Grammar & Composition

#### ***Geography and Anthropology***

GEOG06.493^ Research Seminar in Geography

#### ***History***

HIST05.299^ Intro to Historical Methods

#### ***Law/Justice***

LAWJ05.370 Theories of Crime & Criminality

LAWJ05.469 Seminar in Law/Justice

LAWJ05.479^ Seminar: Police Science

#### ***Liberal Studies***

AMST13.402^ Senior Seminar in American Studies

#### ***Management***

MGT06.309^ Organizational Behavior

MGT98.337 Legal Aspects of Human Resource Management

#### ***Marketing***

MKT09.384^ Research Methods in Marketing

**Mathematics**

MATH01.498^ Mathematics Seminar

**Political Science**

POSC07.303 Campaigns, Political Parties & Interest Groups

POSC07.489^ Seminar in Political Science

**Psychology**

PSY01.302^ Research in Perception

PSY01.315^ Research in Child Development

PSY02.306^ Research in Adolescent Development

PSY02.307^ Research in Cognitive Psychology

PSY02.308^ Research in Learning & Behaviorism

PSY02.309^ Research in Social Psychology (M/G)

**Public Relations and Advertising**

ADV04.434^ Advertising Campaigns

PR06.353^ Case Studies in Public Relations

PR06.454^ Public Relations Planning

**Radio/TV/Film**

RTF03.433^ TV Program Packaging

**Reading**

READ30.322^ Teaching Reading to Children w/ Special Needs

READ30.421 School Reading Problems

**Sociology**

SOC08.325^ Deviant Behavior/Social Control

SOC08.326^ Socialization of the Child Through Adolescence

SOC08.494^ Field Experience Seminar in Sociology

**Writing Arts**

WA01.304^ Writing with Style

WA01.400^ Writing for the Workplace

WA01.408 Writing as Managers

WA01.301^ Writing, Technology & Research

WA01.401^ The Writer's Mind

### **Multicultural/Global Courses**

The following courses satisfy the requirement of one Multicultural/Global Course. They do not satisfy other general education “bank” distribution requirements.

#### ***Economics***

ECON04.307^	Economic Development
ECON04.320^	Contemporary Economic Systems

#### ***English***

ENGL02.200	Women in Literature
ENGL02.216	Survey of African-American Literature

#### ***Foreign Languages and Literature***

SPAN05.324^	Spanish American Civilization & Culture
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#### ***Geography and Anthropology***

ANTH02.370^	Peasant Societies & Cultures of the World
GEOG06.301	Economic Geography
GEOG06.303	Political Geography
GEOG06.304	Population Geography
GEOG06.342	Geography of Europe
GEOG06.343	Geography of Asia
GEOG06.344	Geography of Latin America
GEOG06.346	Commonwealth of Independent States: Geography of U.S.S.R.
GEOG06.347	Geography of Middle East

#### ***History***

HIST05.425^	History of Feminism
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#### ***Law and Justice***

LAWJ05.386	Law and Human Rights
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#### ***Management/MIS***

MGT06.330	Managing International Business
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#### ***Marketing***

MKT09.379^	International Marketing
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#### ***Music***

MUSG06.220	Singing Music of African-Americans
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#### ***Philosophy and Religion***

PHIL09.330	Asian Thought
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#### ***Political Science***

POSC07.211	Women and American Politics
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### *Psychology*

PSY01.105^	Psychology of Ethnic Identity & Community in America
PSY01.200^	Psychology of Women & Cultural Exp.
PSY01.235^	African American Psychology
PSY01.310^	Psychology of Racism & Ethnocentrism

### *Secondary Education and Education Foundations*

FNDS21.300	Intercultural Studies
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### *Sociology*

SOC08.327^	Comparative Education in Sociological Perspective
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## **The Rowan Seminar**

**Maria Tahamont, Coordinator**  
**Department of Biological Sciences**  
**Science Hall**  
**(856) 256-4500 x3584**  
**tahamont@rowan.edu**

### **Rowan 101 Seminar**

Rowan Seminar is designed to help our first year students make a smooth academic transition to university life. The Rowan Seminar courses are special sections of General Education courses, many of which are popular with new college students. Most major programs have designated specific course for first year students. Students 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 what new college students experience. 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 that take Rowan Seminar courses.

Rowan Seminar courses are designated in a student's course schedule with an RS after the title. These sections of the courses are limited to first year students. Rowan Seminar courses are designed to introduce students to the university classroom skills needed to succeed academically 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.

Within the subject context of the course, the professor will introduce every student to the following skills, values, and expectations at the university 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 classroom management skills

All 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.

For the most part, 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 coordinator or visit the Rowan Seminar website at <http://www.rowan.edu/elan/freshsem/>.

## **Semester Abroad Programs**

**Edward Smith, III, Interim Director**  
**International Center**  
**Robinson Hall**  
**(856) 256-4105**  
**ic@rowan.edu**

In addition to coordinating the Interdisciplinary International Studies Program, Rowan's International Center offers students the opportunity to participate in a wide range of university sponsored international programs (in Australia, Africa, Asia, South and Central America, Europe, etc.).

Students from all colleges work with academic advisors in their major to select a course of study that will enable them to complete one semester or one year of study abroad. All credits count to a Rowan degree, and all scholarships and financial aid are applicable. Summer Study Abroad, individualized programs and volunteer experiences are also available.

The International Center is committed to:

- \* Coordinating and presenting internationally focused academic, cultural and professional programs to the Rowan community.
- \* Providing support services to Rowan students, faculty and professionals engaged in international education, research, and international exchange activities.
- \* Collaborating and building partnerships with institutions engaged in international programs and activities in order to provide global learning experiences for members of the Rowan community.

For additional information visit the International Center in Robinson or at its website: [www.rowan.edu/internationalcenter](http://www.rowan.edu/internationalcenter).

## **Academic Major Programs**

Academic major programs listed with general education requirements in the colleges of Business, Communication, Engineering, Liberal Arts and Sciences and Fine 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 Career and Academic Planning Center.

## **Second Major, Minor and 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 found elsewhere in this catalog.

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

Note: On the following pages will be found descriptions of each undergraduate major.

## Interdisciplinary Studies

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

### African American Studies Concentration

**Corahann Okorodudu , Coordinator**  
**Robinson Hall**  
**856-256-4793**  
**africanamericanstudies@rowan.edu**

Rowan University offers an 18-semester hour multidisciplinary concentration designed to provide undergraduate students of all majors with a broad understanding of the development, experiences and contributions of Black people in the United States of America, including developments in Africa and the African Diaspora. Given its roots within the U.S. Civil Rights Movement, the program has a continuing commitment to critical social analysis, education that connects multiple perspectives, and social change through scholarship, advocacy and service. Twelve academic departments across the colleges of the university offer undergraduate courses that are cross-listed with African American Studies.

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

- |                            |                                  |         |
|----------------------------|----------------------------------|---------|
| <b>1. Requirements</b>     |                                  | 6 s.h.  |
| <a href="#">INTR01.104</a> | Intro. to African Amer. Studies  |         |
| <a href="#">ENGL02.216</a> | Afr/Amer. Lit through Harlem Ren |         |
| <i>OR</i>                  |                                  |         |
| <a href="#">ENGL02.316</a> | Afr/Amer. Lit Since Harlem Ren   |         |
| <i>OR</i>                  |                                  |         |
| <a href="#">HIST05.377</a> | Afro-American History Since 1865 |         |
| <b>2. Electives</b>        |                                  | 12 s.h. |
| <a href="#">AFRI16.101</a> | Zulu I                           |         |
| <a href="#">AFRI16.102</a> | Zulu II                          |         |
| <a href="#">COSD01.406</a> | Afr/Amer. Culture in Media       |         |
| <a href="#">ENGL02.116</a> | Readings in Non-West Lit         |         |
| <a href="#">ENGL02.200</a> | Women in Literature              |         |
| <a href="#">ENGL02.216</a> | Afr/Amer. Lit through Harlem Ren |         |
| <a href="#">ENGL02.316</a> | Afr/Amer. Lit Since Harlem Ren   |         |
| <a href="#">ENGL02.217</a> | U.S. Lit. of Latin/Hisp Peoples  |         |
| <a href="#">ANTH02.202</a> | Intro to Cultural Anthropology   |         |
| <a href="#">GEOG06.111</a> | World Regional Geography         |         |
| <a href="#">HIST05.376</a> | African American History to 1865 |         |
| <a href="#">HIST05.394</a> | Sub-Saharan Africa to 1800       |         |
| <a href="#">HIST05.397</a> | Sub-Saharan Africa Since 1800    |         |
| <a href="#">HIST05.441</a> | Imperialism/Colonialism          |         |
| <a href="#">HIST05.322</a> | Civil War and Reconstruction     |         |
| <a href="#">HIST05.413</a> | Comparative Race Relations       |         |
| <a href="#">HIST05.425</a> | History of Feminisms             |         |
| <a href="#">HIST05.422</a> | Women in American History        |         |
| <a href="#">INTR01.304</a> | Africana Soc & Pol. Thought      |         |
| <a href="#">LAWJ05.330</a> | Problems of World Justice        |         |
| <a href="#">LAWJ05.346</a> | Women & Crime                    |         |
| <a href="#">LAWJ05.386</a> | Law and Human Rights             |         |

LAWJ05.205	Minorities, Crime & Justice
MUSG06.115	Growth & Development of Jazz
MUSG06.220	Singing Music of African Americans
POSC07.323	Politics of Rac/Pov/Welfare
POSC07.340	Civil Rights/Liberties
POSC07.324	Black Americans & American Politics
PSY01.200	Psy Women/Cult. Exp
PSY01.235	African American Psychology
PSY01.105	Ethnic Identity & Com. in America
PSY01.310	Psych. of Racism & Ethnocentrism
RTF03.272	Images/Women in Film
RTF03.280	African American Film History
SOC08.230	Sociology of Minority Groups
SOC08.330	Social Stratification
THD08.146	World Dance Forms
THD07.301	African, African American Theatre
THD08.311	African Influences on Amer. Dance

## **Air Force Reserve Officers' Training Corps (ROTC)**

**Assistant Professor of Aerospace Studies**  
**AFROTC, Detachment 750**  
**Saint Joseph's University**  
**Philadelphia, PA 19131-1399**  
**(610) 660-3194**

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

The program of aerospace studies at St. Joseph's University offers one-year, two-year, and four-year curricula leading to a commission as a second lieutenant in the Air Force. In the four-year curriculum, a student takes the General Military Course (GMC) during the freshman and sophomore years, attends a four-week summer training program, and then takes the Professional Officer Course (POC) in the junior and senior years. A student is under no contractual obligation to the Air Force until entering the POC or accepting an Air Force scholarship. In the two-year curriculum, a student attends a five-week summer training program and then enters the POC in the junior year. In the one-year curriculum, a senior or graduate student can enroll in aerospace studies and, after completing the undergraduate degree or graduate coursework, attend a seven-week summer training program and be commissioned upon completion of summer training.

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

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

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

For further information on the cross-enrollment program, scholarships, and career opportunities, contact: Professor of Aerospace Studies

AFROTC Det 750  
Saint Joseph's University  
Philadelphia, PA 19131  
610-660-3190  
rotc@sju.edu

## **Army Reserve Officers' Training Corps (ROTC)**

**John M. DiDonato , Coordinator**  
**Carriage House**  
**856-256-4014**  
**didonatoj@rowan.edu**

The Army ROTC program is coordinated out of the host school, Drexel University. The primary purpose of Army ROTC is to develop leaders of character for the 21st century. Students enrolled in ROTC participate in a unique interactive program focused on leadership development with emphasis on self-discipline, integrity, confidence, and responsibility. Our intent is to help students improve themselves whether they decide to pursue a career as an officer in our Army or as a leader in the private sector.

Students join the program without any obligation either to complete it or to serve in the Army. Students only sign a contract to serve in the Reserve Forces or Active Army when they begin their junior year or when they receive an ROTC scholarship.

Teach leadership and management skills which will enhance a student's future success in either a military or civilian career. Commission the future officer leadership of the U. S. Army and motivate young people to be better citizens.

Army scholarships offer an excellent incentive to join the ROTC program. For more information, see Army R.O.T.C. under the scholarship section.

A highly competitive team specializing in military skills and physical fitness. This team competes in a yearly competition against other university ROTC programs in the tri-state area. Start getting in shape now if you are interested in this high speed, low drag team!

These are optional events for those who want more out of ROTC and their college experience.

We do training such as: Rappelling, Squad Tactics, Paintballing, Trail Running, and Weapons Qualification. All of our training focuses on leadership and safety.

Take pride in the uniform and Army tradition by participating in the Color Guard. We support various events such as Veterans Day Ceremonies, Football Homecomings, Commencement Ceremonies and various local special events.

Join this Nationally Recognized Military Honors Society that focuses on academic and ROTC excellence.

You can contact Task Force Dragon Army ROTC at 215-590-8808, ext. 30 or email us [armyrotc@drexel.edu](mailto:armyrotc@drexel.edu). Check out our web site at <http://www.taskforcedragon.com>

Our program has approximately 150 highly motivated cadets. Typical activities experienced in our program are rappelling, orienteering, rifle marksmanship, various leadership challenges and our cadets participate in a variety of local and campus events. In addition to our team building and leadership enhancing activities, we offer Ranger Challenge and the Adventure Club for those who desire more out of their ROTC and college experience.

ROTC Time Commitments (about 5 hours a week):

Military Science class: 1 hour per week. Day and Time varies.

Tuesday and Thursday: 0630-0730 PT (Physical Training)

Wednesday: 0600-0800 Leadership Lab at Drexel (All cadets)

Weekend Training

1 Field Training Exercise (FTX) per semester for the weekend at Ft. Dix.

Additional Training for Juniors: Day training. About 3 weekend days per semester.

## Asian Studies Concentration

Youru Wang , Coordinator

Edgar F. Bunce Hall

856-256-4500 x3990

wang@rowan.edu

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

The Concentration requirements are as follows:

### Required Course.

3 s.h

ENGL01.116 Readings in Non-Western Literature

OR

POSC07.235 Intro to Asian Political Systems

### Core Courses

9 s.h.

ARHS03.401 Survey of Asian Art

PHIL09.330 Asian Thought

CHIN07.101 Elementary Chinese I

CHIN07.102 Elementary Chinese II

HIST05.355 Modern China

HIST05.408 Chinese Cultural History

GEOG06.343 Geography of Asia

REL10.220 Introduction to Buddhism

HIST05.351 Modern Japan

### Elective Courses

9 s.h.

ANTH02.350 Comparative Cultures

POSC07.230 Comparative Political Systems

ECON04.320 Contemporary Economic Systems

POSC07.321 Contemporary World Problems

ANTH02.420 Culture and Personality

ECON04.307 Economics of Developing Nations

HIST05.441 Imperialism and Colonialism

ECON04.310 International Economics

FIN04.435 International Finance

MKT09.379 International Marketing

ANTH02.202 Intro to Cultural Anthropology

SPED08.206 Multicultural Issues in Special Education

MUSG06.448 Music in World Cultures I: Asia and Oceania

ANTH02.370 Peasant Societies and Cultures of the World

LAWJ05.330 Problems of World Justice

ENGL02.116 Readings in World Literature

REL10.200 Religions of the World

SOC08.220 Sociology of the Family

SOC15.322 The Sociology of Population

INTR01.130 Women in Perspective

ECON04.205 World Economic History

HIST05.120 World History Since 1550

GEOG06.111 World Regional Geography

## Environmental Studies Concentration

Terry O'Brien , Coordinator  
Science Hall  
856-256-4500 Ext 3587  
obrien@rowan.edu

The interdisciplinary nature of the Environmental Studies Concentration is designed to broaden students' awareness of contemporary environmental issues. The concentration provides an instructional framework through which students may pursue interests in the areas of Environmental Planning, Environmental Sciences, and Environmental Testing and Technology. The following are recommended courses for each career track:

### Program Requirements

#### Environmental Planning

18-24 s.h.

GEOG06.308	Geographic Information Systems (GIS) I
GEOG06.309	Geographic Information Systems (GIS) II
GEOG06.325	Geomorphology
GEOG06.103	Geology I
GEOG06.104	Geology II
GEOG06.310	Land Use & Resource Development
BIOL20.100	Intro to Natural Resources
HIST05.205	Environmental Psychology
GEOG06.304	Population Geography
ANTH02.321	Cultural Ecology
SOC15.322	The Sociology of Populations
SOC08.320	Urban Sociology
GEOG06.302	Urban Geography
GEOG06.355	Metropolitan & Regional Planning
SOC08.400	Environment Policy & Society
INTR99.300	Environmental Internship

#### Environmental Sciences

18-24 s.h.

BIOL20.330	Environmental Science
GEOG06.308	Geographic Information Systems (GIS) I
GEOG06.309	Geographic Information Systems (GIS) II
GEOG06.325	Geomorphology
GEOG06.103	Geology I
GEOG06.104	Geology II
CHEM05.301	Chemistry in the Environment
BIOL20.100	Intro to Natural Resources
BIOL11.405	Environmental Microbiology
BIOL20.425	Environmental Toxicology
BIOL20.321	Physiological Ecology
BIOL01.405	Conservation Ecology
BIOL18.400	Limnology
BIOL02.410	Stream Ecology
BIOL18.360	Marine Biology
BIOL20.310	Ecology
BIOL20.474	Tidal Marsh Ecology Oceanography
BIOL19.425	Marine Geology
GEOG06.304	Population Geography
INTR99.300	Environmental Internship
<i>OR one of the following:</i>	
BIOL01.325	Mycology
BIOL01.352	Ornithology
BIOL02.201	Plant Diversity
BIOL01.300	Phycology
BIOL01.454	Herpetology

BIOL01.458	Mammalogy
BIOL01.470	Ichthyology
BIOL07.200	Invertebrate Zoology
BIOL21.401	Entomology

### Environmental Testing & Technology

18-24 s.h.

BIOL20.330	Environmental Science
BIOL20.100	Intro to Natural Resources
BIOL11.405	Environmental Microbiology
BIOL20.425	Environmental Toxicology
CHEM05.301	Chemistry in the Environment
CHEM06.100	Chemistry I
CHEM06.101	Chemistry II
CHEM07.200	Organic Chemistry I
CHEM07.201	Organic Chemistry II
CHEM09.250	Quantitative Analysis
CHEM09.410	Instrumental Methods
INTR99.300	Environmental Internship

## **International Studies Concentration**

**Edward C. Smith III, Coordinator**

**Robinson Hall**

**256-4500 x3472**

**smithe@rowan.edu**

The International Studies program is an interdisciplinary concentration that can help students from all majors prepare themselves for careers in the global economy. Whether you work for the private sector or government, an American company or a multinational firm, there is no escape from the reality of international interdependence. In this global economy, nearly every job you may choose will have an international facet. In the International Studies program students must complete at least 18 credit hours (i.e. 6 classes) selected from a set of core and area studies courses. These may also count toward major, minor, and/or general education requirements.

To prosper in this increasingly interdependent world, it is imperative that students become familiar with a wide range of economic, political, cultural, and environmental issues. The International Studies Concentration enables students to do this as they increase their knowledge of international relations and institutions, and develop their expertise in the culture, history and languages of specific parts of the world. Students are required to complete two courses from a bank of core courses, and four others from a variety of area studies (African, Asian, Eastern European and Russian, European, Latin American, and Middle Eastern) for a total of 18 credit hours. International Studies may be pursued in conjunction with a major or minor program, or integrated within general education requirements.

Knowledge of a foreign language is recommended. Students can also pursue study abroad, field experiences, and/or internships in partial fulfillment of International Studies requirements.

Interested students should contact the Coordinator.

### **International Studies Core**

MGT06.330	Managing International Business
ECON04.269	Selected Topics:Global Economy
ECON04.225	Women in the Economy
ECON04.307	Economic Development of Emerging Nations
ECON04.310	International Economics
ECON04.320	Contemporary Economic Systems
ENGL02.116	Readings in Non-Western Literature
GEOG06.111	World Regional Geography
ANTH02.202	Cultural Anthropology
GEOG06.102	Cultural Geography
ANTH02.350	Comparative Cultures
SOC08.327	Comparative Education from a Sociological Perspective
HIST05.120	World History Since 1500

HIST05.441	Imperialism and Colonialism
SOC15.322	Sociology of Population
LAWJ05.386	Law and Human Rights
LAWJ05.330	Problems in World Justice
MKT09.379	International Marketing
MUSG06.447	Music in World Cultures I: Asia and Oceania
MUSG06.448	Music in World Cultures II: Africa, India, Near and Middle East
REL10.200	Religions in the World
POSC07.230	Comparative Political Systems
POSC07.231	Contemporary World Problems
POSC07.320	International Relations
POSC07.420	International Law
POSC07.421	International Organizations
THD07.440	Contemporary World Theatre

For information about eligible area studies courses, see the coordinator. There are courses not listed here that may be applicable to the concentration with the approval of the area advisor.

## Leadership Studies Concentration

**James Coaxum III, Coordinator**

**Robinson Hall**

**856-256-4779**

**coaxum@rowan.edu**

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

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

### Concentration Requirements

Leadership Core: 9 credit hours

Communication Core: 3 credit hours

Interdisciplinary Core: 6 credit hours

#### Required Courses

##### Leadership Core

9 s.h.

EDSU28.100	Leadership Theory
EDSU28.205	Leadership Seminar I
EDSU28.305	Leadership Seminar II (capstone)

##### Leadership Communication Core

3 s.h.

CMS06.206	Interpersonal Communication
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##### Interdisciplinary Core

6 s.h.

*(Choose any two)*

MGT06.300	Organizational Behavior
MGT06.304	Organizational Change and Development
SOC08.353	The Sociology of Complex Organizations
SOC08.230	Self and Society
FNDS21.308	Group Theory and Behavior in Instruction
FNDS21.301	Educational Policy: Introduction to Decision Making
EDPA02.320	Public Administration
PSY08.310	Industrial/Organizational Psychology
PSY01.100	Social Psychology

## **Thomas N. Bantivoglio Honors Program Concentration**

**Kathleen L. Pereles , Coordinator**  
**Keith and Shirley Campbell Library**  
**856-256-4643**  
**pereles@rowan.edu**

The Thomas N. Bantivoglio Honors Concentration is a 6 course concentration program open to all students in every academic major and college. Students earn an Honors Concentration in addition to their program degree. As students participate in their disciplinary major, the Honors Concentration plays a complementary and crucial role in their growth towards career preparation and civic participation. Participation in the Bantivoglio Honors Concentration affords students with an unique educational experience at Rowan. At graduation ceremonies, Bantivoglio Scholars receive special recognition and their accomplishments are highlighted in the Commencement Program and on their transcripts.

The concentration emphasizes interdisciplinary learning, challenging scholastic work, enhanced classroom experiences, and participation in a learning community of intellectually curious and academically talented student colleagues and committed faculty. The concentration offers an opportunity for students to study topics which cannot be addressed by one academic field of study (e.g., global warming) and which are more effectively studied using perspectives from more than one discipline. Students are encouraged to find ways to integrate the content from their major fields of study with the content from other areas of study. The integration element of Honors classes enriches students' educational experiences by providing them with a way to make connections among ideas and disciplines.

Honors classes are small so that students have the opportunity to engage in active learning with faculty who are committed to helping each student develop his/her talents and skills as a scholar and to work collaboratively with other Honors students in a wide range of academic fields. Honors classes offer enhanced educational experiences in the form of field trips, special speakers, independent study projects with individual professors, and participation at academic and professional conferences.

Participation in the Bantivoglio Honors Concentration affords students the privilege of designated Honors-only housing in which interaction among the Honors students is encouraged and supported by extra-curricular activities. Honors students have priority registration, extended library borrowing privileges, free attendance at educationally enhancing campus activities (e.g., theatre and concerts), and paid research assistantships.

Applications for admission to the Bantivoglio Honors Concentration are reviewed by the Coordinator. Freshmen students are accepted based on a combination of standardized test scores, significant achievement in high school, and participation in extra-curricular activities. Rowan University students and transfer students may apply to the concentration if they have a GPA of 3.5 or higher.

To graduate with an Honors Concentration, students must complete at least six (6) Honors courses. At least four (4) of the Honors courses must be interdisciplinary and a maximum of two (2) courses may be discipline-specific. With limited exceptions, students must complete at least one Honors course during each year they attend Rowan and must receive A's or B's in all Honors courses. Students must also earn accumulative GPA of 3.45 and a Honors GPA of 3.45. Transfer students may transfer in a maximum of two (2) Honors courses as approved by the Coordinator.

Each semester, there are a number of different Honors courses offered. These courses are designated as "Honors-Interdisciplinary" or "Honors-Discipline Specific." There are courses offered in all of the Colleges within the University. Some courses fulfill general education requirements, some fulfill degree requirements, and some are taken as "electives."

A course is designated "interdisciplinary" when it addresses a topic that is too multi-faceted or complex to be taught effectively using only one discipline or point of view. Interdisciplinary courses include information from more than one academic field of study or school of thought and require students to develop their understanding of the topic by integrating or synthesizing the various perspectives. A course on the causes and consequences of unemployment or a course on the effect of art on social causes would be interdisciplinary.

A course is designated "discipline-specific" when it addresses a topic in a specific field of study. A course in Accounting or Calculus would be discipline specific.

It is expected that Bantivoglio Scholars will be active participants in the extra-curricular activities associated with the Honors Concentration. Students should take full advantage of the plays, concerts, lectures, service projects, educational field trips, and social activities sponsored by the Bantivoglio Honors Concentration and the Honors Students' Organization.

## Women's Studies Concentration

**Ieva Zake , Coordinator**  
**Keith and Shirley Campbell Library**  
**856-256-4500 Ext 3515**  
**zake@rowan.edu**

Women's Studies is a multi-disciplinary global concentration offering courses to students in all majors. Courses from the concentration may be used as electives or as part of the general education requirement and many Women's Studies courses fulfill the global/multicultural designation. The major objectives of the concentration are to increase knowledge about women and gender; to examine women's roles across disciplines; to stimulate re-evaluation of the roles of women and men in society; to increase awareness of the status of women; and to value the contributions of women across cultures and time periods. The students are required to complete the core course Women in Perspective as well as take 12 credits from among the first and second tier courses.

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

<a href="#">INTR01.130</a>	Women in Perspective
<b>First Tier Courses:</b>	
<a href="#">ARH03.340</a>	Survey of Women Artists
<a href="#">INTR01.200</a>	Issues in Women's Health
<a href="#">CMS01.323</a>	Images of Gender in Popular Culture
<a href="#">CMS01.318</a>	Communicating Gender
<a href="#">ECON04.225</a>	Women IN THE eCONOMY
<a href="#">ENGL02.200</a>	Women in Literature
<a href="#">HIST05.425</a>	History of Feminisms
<a href="#">HIST05.455</a>	Gender, Sexuality, and History
<a href="#">HIST05.422</a>	Women in American History
<a href="#">HIST05.417</a>	Women in Islam
<a href="#">HIST05.418</a>	Women in Europe to 1700
<a href="#">HIST05.419</a>	Women in Modern Europe
<a href="#">HIST05.</a>	Selected Topics: Women in African History
<a href="#">HIST05.</a>	Selected Topics: Sexuality and Gender in History
<a href="#">INTR01.430</a>	Women, Sex, and Power: Capstone Seminar in Women's Studies
<a href="#">LAWJ05.346</a>	Women, Crime and Criminal Justice
<a href="#">PHIL09.328</a>	Philosophy of Gender
<a href="#">PHIL09.346</a>	Feminist Ethics
<a href="#">POSC07.311</a>	Women and American Politics
<a href="#">PSY01.200</a>	The Psychology of Women

[RTF03.272](#) Images of Women in Film  
[SOC08.493](#) Seminar on Gender Roles  
[SOC08.370](#) The Sociology of Women  
[SOC08.440](#) Selected Topics: Men and Masculinity  
[HIST05.393](#) Women in African History  
 Selected Topics courses in various disciplines (see the Coordinator of the Program more information)

Second Tier Courses:

[ENGL02.216](#) African American Literature to Harlem Renaissance  
[ANTH02.322](#) Sex and Sex Roles in Anthropological Perspective  
[HIST05.376](#) Afro-American History to 1865  
[HIST05.377](#) Afro-American History since 1865  
[HIST05.492](#) Seminar: History of Witchcraft  
[HIST05.](#) Selected Topics: Family History  
[PHIL09.369](#) Philosophy of Science  
[PSY05.217](#) The Psychology of Gender and Alcoholism/Drug Abuse  
[PSY05.310](#) The Psychology of Human Sexuality

Third Tier Courses:

[ANTH02.310](#) Indians of North America  
[ANTH02.210](#) Natives of South America  
[HIST05.408](#) Chinese Cultural History  
[INAR05.302](#) Contemporary American Family  
[POSC07.323](#) The Politics of Race, Poverty and Welfare in Urban Areas  
[PSY05.425](#) Family Psychology and Alcoholism/Drug Abuse  
[PSY01.202](#) Combating Child Abuse  
[RTF03.280](#) Afro- American Film  
[SOC08.220](#) The Sociology of the Family  
[SOC08.399](#) Sociology of the Holocaust  
[SOC08.440](#) Special Topics: Comparative Family  
[SOC08.436](#) Sociology of Medicine  
[HONORS](#) From Nancy Drew to Lara Croft: Historical and Critical Dimensions of the Female Detective Genre  
[FNDS21.300](#) Intercultural Studies

# **Rohrer College of Business**

**Edward J. Schoen , Dean**  
**Edgar F. Bunce Hall**  
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**Margaret Van Brunt , Assistant Dean**  
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**Karen Siefring , Assistant to the Dean, Advising**  
**Edgar F. Bunce Hall**  
**856-256-4037**  
**siefring@rowan.edu**

## **Mission**

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

- The College of Business Faculty make quality teaching, supported by relevant scholarship, their highest priority.
- 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 College of Business promotes entrepreneurship throughout the University and in the regional community.

## **Vision**

The vision of the College of Business is to provide its students with a quality business education which enables them to achieve successful careers in the dynamic environment of the 21st century.

## **Goals**

The College strives for quality personal education for both undergraduate and graduate students. Faculty members are encouraged to work on continuous improvement of instruction and curriculum. They are also encouraged to undertake scholarly activity to remain current with the theories, concepts and practices in their teaching fields.

## **Requirements**

The General Education component of the undergraduate curriculum for the degree programs in Business Administration and Accounting must comprise at least 50% of the student's four-year program, and students pursuing undergraduate degree programs offered by the other colleges of Rowan University are not permitted to take more than 25% of their baccalaureate program courses from the College of Business.

Moreover, no student will be permitted to enroll in upper division courses (level 300 and higher) offered by the College of Business unless he/she has completed the prerequisite and (1) has been admitted to the College of Business as a Business Administration (501) or Accounting (503) major; (2) is pursuing the Minor in Business; (3) is taking an upper division course as a recommended elective as part of a major program offered by another college at Rowan University; or (4) is taking an upper division course as a non-matriculating student for transfer to another academic institution. Transfer students should note that the degree programs in Business Administration and Accounting require at least 50% of the business credit hours be earned at Rowan University.

## Accreditation

Rowan University's business programs are accredited by The Association to Advance Collegiate Schools of Business (AACSB International). To achieve this prestigious accreditation, the business program successfully demonstrated a wide range of quality standards relating to curriculum, faculty resources, admissions, degree requirements, facilities, financial resources, and intellectual climate.

## Programs Offered

The College of Business offers the following programs to serve its undergraduate and graduate students: a Bachelor of Science in Business Administration program in which students can pursue specializations in Entrepreneurship, Human Resource Management and Management; a Bachelor of Science in Accounting; a Bachelor of Science in Finance; a Bachelor of Science in Management Information Systems; a Bachelor of Science in Marketing; a minor in Business Administration; and a Master of Business Administration (MBA) degree. The College seeks to ensure that each student completing a program of study has a professional business education grounded in the liberal arts.

The aims of the program are to:

- enable students to develop a broad general management approach toward organizations and the changing social and international environments they encounter;
- foster the students ability to develop and organize information for critical analysis as the basis for decision making;
- enable students to understand standards of professional and ethical behavior high are consistent with reasonable societal expectations; and
- develop in students the communications and technological expertise required for initial positions, as well as for career growth.

## Departments

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

## Core Requirements

### B.S. in Business Administration

<b>General Education</b>	52 s.h.
A. Communications	9 s.h.
COMP01.111	College Composition I 3 s.h. or
COMP01.105	Integrated College Composition I 4 s.h.
COMP01.112	College Composition II
CMS06.202	Public Speaking
B. Math and Science	13 s.h.
MATH01.130	Calculus I 4 s.h. or
MATH03.125	Calculus Techniques and Applications 3 s.h.
MATH02.260	Statistics I
Take one course from the list of approved General Education computing courses, having a course identification number of CS0x.xxx.	
Choose a lab science course from approved general education courses.	
C. Social and Behavioral Sciences	9 s.h.
ECON04.101	An Introduction to Economics - A Macroeconomic Perspective
ECON04.102	An Introduction to Economics - A Microeconomic Perspective
Choice from approved general education courses (Psychology or Sociology recommended)	
D. History, Humanities, Language	6 s.h.
Choose courses from approved general education courses.	
E. Artistic and Creative Experience	3 s.h.
Choose course from approved general education courses.	

F. Non-Program Courses 12 s.h.

**Non-Business Electives** 8 s.h.

Any university non-business catalog course or non-business approved transfer course; consult with advisor.

**Required courses for all College of Business Students** 27 s.h.

Sophomore Year

- ACC03.210 Principles of Accounting I
- ACC03.211 Principles of Accounting II
- MGT98.242 Legal Environment of Business
- MKT09.200 Principles of Marketing

Junior and Senior Years

- MGT06.305 Operations Management
- FIN04.300 Principles of Finance
- MGT06.300 Organizational Behavior
- OR*
- MGT06.309 Organizational Behavior WI
- MIS02.334 Management Information Systems
- MGT06.402 Business Policy

**Specialization Courses** 30 s.h.

Senior Standing as a Business Major is defined as:

1. minimum of 90 credit hours completed
2. Business Administration or Accounting Major

Junior Standing as a Business Major is defined as:

1. minimum of 57 credit hours completed
2. Business Administration or Accounting Major

Sophomore Standing as a Business Administration or Accounting Major is defined as:

1. minimum of 24 credit hours completed

Minor in Business

The Minor in Business requires students to complete 15 credit hours in general education requirements. A student must achieve a minimum 2.5 GPA in these courses.

**Required Prerequisite Courses** 15 s.h.

- ECON04.101 An Introduction to Economics - A Macroeconomic Perspective
- ECON04.102 An Introduction to Economics - A Microeconomic Perspective
- STAT02.260 Statistics I
- CS03.125 Calculus Techniques & Applications

**Business Courses** 21 s.h.

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

Lower Division

- MGT98.242 Legal Environment of Business
- ACC03.210 Principles of Accounting I
- ACC03.211 Principles of Accounting II
- MKT09.200 Principles of Marketing

Upper Division

- MGT06.300 Organizational Behavior OR 0506.309 Organizational Behavior - WI

## Accounting and Finance

Carol Welsh , Chair  
Edgar F. Bunce Hall  
856-256-4039  
welsh@rowan.edu

The Accounting and Finance Department awards a B.S. in Accounting and a B.S. in Finance. Foundation courses offer students, regardless of their specializations, a solid basis in accounting and financial theory. At the upper levels, courses are designed to qualify students for a wide range of careers in the accounting and the financial environment.

### B.S. Accounting

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

Students working toward a B.S. in Accounting must maintain a 2.00 grade point average overall as well as a 2.50 grade point average overall in the business core and Accounting major.

Course requirements **General Education** 52-54 s.h.

**Business Core** 27 s.h.

ACC03.210 Principles of Accounting I  
ACC03.211 Principles of Accounting II  
MGT98.242 Legal Environment of Business  
MKT09.200 Principles of Marketing  
MGT06.305 Operations Management  
FIN04.300 Principles of Finance  
MGT06.300 Organizational Behavior

OR

MGT06.309 Organizational Behavior(WI)  
ACC03.320 Accounting Information Systems  
MGT06.402 Business Policy

**Accounting Major Requirements** 30 s.h.

ACC03.310 Intermediate Accounting I  
ACC03.311 Intermediate Accounting II  
ACC03.326 Cost Accounting  
ACC03.410 Auditing  
ACC03.416 Advanced Accounting  
ACC03.428 Integrative Accounting Seminar  
ACC03.430 Individual Taxation  
ACC03.431 Taxation of Business Entities  
FIN04.435 International Financial Management  
MGT98.400 Law for Accountants

**Business Elective** 3 s.h.

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

**Free Electives** 7-8 s.h.

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

## B.S. in Finance

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

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

### Course requirements:

#### General Education

52 s.h.

It is recommended that Statistics II be taken in preparation for senior-level (400-level) Finance courses.

#### Business Core

27 s.h.

ACC03.210	Principles of Accounting I
ACC03.211	Principles of Accounting II
MGT98.242	Legal Environment of Business
MKT09.200	Principles of Marketing
MGT06.305	Operations Management
FIN04.300	Principles of Finance
MGT06.300	Organizational Behavior
OR	
MGT06.309	Organizational Behavior (WI)
MIS02.334	Management Information Systems
MGT06.402	Business Policy

#### Finance Specialization Required:

30s.h.

ACC03.310	Intermediate Accounting I
ACC03.316	Concepts in Federal Taxation
FIN04.422	Financial Management I
FIN04.423	Financial Management II
FIN04.431	Investments/Portfolio Analysis
FIN04.433	Financial Institutions and Markets
FIN04.435	International Financial Management

#### Electives:

Elective courses are generally offered only once an academic year.

Select any three of the following courses:

ACC03.311	Intermediate Accounting II
FIN04.424	Seminar in Finance
FIN04.425	Risk Management
FIN04.430	Supervised Internship in Finance
FIN04.327	Selected Topics in Finance

#### Business Elective

3 s.h.

Choice of any 200, 300, 400, 500 level College of Business course or Business Ethics (PHIL09.322), and excluding any internship other than Supervised Internship in Finance (FIN04.430)

#### Free Electives

8 s.h.

#### Total Credits for the Program

120 s.h.

## Management and Management Information Systems

Dilip Mirchandani , Chair

Edgar F. Bunce Hall

856-256-4078

mirchandani@rowan.edu

The Management and Management Information Systems Department awards a B.S. in Business Administration with specializations in Entrepreneurship, Human Resource Management and Management, as well as a B.S. in Management Information Systems (MIS). The business courses offer students a solid grounding in management theory that contributes to their professional preparation. Majors benefit from a curriculum that combines liberal arts requirements, intensive business theory and fundamentals, and many hands-on learning opportunities.

## Management Information Systems

**Diane Hamilton , Advisor**  
**Edgar F. Bunce Hall**  
**856-256-4760**  
**hamilton@rowan.edu**

The B.S. in Management Information Systems prepares students for careers in a rapidly changing technological world by training them to analyze business problems, challenges and opportunities, and to subsequently design, develop, implement and maintain business solutions through the use of information and information technology.

Students specializing in MIS learn how to analyze complex business situations, solicit information from individuals and systems, write specification documents, effectively communicate with both technical and non-technical people, design and develop technological solutions, implement and integrate various technologies, propose and evaluate alternative solutions, develop and manage project plans, and assess system success and organizational impacts. Critical thinking and communication skills are emphasized as students become proficient in designing and developing Web-based electronic commerce and intranet solutions, networking solutions, and relational database solutions.

Students working toward a B.S. in Management Information Systems must maintain a 2.00 grade point average overall and a 2.50 grade point average in all MIS and business course requirements.

The specific requirements for this program are:

<b>General Education</b>		52-54 s.h.
A. Communications		9-10 s.h.
COMP01.111	College Composition I	3 s.h.
OR		
COMP01.105	Integrated College Composition I	4 s.h.
COMP01.112	College Composition II	
CMS06.202	Public Speaking	
B. Math and Science		14-15 s.h.
MATH03.125	Calculus Techniques and Applications	3 s.h.
OR		
MATH01.130	Calculus I	4 s.h.
STAT02.260	Statistics I	
CS01.140	Enterprise Computing I	
	Choose a lab science course from approved general education courses.	
C. Social and Behavioral Sciences		9 s.h.
ECON04.101	An Introduction to Economics - A Macroeconomic Perspective	
ECON04.102	An Introduction to Economics - A Microeconomic Perspective	
	Choice from approved general education courses (Psychology or Sociology recommended)	
D. History, Humanities, Language		6 s.h.
	Choose courses from approved general education courses.	
E. Artistic and Creative Experience		3 s.h.
	Choose course from approved general education courses.	
F. Non-Program Electives		10-12 s.h.
<b>Business Core</b>		27 s.h.
MKT09.200	Principles of Marketing	
ACC03.210	Principles of Accounting I	
ACC03.211	Principles of Accounting II	

MGT98.242	Legal Environment of Business
MGT06.305	Operations Management
FIN04.300	Principles of Finance
MGT06.300	Organizational Behavior OR
MGT06.309	Organizational Behavior (WI)
MIS02.334	Management Information Systems
MGT06.402	Business Policy

### Management Information Systems

36 s.h.

CS04.141	Enterprise Computing II
MIS02.338	Design of Database Systems (fall)
MIS02.330	Business Systems (fall)
MIS02.322	Principles of Systems Design (fall)
MIS02.410	Advanced Database Management (spring)
MIS02.427	Network Management (spring)
MIS02.428	Business Web Applications (fall)
MIS02.425	Project Management (fall)
MGT06.330	Managing International Business
MIS02.430	E-Business: IS Perspective (spring)
MIS02.420	MIS Capstone Experience (spring)

### Choose one course from the following:

ACC03.326	Cost Accounting
FIN04.422	Financial Management I
MGT06.304	Organizational Change and Development
MGT06.326	Entrepreneurship and Small Business Management
MGT06.361	Supervised Internship
MGT06.401	Independent Project
MKT09.305	Internet Marketing
MGT06.420	Principles of Training/Training Management
MIS02.300	Integrated Business Software Tools
MIS02.424	Seminar in MIS
CMS01.400	Writing for the Workplace
CS01.102	Introduction to Programming
CS01.205	Computer Lab Techniques
CS04.110	An Introduction to Programming Using Robots
CS04.222	Data Structure and Algorithms
PHIL09.230	Symbolic Logic
PHIL09.322	Business Ethics
CMS06.206	Interpersonal Communication
GEOG06.360	Introduction Geographic Information Systems
INTR01.265	Computers and Society

### Free Electives

4 s.h.

### Total Credits for the Program

120 s.h.

### Management

The Management specialization prepares students for meaningful positions in management, while providing them with a foundation for career growth. The management program is designed to provide a strong foundation in both traditional and innovative management techniques, blending theory and practice that includes classroom instruction, internships, and lectures by management practitioners. Students enrolled in the management program are expected to: 1) learn important management concepts, skills and techniques focused on managing and supervising other workers, 2) think critically, 3) analyze and solve organizational problems, 4) improve their oral and written communication skills, and 5) build their team skills.

The program offered within the department will emphasize the increasing importance of information technology in business decision making, a concern for legal, and ethical and social responsibility, the quality management and control tools for maintaining a competitive advantage, the globalization of the business environment, and the management of a new, diverse workforce.

Students working toward a B.S. in Business Administration with a Management specialization must maintain a 2.00 grade point average overall and a 2.50 grade point average in all business courses taken.

Course requirements:

**General Education** 52-54 s.h.

The specific general education requirements for this program are the same as for all College of Business students.

**Business Core** 27 s.h.

- MKT09.200 Principles of Marketing
- ACC03.210 Principles of Accounting I
- ACC03.211 Principles of Accounting II
- MGT98.242 Legal Environment of Business
- MGT06.305 Operations Management
- FIN04.300 Principles of Finance
- MGT06.300 Organizational Behavior OR
- MGT06.309 Organizational Behavior (WI)
- MIS02.334 Management Information Systems
- MGT06.402 Business Policy

**Management Specialization** 18 s.h.

- WA01.408 Writing as Managers (WI)
- OR
- WA01.400 Writing for the Workplace (Designated Section for Management Students)
- MGT06.310 Leadership and Supervision for Management
- MGT06.311 Decision-Making Tools for Managers
- MGT06.330 Managing International Business
- MGT06.405 Business Management Simulation
- MGT06.361 Supervised Internship OR
- MGT06.430 Business Field Experience

**Management Electives** 15 s.h.

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

**Quantitative Skills**

- MIS02.322 Design of Database
- MKT09.384 Research Methods in Marketing-WI
- FIN04.42 Financial Management
- MGT06.404 Quality Management
- MIS02.300 Integrated Business Software Tools
- MGT06.354 Managerial Data Analysis
- MGT06.426 New Venture Development
- MKT09.378 Product, Price, and New Venture Management
- ACC03.426 Cost Accounting
- ECON04.390 Risk and Insurance

**Qualitative People Skills**

- MGT06.304 Organizational Change and Development
- MGT06.302 Management of Human Resources
- MGT06.420 Principles of Training and Training Management
- MGT06.315 Recruitment and Selection
- MGT06.327 Strategic Issues in Family Business
- MKT09.382 Sales Force Management
- MKT09.376 Consumer Behavior
- PHIL09.322 Business Ethics
- SPAN05.312 Spanish for Business
- MGT06.361 Supervised Internship (additional 3.0 s.h.)

**Organizational Task Skills**

- MGT06.450 Technology Entrepreneurship
- MGT06.340 Entrepreneurship and Innovation
- MGT06.326 Entrepreneurship and Small Business Management
- MKT09.360 Services Marketing
- MIS02.430 E-Business: IS Perspectives
- MKT09.372 Retailing

MKT09.350	Management of Advertising and Promotion
EDPA02.320	Public Administration
SOC08.401	Human Service Organizations
SOC08.353	The Sociology of Complex Organizations
MGT06.312	Special Topics in Management I: Changes in the Economic Environment
MGT06.313	Special Topics in ManagementII: Business Seminar

**Free Electives**

6-8 s.h.

**Total Credits for Program**

120 s.h.

**Human Resource Management**

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

Course requirements:

**General Education**

52-54 s.h.

The specific general education requirements for this program are the same as for all College of Business students.

**Business Core**

27 s.h.

MKT09.200	Principles of Marketing
ACC03.210	Principles of Accounting I
ACC03.211	Principles of Accounting II
MGT98.242	Legal Environment of Business
MGT06.305	Operations Management
FIN04.300	Principles of Finance
MGT06.300	Organizational Behavior OR
MGT06.309	Organizational Behavior (WI)
CS02.334	Management Information Systems
MGT06.402	Business Policy

**Human Resource Management Specialization**

21 s.h.

MGT06.302	Management of Human Resources
MGT06.330	Managing International Business
MGT06.315	Recruitment and Selection
HR16.401	Labor/Employee Relations
MGT06.425	Management of Compensation
MGT98.337	Legal Aspects of Human Resource Management -WI
MGT06.361	Supervised Internship

**Human Resource Management Electives**

15 s.h.

Select 15 s.h. from the following list:

MGT06.319	Special Topics in Human Resource Management
MGT06.304	Organizational Change and Development
MGT06.318	Human Resources Information Systems
CS02.300	Integrated Software Tools for Business
MGT06.404	Quality Management
MGT06.420	Principles of Training and Training Management
PHIL09.322	Business Ethics
ECON04.345	Labor Economics
SPAN05.312	Spanish for Business
STAT02.261	Statistics II
PSY05.402	Psychology of Conflict Resolution
MGT06.361	Supervised Internship

OR

any upper-level non-required courses offered by Rowan University's College of Business

**Free Electives**

6-8 s.h.

**Total Credits for Program**

120 s.h.

## Entrepreneurship

The specialization in Entrepreneurship was created to meet the needs of students who want to develop and run their own companies or engage in entrepreneurship management practices. Through courses such as New Venture Development, Strategic Issues in Family Business, and Entrepreneurship and Innovation, students gain insight into what it takes to be their own boss. Students working toward a B.S. in Business Administration with a specialization in Entrepreneurship must maintain a 2.00 grade point average overall and a 2.50 grade point average in all business courses taken.

Course requirements:

### General Education

52-54 s.h.

The specific general education requirements for this program are the same as for all College of Business students.

### Business Core

27 s.h.

MKT09.200	Principles of Marketing
ACC03.210	Principles of Accounting I
ACC03.211	Principles of Accounting II
MGT98.242	Legal Environment of Business
MGT06.305	Operations Management
FIN04.300	Principles of Finance
MGT06.300	Organizational Behavior OR
MGT06.309	Organizational Behavior (WI)
MIS02.334	Management Information Systems
MGT06.402	Business Policy

### Entrepreneurship Requirements

12 s.h.

MGT06.240	Entrepreneurship and Innovation
MGT06.330	Managing International Business (M/G)
OR	
MKT09.379	International Marketing (M/G)
MKT09.384	Research Methods in Marketing (WI)
MGT06.415	Management Consulting Field Study

### Entrepreneurship Electives

12 s.h.

MGT06.326	Entrepreneurship and Small Business Management
MGT06.426	New Venture Development
MGT06.327	Strategic Issues in Family Business
MGT06.328	Evaluating Franchising Opportunities
MGT06.342	Financing and Legal Aspect of Entrepreneurship
ENT06.346	Social Entrepreneurship
MGT06.361	Supervised Internship
MGT06.344	Entrepreneurial Growth Strategies
MGT06.450	Technology Entrepreneurship

### Business Electives

9 s.h.

Select 9 s.h. from the following list:

MKT09.378	Product, Price, and New Venture Management
MKT09.360	Services Marketing
MKT09.391	Business to Business Marketing
MGT06.304	Organizational Change and Development
MGT06.405	Business Management Simulation
MIS02.300	Integrated Business Software Tools
ACC03.326	Cost Accounting
ACC03.328	Entrepreneurial Accounting
PHIL09.322	Business Ethics
THD07.365	Theatre Management
PSY02.320	Public Administration
ECON04.307	Economic Development
ECON04.340	Regional Economics of Southern N.J.

### Free Electives

6-8 s.h.

### Total Credits for Program

120 s.h.

## Marketing

**Phillip A. Lewis , Chair**  
**Edgar F. Bunce Hall**  
**856-256-4500**  
**lewisph@rowan.edu**

The Marketing Department awards a Bachelor of Science Degree in Marketing.

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

Students majoring in Marketing must maintain a 2.00 grade point average overall and a 2.50 grade point average in all business courses taken at Rowan University.

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

### B.S. Marketing

#### General Education

52-54 s.h.

The specific general education requirements for this program are the same as for all College of Business students.

#### Business Core

27 s.h.

ACC03.210	Principles of Accounting I
ACC03.211	Principles of Accounting II
MGT98.242	Legal Environment of Business
MKT09.200	Principles of Marketing
MGT06.305	Operations Management
FIN04.300	Principles of Finance
MGT06.300	Organizational Behavior
MIS02.334	Management Information Systems
MGT06.402	Business Policy

#### Marketing Major

33 s.h.

Required:

MKT09.376	Consumer Behavior
MKT09.384	Research Methods in Marketing (WI)
MKT09.379	International Marketing (M/G)
MKT09.403	Strategic Marketing Management

Electives: Elective courses are generally offered only once an academic year.

Select 15 s.h. from the following list:

MKT09.305	Internet Marketing
MKT09.315	Personal Selling
MKT09.330	Marketing Channels
MKT09.350	Management of Advertising and Promotion
MKT09.360	Services Marketing
MKT09.372	Retailing
MKT09.378	Product, Price & New Venture
MKT09.375	Business Logistics
MKT09.382	Sales Force Management
MKT09.390	Selected Topics in Marketing
MKT09.391	Business to Business Marketing
MKT09.405	Management Communications and Public Relations
MKT09.411	Supervised Internship in Marketing

#### Marketing and Business Elective:

6 s.h.

The Business electives can be any two courses from the following list:

Any non-required 300 or 400 level course offered by the Marketing, Management/MIS, or Accounting/Finance departments except any internship course offered by any other department.

**Free Electives**

6-8 s.h.

**Total Credits for Program**

120 s.h.

# College of Communication

**Allen C. Monroe , Dean**  
**Bozorth Hall**  
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**Linda C. Sweeten , Assistant Dean for Administration**  
**Bozorth Hall**  
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**Esther J. Mummert , Advisor**  
**Bozorth Hall**  
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## History

The College of Communication was established July 1, 1996, after unanimous final approval by the Rowan University Board of Trustees at their June, 1996 meeting.

## Programs Offered

The College offers six majors: Advertising, Communication Studies, Journalism, Public Relations, Radio/TV/Film, and Writing Arts. The department of Writing Arts administers the general education writing program for the University, a dual major in Writing Arts and Elementary or Early Childhood Education, and a stand-alone major. The College houses two graduate programs: the M.A. in Public Relations and the M.A. in Writing. Journalism and Advertising offer a minor in their program, and Writing Arts offers a concentration in Creative Writing.

The College of Communication 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. Internships are encouraged in all majors, and Public Relations/Advertising students are required to do an internship.

## Departments

The College of Communication houses five departments:  
Communication Studies  
Journalism  
Public Relations/Advertising  
Radio/Television/Film, and Writing Arts

## Services

In addition to regular classrooms, the College of Communication makes extensive use of specialized laboratories. Students learn in new, state-of-the-art, digital production facilities that include two full video/film production studios, a satellite connection, three radio production labs, digital video/film editing suites, and a 130-seat screening theatre. Students can learn layout, desktop publishing, and numerous other skills in the journalism laboratory.

The college also provides students with two networked writing labs and tutorial services in writing for a variety of classes.

## Core Requirements

All of the College of Communication major programs, except Writing Arts, require thirteen major courses. Writing Arts requires ten major courses and allows for five non program electives.

Students should also refer to the General Education requirements in the Academic Affairs section in this catalog.

<b>General Education</b>	52-53 s.h.
Communication	9-10 s.h.
COMP01.111 College Composition I	
OR	
COMP01.105 Integrated College Composition	
COMP01.112 College Composition II	
CMS06.202 Public Speaking	
Science and Mathematics	10 s.h.
Mathematics	
Lab Science 4 s.h.	
Choice	
Social and Behavioral Sciences	12 s.h.
Sociology choice	
Psychology choice	
Economics or Political Science choice	
Choice	
History, Humanities and Languages	12 s.h.
Literature choice	
History or Philosophy choice	
Choice	
Choice	
Artistic and Creative Experience	3 s.h.
Non-Program Courses	6 s.h.
(Communication Studies, Advertising/Public Relations, Journalism, Radio/TV/Film)	
(Writing Arts)	15 s.h.

## Communication Studies

**Lorin B. Arnold , Chair**  
**Hawthorn Hall**  
**856-256-4293**  
**arnold@rowan.edu**

The Communication Studies department offers a Bachelor of Arts in the discipline of communication that enables students to develop a sophisticated understanding of communication theory, research, and strategies. Courses such as Persuasion and Social Influence, Interpersonal Communication, Small Group Communication, Rhetorical Theory, Ethical Issues in Human Communication, and Seminar in Communication Studies provide a broad and rigorous grounding in communication theory, research, and practice.

### Bachelor of Arts in Communication Studies

<b>General Education</b>	52-53 s.h.
<b>Major Requirements</b>	18 s.h.
CMS01.220 Introduction to Communication Studies	
CMS01.300 Communication Theory	

- CMS01.320 Ethical Issues in Human Communication
- CMS06.330 Communication Studies Research Methods
- CMS06.406 Seminar in Communication Studies

**Communication Studies Emphases**

12 s.h.

Select four courses from one of the following groups:

A. Rhetoric/Cultural Criticism

- CMS01.203 Mass Media and Their Influences
- CMS01.222 Rhetorical Theory
- CMS01.323 Images of Gender in Popular Culture
- CMS05.330 International Media Communication
- CMS06.441 Rhetorical Criticism
- CMS06.205 Persuasion and Social Influence
- CMS06.406 Special Topics in Communication
- MEDA05.301 Political Communication

B. Interpersonal/Organizational Communication

- CMS01.221 Organizational Communication Theory and Research
- CMS01.321 Health Communication
- CMS01.322 Family Communication
- CMS06.206 Interpersonal Communication
- CMS06.246 Small Group Communication
- CMS06.316 Intercultural Communication
- CMS01.318 Communicating Gender
- CMS06.406 Special Topics in Communication

**Cross-Emphasis Elective**

3 s.h.

Each student will select and complete one course from the emphasis area in which they are NOT specializing (with a grade no lower than a C-).

**Related Electives**

9 s.h.

Select three courses from the following group:

- CMS99.361 Intro to Survey Research
- CMS01.207 Fiction and Film
- CMS01.221 Organizational Communication Theory and Research
- CMS01.222 Rhetorical Theory
- CMS01.321 Health Communication
- CMS01.322 Family Communication
- CMS01.323 Images of Gender in Popular Culture
- CMS01.350 Practicum in Communication Studies
- CMS01.400 Writing for the Workplace
- RTF03.220 Intro to Electronic Media
- RTF03.205 TV History and Appreciation
- ADV04.330 Intro to Advertising
- PR06.350 Intro to Public Relations
- CMS07.335 Communication Law
- CMS99.363-5 Field Experience I, II, & III
- CMS99.462 Public Opinion
- RTF10.270-1 Film History and Appreciation I/II
- RTF03.272 Images of Women in Film
- CMS01.305 Political Communication
- CMS05.280 Semantics
- CMS05.380 Linguistics
- CMS06.205 Persuasion and Social Influence
- CMS06.206 Interpersonal Communication
- CMS06.246 Small Group Communication
- CMS01.330 International Media Communication
- CMS06.300 Advanced Public Speaking
- CMS06.316 Intercultural Communication
- CMS01.318 Communicating Gender
- CMS06.340 Argumentation and Debate
- CMS01.305 Political Communication
- CMS06.406 Special Topics in Communication

<a href="#">CMS06.441</a>	Rhetorical Criticism	28-29 s.h.
<b>Free Electives</b>		120 s.h.
<b>Total Credits in Program</b>		

## Journalism

**Carl D. Hausman Jr., Chair**  
**Bozorth Hall**  
**856-256-4359**  
**hausman@rowan.edu**

The Department of Journalism houses the Journalism major and minor.

### Bachelor of Arts in Journalism

**Carl D. Hausman Jr., Advisor**  
**Bozorth Hall**  
**856-256-4359**  
**hausman@rowan.edu**

The Bachelor of Arts in Journalism prepares students for a variety of career opportunities in print journalism, broadcast journalism, online journalism and editing/publishing. The Whit, the weekly campus newspaper, is housed in the department.

### General Education 52-53 s.h.

Requirements are the same for all Communication students.

Note: Prerequisites are in parentheses ( ).

### Major Requirements 21 s.h.

<a href="#">JRN02.205</a>	Journalism Principles and Practices (CC1)	
<a href="#">JRN02.310</a>	News Reporting I (Journalism Principles and Practices)	
<a href="#">JRN02.319</a>	Media Ethics (Journalism Principles and Practices)	
<a href="#">JRN02.318</a>	Enterprise Journalism (News Reporting I)	
<a href="#">JRN02.335</a>	Communication Law	45 s.h.
<a href="#">CMS01.300</a>	Communication Theory (CC2)	
<a href="#">JRN02.410</a>	Problems in Contemporary Journalism (90 s.h. or perm.)	

### Sequences 12 s.h.

(Each student must choose at least one sequence.)

#### Print Journalism

<a href="#">JRN02.311</a>	News Reporting II (News Reporting I)	
<a href="#">JRN02.312</a>	Newspaper Feature Writing (News Reporting II)	
<a href="#">JRN02.411</a>	Copy Editing (News Reporting I)	
<a href="#">JRN02.317</a>	Publication Layout and Design	45 s.h.

#### Broadcast Journalism

<a href="#">JRN02.341</a>	Broadcast News Writing (News Reporting I)	
<a href="#">JRN02.307</a>	On-Camera Field Reporting (Broadcast News Writing)	
<a href="#">RTF03.222</a>	TV Production I (by permission)	
<a href="#">JRN02.305</a>	Broadcast Journalism: TV Newscast (News I & TV Prod. I)	

#### Online Journalism

<a href="#">JRN02.311</a>	News Reporting II (News Reporting I)	
<a href="#">JRN02.321</a>	Online News Writing (News Reporting I)	
<a href="#">JRN02.325</a>	Web Production and Editing for Mass Media (News Rep I)	
<a href="#">JRN02.314</a>	Photojournalism	45 s.h.

#### Editing and Publishing

<a href="#">JRN02.411</a>	Copy Editing (News Reporting I)	
<a href="#">JRN02.317</a>	Publication Layout and Design	45 s.h.
<a href="#">JRN02.425</a>	Advanced Publication Layout (Pub. Layout and Design)	
<a href="#">JRN02.322</a>	The Publishing Industry	45 s.h.

#### Related Electives 6 s.h.

(Each student must take 2 courses from this list.)

<a href="#">JRN02.425</a>	Advanced Publication Layout (Pub. Layout and Design)	
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JRN02.320	Broadcast Journalism: Radio (News Reporting I)
JRN02.305	Broadcast Journalism: TV Newscast (News I & TV Prod. I)
JRN02.341	Broadcast News Writing (News Reporting I)
JRN02.411	Copy Editing (News Reporting I)
JRN02.356	J. Field Experience I (75 s.h. and adviser's permission)
JRN02.358	J. Field Experience II (75 s.h. and adviser's permission)
JRN02.355	Journalism Practicum
JRN02.313	Magazine Article Writing 45 s.h.
JRN02.420	Newspaper Laboratory (30 s.h.)
JRN02.312	Newspaper Feature Writing (News Reporting II)
JRN02.311	News Reporting II (News Reporting I)
JRN02.307	On-Camera Field Reporting (Broadcast News Writing)
JRN02.321	Online News Writing (News Reporting I)
JRN02.314	Photojournalism 45 s.h.
JRN02.317	Publication Layout and Design 45 s.h.
PR06.354	The Impact of PR on the News
JRN02.322	The Publishing Industry (45 s.h.)
RTF03.220	The Television Industry
RTF03.222	TV Production I (by permission)
JRN02.325	Web Production and Editing for Mass Media (News Rep I)

Only two courses may transfer in the major.

### Free Electives

30 s.h.

Try to use at least 12 s.h. to build an area of expertise relevant to your program. These free electives can also be used to build a minor from another program.

### Minor in Journalism

**Carl D. Hausman Jr., Advisor**

**Bozorth Hall**

**856-256-4359**

**hausman@rowan.edu**

This program is designed to address the needs of students who wish to combine two areas of academic study into one profession (such as business journalism, or writing about the arts) or to increase their understanding of journalism from an academic standpoint, an option that may be particularly useful for education majors.

The program consists of 18 credits, and students must complete College Composition I (COMP01.111) and College Composition II (COMP01.112) and achieve an overall 2.5 GPA in order to be admitted to the minor.

### Required Courses

9 s.h.

Note: Prerequisites are in parentheses ( ).

JRN02.205	Journalism Principles and Practices (CCI)
JRN02.310	News Reporting I (Journalism Principles and Practices)
JRN02.318	Enterprise Journalism (News Reporting I)

### Electives (choose three)

9 s.h.

JRN02.425	Advanced Publication Layout (Pub Layout & Design)
JRN02.320	Broadcast Journalism: Radio (News Reporting I)
JRN02.305	Broadcast Journalism: TV Newscast (News Rep. I & TV Prod. I)
JRN02.341	Broadcast News Writing (News Reporting I)
JRN02.335	Communication Law (45 s.h.)
JRN02.411	Copy Editing (News Reporting I)
JRN02.313	Magazine Article Writing (45 s.h.)
JRN02.319	Media Ethics (Journalism Principles and Practices)
JRN02.312	Newspaper Feature Writing (News Reporting II)
JRN02.311	News Reporting II (News Reporting I)
JRN02.307	On-Camera Field Reporting (Broadcast News Writing)
JRN02.321	Online News Writing (News Reporting I)
JRN02.314	Photojournalism (45 s.h.)
JRN02.410	Problems in Contemporary Journalism (90 s.h. or permission)

JRN02.317 Publication Layout and Design (45 s.h.)  
JRN02.325 Web Production and Editing for Mass Media (News Reporting I)

Substitution of one course not on the above list of electives may be made with the approval of the student's adviser.

## Public Relations/Advertising

**Suzanne D. FitzGerald , Chair**  
**Bozorth Hall**  
**856-256-4265**  
**sparks@rowan.edu**

The Public Relations & Advertising Department offers majors in public relations and advertising and a minor in advertising. Core courses, such as Basic Public Relations Writing, offer students a solid foundation in communication, while upper level courses qualify students for a wide range of careers in public relations, advertising, and related fields. The department also offers the graduate program leading to an MA in Public Relations. The department advises a nationally acclaimed chapter of the Public Relations Student Society of America and a student chapter of the American Advertising Federation. Rowan University's Public Relations program has become but the 16th program in the country to receive CEPR accreditation from the Public Relations Society of America.

### Minor in Advertising

**Suzanne D. FitzGerald , Advisor**  
**Bozorth Hall**  
**856-256-4265**  
**sparks@rowan.edu**

<b>Requirements</b>		18 s.h.
ADV04.330	Intro to Advertising	
ADV04.331	Print Media Copywriting	
ADV04.430	Electronic Media Copywriting	
ADV04.432	Media Planning	
ADV04.360	Integrated Marketing Comm	
PR06.310	Intro PR/Adv Research	
<b>Total Hours Required for Graduation</b>		120 s.h.

### BA in Public Relations

**Suzanne D. FitzGerald , Advisor**  
**Bozorth Hall**  
**856-256-4265**  
**sparks@rowan.edu**

<b>General Education</b>		52-53 s.h.
Requirements are the same for all Communication students; see Core Requirements for this college.		
<b>Major Requirements</b>		33 s.h.

CMS01.300 Communication Theory  
PR99.462 Public Opinion  
PR06.350 Introduction to Public Relations  
ADV04.330 Introduction to Advertising  
PR06.301 Basic Public Relations Writing  
PR06.305 Advanced Public Relations Writing and Strategies  
PR06.310 Intro PR/Adv Research  
JRN02.317 Publication Layout & Design  
PR06.353 Case Studies in Public Relations (WI)(Fall)  
PR06.454 PR Planning (WI)(Spring)  
PR06.360 PR/Adv Field Experience I  
OR  
PR06.362 PR/Adv Field Experience II

**Related Electives**

6 s.h.

Select two courses from the following groups:

ADV04.360	Integrated Marketing Comm
ADV04.432	Media Planning
ADV04.430	Electronic Media Copywriting
JRN02.335	Communications Law
JRN02.319	Media Ethics
CMS01.203	Mass Media
PR06.354	Impact of PR on the News
PR06.359	PR Practicum
PR06.362	PR/Adv Field Exp II
PR06.364	PR/Adv Field Exp III
CMS01.321	Health Communication
CMS01.305	Political Communication
MGT06.300	Organizational Behavior
CMS06.246	Small Group Communication
JRN02.310	News Reporting I
JRN02.313	Magazine Article Writing
JRN02.312	Special Journalistic Writing
CMS06.205	Persuasion and Social Influence
RTF03.220	The Television Industry

**Free Electives**

30 s.h.

**Total Credits in Program**

120 s.h.

**BA in Advertising****Suzanne D. FitzGerald , Advisor****Bozorth Hall****856-256-4265****sparks@rowan.edu****General Education**

52-53 s.h.

Requirements are the same for all Communication students; see Core Requirements for this College.

**Major Requirements**

36 s.h.

CMS01.300	Communication Theory
ADV04.330	Introduction to Advertising
PR06.350	Intro to Public Relations
ADV04.331	Print Media Copywriting
ADV04.352	Advertising Strategies (Fall)
ADV04.430	Electronic Media Copywriting
ADV04.434	Advertising Campaigns (Spring)
JRN02.317	Publication Layout & Design
ADV04.432	Media Planning
ADV04.360	Integrated Marketing Comm
PR06.310	Intro PR/Adv Research
PR06.360	PR/Adv Field Experience I
OR	
PR06.362	PR/Adv Field Experience II

**Related Electives**

3 s.h.

JRN02.335	Communication Law
JRN02.319	Media Ethics
CMS01.203	Mass Media
PR06.354	Impact of PR on the News
ADV04.355	Advertising Practicum
PR06.362	PR/Adv Field Experience II
PR06.364	PR/Adv Field Experience III
CMS01.321	Health Communication
CMS01.305	Political Communication

MGT06.300	Organizational Behavior
CMS06.246	Small Group Communication
JRN02.310	News Reporting I
JRN02.313	Magazine Article Writing
JRN02.312	Special Journalistic Writing
CMS06.205	Persuasion and Social Influence
RTF03.220	The Television Industry

**Free Electives** 30 s.h.  
**Total Credits in Program** 120 s.h.

## Radio/Television/Film

**Joseph Bierman , Chair**  
**Bozorth Hall**  
**856-256-4289**  
**bierman@rowan.edu**

The Department of Radio/TV/Film offers students courses in production, business, history, and the aesthetics of the media industry. Students can select from two tracks within the program. Radio/TV/Film Production Emphasis. This track is based in the department's state-of-the-art, digital production facilities. Radio/TV/Film Critical Studies Emphasis. This track explores the structure and content of the media industry.

Students completing either track receive a broad-based liberal arts background and a strong preparation for either the media production industry or advanced media studies.

Outside the classroom, students can practice their specializations in student clubs and organizations, including Cinema Workshop (16mm and digital filmmaking), The Rowan Television Network (Channel 5 The University's Cable Channel), and WGLS-FM, the University's radio station. The Department of Radio/TV/Film offers an extensive internship program that includes Philadelphia, the Delaware Valley, New Jersey and the New York Metropolitan areas.

## Radio/Television/Film Production Specialization

**General Education** 51-52 s.h.  
Requirements are the same for all Communication students; see Core Requirements for this College.

**Major Requirements** 24 s.h.

RTF03.275	Applied Media Aesthetics
RTF03.224	Sound Communication
RTF03.270	Film History and Appreciation I
RTF03.205	TV History and Appreciation
RTF03.222	TV Production I
RTF03.370	Film Production I

Plus two of the following:

RTF03.220	The Television Industry
RTF03.221	The Radio Industry
RTF03.340	The Movie Industry

**Specialized Electives** 15 s.h.

GROUP I: 3 credits from among the following: Should be courses in communication, business, management, which will augment the broadcasting experience. Such courses may include, but are not limited to:

MGT06.101	Introduction to Management
MGT06.302	Management of Human Resources
MKT09.290	Marketing Basics
ADV04.330	Introduction to Advertising

ADV04.432	Media Planning
PR06.350	Intro to Public Relations
CMS07.335	Communication Law
CMS06.205	Persuasion and Social Influence

GROUP II: 6 credits from among the following: Should be courses in which the primary emphasis is on writing. Such courses may include, but are not limited to:

JRN02.210	Journalistic Writing
JRN02.313	Magazine Article Writing
JRN02.320	Electronic Journalism I: Radio
JRN03.305	Electronic Journalism II:TV
RTF03.393	Film Scenario Writing
RTF03.433	TVProgram Packaging
WA07.290	Creative Writing I
WA07.291	Creative Writing II
WA01.304	Writing with style
WA01.400	Writing for the Workplace

GROUP III: 6 credits from among the following courses in techniques, advanced production or professional experience. Such courses may include, but are not limited to:

JRN02.314	Photojournalism
RTF03.350	RTF Studio Practicum
RTF03.351	RTF Field Experience I
RTF03.352	RTF Field Experience II
RTF03.353	RTF Field Experience III
INAR39.330	General Photography
RTF03.271	Film History and Appreciation II
RTF03.272	Images of Women in Film
RTF03.371	Film Production II
RTF03.372	American Film Directors
RTF03.373	The Movie Industry
RTF03.470	Advanced Film Production
RTF03.471	Techniques of Documentary Films
RTF03.321	TV Production II
RTF03.331	Radio Broadcasting II
RTF03.335	A/V Production Systems
RTF03.450	Television Documentary and Field Production
WA01.207	Fiction to Film
RTF03.433	TV Program Packaging WI
RTF03.420	Current Issues in Electronic Media

**Free Electives** 30 s.h.  
**Total Credits in Program** 120/121s.h.

### Radio/Television/Film Critical Studies Specialization

**General Education** 51-52 s.h.  
 Requirements are the same for all Communication students; see Core Requirements.

**Major Requirements** 24 s.h.

RTF03.205	TV History and Appreciation
RTF03.270	Film History and Appreciation I
RTF03.275	Applied Media Aesthetics
RTF03.340	Radio/TV/Film Research and Criticism
RTF03.420	Current Issues in Electronic Media
RTF03.220	The Television Industry
RTF03.221	The RadioIndustry
RTF03.273	The Movie Industry

**Specialized Electives** 12 s.h.

GROUP I: (choose two, Writing - 6 s.h.) courses may include but are not limited to

JRN02.313	Magazine Article Writing
JRN02.210	Journalistic Writing
PR06.301	Basic P.R. Writing
RTF03.393	Film Scenario WI
RTF03.433	TV Program Packaging WI
CRWR07.290	Creative Writing I
CRWR07.291	Creative Writing II
WA01.400	Writing for the Workplace WI
WA01.304	Writing With Style WI

GROUP II: (choose two, History, Theory & Criticism - 6 s.h.) courses may include, but are not limited to)

CMS01.405	Independent Study in Communication
CMS06.205	Persuasion and Social Influence
RTF03.272	Images of Women in Film
RTF03.351	RTF Field Experience
RTF03.372	American Film Directors
RTF01.402	Special Topics in Radio/TV/Film
CMS01.207	Fiction and Film
RTF03.271	Film History and Appreciation II

**Free Electives**

33 s.h.

**Total Credits in Program**

120/121.s.h.

## Writing Arts

**Janice Rowan , Chair**  
**Hawthorn Hall**  
**856-256-4096**  
**rowan@rowan.edu**

The Writing Arts department houses a Writing Arts major, open to all students, and a Writing Arts dual major for Elementary Education and Early Childhood Education majors. Some of the department's major writing courses include Writing for the Workplace; Writing with Style; The Writer's Mind; Writing, Research, & Technology; and Evaluating Writing. The department also administers the required general education courses in writing, College Composition I and College Composition II, for the entire University.

## Creative Writing Concentration

**Julia Chang , Advisor**  
**Hawthorn Hall**  
**856-256-4500 x3417**  
**chang@rowan.edu**

The Writing Arts Department at Rowan University offers a program of study in creative writing leading to a concentration. To qualify for the concentration, students must complete 18 hours of approved course work selected from a variety of courses in the writing of poetry, fiction, plays, television and film scenarios, and children's stories. The sequence begins with the introductory courses, Creative Writing I and Creative Writing II, which provide a basic knowledge of the techniques involved in crafting poems, short stories, and plays. Students need at least a B in these courses to pursue a concentration. After completing the introductory courses, students are required to consult with the advisor who will help them design the rest of their concentration. Students who do not wish a formal concentration but who are interested in developing as writers are also invited to take courses in the Creative Writing Program.

Once enrolled in the Creative Writing Program, students can look forward to these goals and achievements:

- Creation of a manuscript of original work

- Increased awareness of the various modes of literary expression
- More sophisticated appreciation of the craft of writing
- Greater sensitivity to language and its powers
- Deepened understanding of the relationship among the writer, the audience, and the work
- A more definite sense of students' own literary voice and style

Students must complete four additional courses from those listed under the concentration. These courses must be selected in consultation with an advisor. An advisor must attest that the concentration has been completed before it will be listed on a transcript. In addition to taking courses, students develop as writers from working closely with advisors. The catalog lists prerequisites.

CRWR07.290	Creative Writing I
CRWR07.291	Creative Writing II
CRWR07.309	Writing Children's Stories
CRWR07.391	Advanced Creative Writing
RTF03.393	Film Scenario Writing
CRWR07.395	Advanced Poetry Writing
CMS99.363	Field Experience in Communication I
CMS99.364	Field Experience in Communication II
JRN02.313	Magazine Article Writing

### Bachelor of Arts in Writing Arts

The Writing Arts major provides a broad-based study of written communication, drawing upon the disciplinary strengths of the College of Communication. The Writing Arts major offers students an important content area and set of skills to complement any program of study. Courses such as The Writer's Mind; Writing, Research and Technology; and Evaluating Writing enable students to develop a strong foundation in writing. Students learn how a writer composes in print and in new media forms and how audiences evaluate the finished product.

#### General Education

60-62 s.h.

The Writing Arts program requires the same number of credit hours in General Education as the other programs in Communication. However, to provide students with more flexibility for future career opportunities, the Writing Arts major allows for 15 hours of non-program courses. Students should also refer to the General Education requirements in the Academic Affairs section in this catalog.

#### Non Program Courses

15 s.h.

#### Major Requirements

15 s.h.

CMS01.203	Mass Media
CMS01.300	Communication Theory
WA01.301	Writing, Research and Technology
WA01.401	The Writer's Mind
WA01.405	Evaluating Writing

#### Related Electives I (select 2)

6 s.h.

WA01.304	Writing with Style
WA01.400	Writing for the Workplace
JRN02.210	Journalistic Writing
CRWR07.290	Creating Writing I

OR

CRWR07.291	Creative Writing II
CRWR07.309	Writing Children's Stories

#### Related Electives II (select 1)

3 s.h.

CMS01.207	Fiction to Film
RTF03.220	The Television Industry
ADV04.330	Intro to Advertising
PR06.350	Intro to Public Relations

#### Related Electives III (select 2)

6 s.h.

JRN02.317	Publication Layout & Design
CMS05.380	Linguistics
CMS06.206	Interpersonal Communication
CMS06.246	Small Group Communication

#### Free Electives

30 s.h.

All Elementary Education requirements are used as free electives.

**Total**

121/122 s.h.

# College of Education

**Carol Sharp , Dean**  
Education Hall  
856-256-4750  
sharp@rowan.edu

**Jill A. Perry , Interim Associate Dean**  
Education Hall  
856-256-4753  
perry@rowan.edu

## 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. Our programs provide an intellectually rigorous and challenging environment for all candidates. Built upon a liberal education, the College's programs combine the study of research, theory, and wisdom of practice in diverse settings with a variety of opportunities to apply knowledge, skills and dispositions to practice.

## Goals

Rowan University has an historic and unwavering commitment to prepare educators who will demonstrate the knowledge, skills, and dispositions indicative of the potential for outstanding success in their future professional careers. "The Learning Community in Action" is the conceptual framework for all programs in the College of Education at Rowan University. Therefore, the College of Education strives to model learning community principles for both initial and advanced candidates who will in turn create learning communities in their professional positions. Candidate performances are measured according to the knowledge, skills and dispositions defined in the Conceptual Framework as developed in response to the appropriate national and/or state standards.

## 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 programs have received National Recognition from the following professional organizations that are aligned with NCATE:

- AAHPERD/NASPE American Alliance for Health Physical Education, Recreation, and Dance/National Association for Sport and Physical Education.
- ACEI Association for Childhood Education International
- ACTFL American Council on the Teaching of Foreign Languages
- ALA / AASL American Library Association/ American Association of School Librarians
- ASBO Association of School Business Officials
- CEC Council for Exceptional Children
- ELCC Educational Leadership Constituent Council
- IRA International Reading Association
- NAEYC National Association for the Education of Young Children
- NCSS National Council for the Social Studies
- NCTE National Council of Teachers of English
- NCTM National Council of Teachers of Mathematics
- NSTA National Science Teachers Association

Moreover, the Commission on Accreditation of Allied Health Education Programs (CAAHEP) accredits the college's athletic training specialization.

## Programs Offered

Bachelor's degree programs are available in Collaborative Education (Co-Teach), Health and Exercise Science (Athletic Training and Health Promotion Fitness Management), and the BA in Education (Early Childhood Education, Elementary Education, Subject Matter Education, and Health and Physical Education).

In addition, the College of Education offers non-degree teacher certification programs in Reading, and Teacher of Students with Disabilities (Special Education) and numerous graduate programs.

## Admission

Procedures for Admission, Retention and Eligibility for Teacher Certification are described in the following paragraphs:

Admission to Rowan University does not guarantee admission as a teacher certification candidate. Students desiring admission as a teacher certification candidate must file an application. Applications are completed and filed with the certifying department as part of the requirements of the sophomore field experience course. They are reviewed first by the academic department and then by the Office of the Dean. Students are notified of their acceptance at the beginning of their junior year. The same process applies to two-year transfer students, but is generally compressed to take place in the fall semester of the junior year. A grade of C or better is required in all course work.

The following four-step process outlines the various requirements that must be addressed by all teacher certification candidates. This outline describes the minimum college requirements. Students should check with their certifying department for specific expectations, departmental requirements and standards:

Admission to the University is managed by Admissions Department

1. Meet University Admission Requirements
2. Declared dual major and/or eligible for certification in the State of New Jersey

Acceptance into the certification program (Junior Practicum)

1. C or higher in "sophomore" course(s) (e.g. Teaching in Learning Communities I & II, Teaching Literacy)
2. Interview by sophomore course instructor(s)
3. Acceptable dispositional report(s) from university instructor(s)
4. Acceptable dispositional report(s) from cooperating teacher(s)
5. Service learning component
6. Passing grade on Praxis I tests (Mathematics, Reading, & Writing)
7. Acceptable score on Portfolio assessment at this Transition Point
8. A minimum of 12 credit hours in content area major (for subject matter specialization only)

Acceptance into Clinical Practice (Student Teaching)

1. Passing grade(s) on State required Praxis II test(s)
2. Average grade of 3.0 in professional courses with no course grade lower than C- and no incompletes
3. Achieve minimum content area GPA as specified by particular College of Education, College of Liberal Arts and Sciences, College of Fine and Performing Arts, College of Business, or College of Communication departments
4. Achieve overall GPA of at least 2.75
5. Interview with specific subject pedagogy specialist
6. Acceptable dispositional report(s) from university instructor(s) and cooperating teacher(s)
7. Acceptable score on Portfolio assessment at this Transition Point reflecting acquisition of content knowledge and planning skills.

Program Exit

1. Successful completion of Clinical Practice teaching as documented by:
  - a. Satisfactory rating on final supervisor assessment
  - b. COE evaluation forms from supervisor and cooperating teacher
  - c. SPA/NCATE evaluation forms
2. Acceptable score on Portfolio assessment reflecting impact on P-12 student learning.
3. Overall GPA of 2.75
4. Average grade of 3.0 in professional courses with no course grade lower than C- and no incompletes
5. Achieve minimum content area GPA as specified by particular College of Education and College of Liberal Arts and Sciences departments

## **Departments**

The College of Education is composed of 6 academic departments. They include:

Educational Leadership,  
 Teacher Education,  
 Health and Exercise Science,  
 Reading,  
 Foundations of Education,  
 Special Educational Services/Instruction.

## **Support Services**

In addition to the academic departments, the College of Education houses several offices that support the academic program including:

The Office of the Dean  
 The Student Services Centers

The Center houses the Office of Field Experiences, Undergraduate Academic Advisors, and the Office of Certification. The staff members in these offices facilitate the placement of all students requiring field experiences in a school or clinical setting, assist students with the completion of their requirements for graduation, and certification application.

### **The Office of Field Experiences**

**Robert W. Kern, Executive Director**

**Education Hall**

**856-256-4727**

**kern@rowan.edu**

### **Academic Advisors**

**Education Hall**

**856-256-4420**

### **The Thomas E. Robinson Beginning Teacher Induction Center**

The Thomas E. Robinson Beginning Teacher Induction Center (BTIC) is located in the College of Professional and Continuing Education. The BTIC offers support services for beginning teachers via seminars, workshops, clinics, a newsletter, mentor training, and individualized problem solving. BTIC professional development opportunities provide a link between preservice and inservice teacher education. Novice teachers have opportunities to interact with field-based practitioners and to network with novice teachers from the eight counties of Southern New Jersey.

### **The John J. Schaub Instructional Technology Center**

The John J. Schaub Instructional Technology Center consists of a Computer Laboratory and an Instructional Materials Laboratory. The Center provides facilities, technology, materials and training in the four areas of Instructional Technology: print technology, audio-visual technology, computer technology, and integrated technology. It is the primary instructional technology resource and training facility for students and faculty in the College of Education.

## **The Education Institute A Force for Collaborative Leadership in Education**

The Education Institute is located in the College of Professional and Continuing Education. The primary goal of the Institute is to provide an outreach and service functions that match the needs of local school districts to the resources of the University. In this capacity, the institute supports basic and applied research and sponsors graduate courses and professional development activities designed to improve the quality of education within the region.

## **Educational Leadership**

**David C. Hespe , Chair**  
**Education Hall**  
**856-256-4702**  
**hespe@rowan.edu**

The Department of Educational Leadership offers no undergraduate degree programs. It offers graduate-level programs for those who aspire to careers in public school administration. Specialized programs are available for the preparation and certification of elementary and secondary school principals, vice principals, assistant superintendents, supervisors, directors, and department chairpersons as well as school business administrators. In addition, the department offers a Master of Arts degree in Higher Education for those desiring preparation for a professional career in higher education, and a Doctor of Education in Educational Leadership for individuals preparing for executive leadership positions in schools and colleges.

The department also houses the undergraduate concentration in Leadership Studies which can be found under Interdisciplinary Concentrations. Students who wish more information on the programs and courses offered by the Department of Educational Leadership are advised to contact the department office.

## **Foundations of Education**

**Frank Orlando , Chair**  
**Education Hall**  
**856-256-4728**  
**orlando@rowan.edu**

The Department of Foundations of Education has three missions:

1. To offer the required foundations of education courses that provide a basis for all teacher education programs in the College of Education;
2. To offer graduate courses in the area of curriculum to support various graduate programs in the College of Education; and
3. To offer a Master of Arts degree program in the area of Educational Technology. (The M.A. in Educational Technology program is currently being restructured and new applicants are not being accepted into the program.)

## **Health and Exercise Science**

**Richard J. Fopeano , Chair**  
**Education Hall**  
**856-256-4500 x3740**  
**fopeano@rowan.edu**

The Department of Health and Exercise Science offers undergraduate program in three specializations divided between two separate degrees.

The Bachelors of Arts in Education with Specialization in Teacher Certification in Health and Physical Education prepares teacher candidates for positions from Preschool through High School. This accredited program combines instruction in both Health Education and Physical Education. Successful candidates become dually certified in both by the New Jersey State Department of Education.

The Bachelors of Arts in Exercise Science degree offers specializations in Athletic Training as well as Health Promotion/Fitness Management. Athletic Training students go on to work in school and professional sport teams. Health Promotion/Fitness Management students often go on to work in private fitness facilities, corporate Health and Wellness Centers, private and non-profit community and public health programs.

All students complete a bank of courses in General Education , a Health and Exercise Science Core and an academic specialization. The upper-level specialization courses are specific and unique to the professional preparation of the student. The number of semester hours vary for each specialization as indicated below.

- Health and Physical Education Teacher Certification - 129 s.h.
- Athletic Training - 120 s.h.
- Health Promotion/Fitness Management - 122 s.h.

The department has a two-level admission and retention policy. Students seeking admission into Health and Exercise Science (Transfer = 2.5 GPA) must meet the admission standards established for all Rowan University students. In order to be admitted into and continue with any specialization a student must demonstrate an above-average academic ability and be involved in professional-related activities.

Each of the three specializations offered within the Department of Health and Exercise Science provides students with numerous experiences and opportunities to grow professionally. The philosophy of the department is to extend the classroom knowledge and theory into field experience settings. Students in the Health and Physical Education Teacher Certification specialization complete field experiences in both urban and rural settings at different educational levels to include children with special needs. Student athletic trainers work with on-campus, high school and professional sport teams. Health Promotion and Fitness Management internships are completed in corporate wellness facilities, community health agencies, and hospital-based wellness and rehabilitation centers.

The Department of Health and Exercise Science prepares professionals who can assume leadership roles in school, community, medical and corporate settings. Major students are persons interested in working with people of varying ages in the areas of health, wellness, human movement, exercise science, physical education, sports medicine and athletic training. Career opportunities include: teaching health and physical education (K-12) in public and private school environments; managing health promotion programs in community, corporate and medical settings, coaching school and recreational athletic teams; and working in sports medicine and allied health care settings.

**BA in Education, Specialization in Health and Physical Education**

**Melvin Pinckney , Advisor**  
**Education Hall**  
**856-256-4785**  
**pinckney@rowan.edu**

**Health and Physical Education Teacher Certification Specialization** 129 s.h.

To complete the program, students must have a minimum of 2.75 overall GPA, 3.0 GPA in the specialization, successfully complete the Praxis I exam and the Health and Physical Education Praxis II exam. No grades less than a C- will be counted toward graduation.

<b>General Education</b>		60 s.h.
Communications		9 s.h.
COMP01.111	College Composition I	
COMP01.112	College Composition II	
CMS06.202	Public Speaking	
Science and Mathematics		10 s.h.
INAR06.200	Basic Nutrition	
STAT02.100	Elementary Statistics	
BIOL01.113	Lab Science Human Focus	
History, Humanities and Language		12 s.h.
FNDS21.150	History of American Education	
READ30.120	Literacies in Today's World	
H/H/L	(M/G) Elective	

H/H/L	(Lit W/I) Elective	
Social and Behavioral Sciences		12 s.h.
PSY09.209	Child Development	
OR		
PSY09.210	Adolescent Development	
PSY01.100	Intro to Psychology: Personal, Emotional and Social Interactions	
SOC08.120	Intro to Sociology	
HLTH37.210	Consumer Health Decisions	
Artistic and Creative Experience		3 s.h.
THD08.135	Elements of Dance	
Non Program Electives		14 s.h.
FNDS21.230	Characteristics of Knowledge Acquisition	
SPED08.130	Human Exceptionality	
PHED35.109	Adventure/Experiential Learning	
6 credits of Electives		
<b>Health and Exercise Science Core.</b>		12 s.h.
PHED35.241	Structures & Functions of the Human Body I	
PHED35.242	Structures & Functions of the Human Body II	
PHED35.343	Kinesiology	
PHED35.344	Exercise Physiology w/o Lab	
<b>College of Education Core</b>		8 s.h.
EDUC01.104	Teaching: Into to Profession	
EDUA01.270	Teaching in Learning Community I	
READ30.280	Teaching Literacy	
<b>Health and Physical Education Courses</b>		36 s.h.
PHED35.286	Teaching Learning Community II-Health and Physical Education	
PHED37.270	Foundations of Fitness and Motor Development	
PHED35.228	Rhythmic Activities Form	
PHED35.205	Teaching Concepts of Team Sports	
PHED35.231	Teaching Concepts of Individual and Dual Sports	
PHED35.235	Safety, First Aid & Prevention	
HLTH37.325	Teaching Concepts of Health I	
HITH37.326	Teaching Concepts of Health II	
PHED35.452	Adapted Physical Education	
PHED35.336	Elementary School Physical Education Activities	
PHED35.342	K-12 Physical Education Curriculum and Instruction	
PHED35.352	Technology & Assessment in Health and Exercise Science	
<b>Clinical Experience Courses</b>		13 s.h.
PHED35.392	Practical Field Experience	
PHED35.460	Clinical Practice (Elementary)	
PHED35.461	Clinical Practice (Secondary)	
PHED35.465	Clinical Senior Seminar	
<b>Program total</b>		129 s.h.
 <b>B.A. in Health &amp; Exercise Science: Health Promotion and Fitness Management Specialization</b>		
<b>General Education</b>		60 s.h.
(determined by specialization a minimum GPA of 2.5 must be maintained; see the General Education requirements in the Academic Affairs section in this catalog)		
Communications		9 s.h.
COMP01.111	College Composition I	
COMP01.112	College Composition II	
CMS06.202	Public Speaking	
Science and Mathematics		7 s.h.
CHEM05.102	Chemistry for Everyday Life (lab) or other approved lab science	
STAT02.100	Elementary Statistics	
History, Humanities and Language		6 s.h.
Any LIT elective Any M/G elective Social and Behavioral Sciences		6 s.h.
HLTH37.210	Consumer Health Decisions	

CMS06.206 Interpersonal Communication 3 s.h.  
Artistic and Creative Experience

General Education Electives 11 s.h.

**Free Electives** 18 s.h.

Students are strongly encouraged to complete a minor or concentration using the General Education and Free Electives. Recommended minors include Business, Dance, Speech Communication, Computer Science, Foreign Language and Psychology. Recommended concentrations include Pre-Medicine, International Studies, Women's Studies, Leadership and Honors.

**Major Core** 28 s.h.  
(a minimum of 2.75 must be maintained) A grade of C or better is required in all courses.)

PHED35.241 Structures & Functions of the Human Body I (note: Anatomy and Physiology I, Biology Dept., 4 credits with lab, is recommended as a substitution)  
PHED35.242 Structures & Functions of the Human Body II (note: Anatomy and Physiology II, Biology Dept., 4 credits with lab, is recommended as a substitution)  
PHED35.343 Kinesiology  
PHED35.345 Exercise Physiology with Lab  
HLTH37.192 Contemporary Health I  
HLTH37.193 Contemporary Health II  
PHED35.235 Safety, First Aid & Prevention  
PHED35.352 Technology & Assessment in Health & Exercise Science  
INAR06.200 Basic Nutrition

**HPFM Specialization Curriculum** 34 credits  
(minimum GPA of 3.0 must be maintained) A grade of C or better is required in all courses.

HLTH37.310 Foundations of Health Promotion and Fitness Management  
HLTH37.340 Administration of Health Promotion & Fitness Management Programs  
PHED35.401 Exercise Prescription  
HLTH37.170 Stress Management  
HLTH37.350 Health Behavior  
HLTH37.430 Practicum in Health Promotion and Fitness Management  
HLTH37.453 HP/FM Field Experience  
PHED35.412 Exercise for Special Populations  
INAR06.415 Nutrition for Fitness  
HLTH37.329 Lab/Personal Training Techniques

**Total Credits in Program** 122 s.h.

### **B.A. in Health and Exercise Science: Athletic Training Specialization**

**Robert L. Sterner , Coordinator**  
Education Hall  
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sterner@rowan.edu

Technical Standards for the Athletic Training Education Program  
The following technical standards are signed in the first athletic training class, prior to athletic training students performing any hands-on duties.

The Athletic Training Educational Program at Rowan University is a rigorous and intense program that places specific requirements and demands on the students enrolled in the program. An objective of this program is to prepare graduates to enter a variety of employment settings and to render care to a wide spectrum of individuals engaged in physical activity. The technical standards set forth by the Athletic Training Educational Program establish the essential qualities considered necessary for students admitted to this program to achieve the knowledge, skills, and competencies of an entry-level certified athletic trainer, as well as meet the expectations of the program's accrediting agency (Commission on Accreditation of Athletic Training Education [CAATE]). The following abilities and expectations must be met by all students admitted to the Athletic Training Education Program. In the event a student is unable to fulfill these technical standards, with or without reasonable accommodation, the student will not be admitted into the program.

Compliance with the program's technical standards does not guarantee a student's eligibility for the Board of Certification (BOC, Inc.) exam.

Candidates for selection to the Athletic Training Educational Program must demonstrate:

1. the mental capacity to assimilate, analyze, synthesize, integrate concepts and problem solve to formulate assessment and therapeutic judgments and to be able to distinguish deviations from the norm.
2. sufficient postural and neuromuscular control, sensory function, and coordination to perform appropriate physical examinations using accepted techniques; and accurately, safely and efficiently use equipment and materials during the assessment and treatment of patients.
3. the ability to communicate effectively and sensitively with patients and colleagues, including individuals from different cultural and social backgrounds; this includes, but is not limited to, the ability to establish rapport with patients and communicate judgments and treatment information effectively. Students must be able to understand and speak the English language at a level consistent with competent professional practice.
4. the ability to record the physical examination results and a treatment plan clearly and accurately.
5. the capacity to maintain composure and continue to function well during periods of high stress.
6. the perseverance, diligence and commitment to complete the athletic training education program as outlined and sequenced.
7. flexibility and the ability to adjust to changing situations and uncertainty in clinical situations.
8. affective skills and appropriate demeanor and rapport that relate to professional education and quality patient care.

The mission of the RUATEP is to provide a challenging and dynamic learning environment for the professional preparation of students so that they master the competencies and proficiencies needed to become an entry level certified athletic trainer.

### **Goals of the Program**

The goals of the RUATEP program are fourfold:

1. to challenge students to become competent certified athletic trainers.
2. to instruct students in the principles of professional practice.
3. to challenge students to continue to become involved in scholarly and professional activities.
4. to challenge students to think and make critical and responsible personal and professional judgments.

The goal of the RUATEP is to prepare undergraduate students to become competent Certified Athletic Trainers. The faculty and staffs' goals are to provide every student with the opportunity to succeed within the RUATEP. The staff and faculty are fully dedicated to providing positive learning environments within the classroom, laboratory, and within traditional and nontraditional clinical settings. The RUATEP also provides nontraditional learning experiences so that students have exposure to other health care professional settings. These alternate experiences include but are not limited to: physician's offices, operating rooms, physical therapy clinics and hospital emergency rooms. Upon completion of all RUATEP requirements and graduation from Rowan University, the faculty and staff strive to place qualified, responsible, honest, and hardworking individuals in settings such as: graduate assistants, high schools, colleges and universities, clinics and other health care settings.

The RUATEP is divided into the pre-specialization and formal specialization. Upon entering Rowan University, students are automatically enrolled in the pre-athletic training specialization. A secondary application process is in place for those students seeking acceptance into the formal Athletic Training specialization. Application to the formal specialization occurs once per academic year; either in the spring semester of the pre-specialization student's sophomore year, or spring semester of the transfer student's first year depending upon completion of all prerequisite coursework and application materials.

The following criteria must be met before a candidate is eligible to apply to the Athletic Training education program's formal specialization:

1. Completion of the following coursework\*\*:

- One of the following: Biology I, Biology Human Focus, or Introduction to Psychology (Personal, Emotional, and Social)
- Introduction to Athletic Training
- Prevention and Care of Orthopedic Injuries
- Pathology and Evaluation of Orthopedic Injuries I and II
- Anatomy and Physiology I and II with laboratories
- Safety, First Aid, and Basic Understanding of Athletic Injuries
- Advanced Emergency Care
- Contemporary Health I or II

(\*\*) During the application process students may be currently enrolled in pre-requisite classes. All pre-requisite classes need to be completed prior to beginning Clinical Experiences in Athletic Training I.

2. Grade Point Averages

- Athletic Training Core = 3.0
- Health and Exercise Science Core = 2.75
- Overall = 2.5

3. No grade lower than a C in the Pre-specialization Athletic Training Core. These courses include:

- Introduction to Athletic Training
- Prevention and Care of Athletic Injuries
- Pathology and Evaluation of Orthopedic Injuries I
- Pathology and Evaluation of Orthopedic Injuries II
- Advanced Emergency Care

4. No grade lower than a C- in any other class, including Health and Exercise Science Core and General Education courses

5. A minimum of 270 clinical observation hours at Rowan University

6. A cumulative average grade of at least 3.0 out of 4.0 on pre-specialization clinical evaluations. These are done twice per semester and are based on clinical observation hours.

7. Current CPR card and First Aid Certification (certification must be at least Adult CPR at the community level and First Aid can be either Basic, Standard, or higher). Please note that students will receive these certifications through Rowan Course-work their freshmen and sophomore years.

8. In-service Attendance. The student must attend all in-services. Pre-specialization students absent from an in-service must provide a written letter to the program director giving a rationale for the absence. The program director will sign acceptable or not acceptable absence on the letter. Two non-acceptable absences in one semester will make the pre-specialization student ineligible to apply to the formal specialization. Criteria for acceptable absences is published in Athletic Training Student Policy Manual and on syllabi where in-service attendance is part of the course grade.

### **Formal Specialization Application Procedures**

1. Written Application. An application packet will be given to each student in the spring of the year they are applying to the formal specialization. The student must complete all components by the deadline appointed by the Program Director before the student is considered for acceptance into the specialization. Components of the written application included within the packet are as follows:

- Application Form
- Proof of Health Physical Document
- Technical Standards Document\*
- Athletic Training Specialization Agreement Document

- Blood-borne Pathogen Declaration Document\*
- HIPPA Agreement Document\*
- Unofficial Transcripts
- Student Resume
- 2 Letters of Recommendation
- Essay Questions

(\*Please note these are filled out in the pre-specialization and redone during the formal specialization application process.

2. Proficiency Examination. Students are required to take a proficiency (oral and practical in nature) that is based on required athletic training coursework taken up to the application process period. An athletic training student must receive a score of at least 70% on this proficiency examination in order to be accepted into the formal specialization. Students may take this examination up to three times, however after the third failure the student will not be eligible for matriculation into the formal specialization until the following year. Remember: The application process occurs only once per academic year and during the spring semester.
3. Interview. Each student will complete an interview with the selection committee. A score of at least 70% is needed to be eligible for entry into the formal specialization. The grading criteria for the interview is as follows:
  - Understanding of Profession- 50%
  - Displaying of Self Confidence- 10%
  - Ability to follow-up questions on written essays- 20%
  - Understanding of Specialization and competencies and proficiencies associated with the program- 10%
  - Ability to ask pertinent questions of interview committee- 10%

Final Acceptance Criteria The RUATEP's maximum capacity is 20 students for junior level admission which is based on the number of clinical instructors. Students are rank ordered and the highest rated students are accepted into the formal specialization program. The score for rank ordering are calculated as follows:

#### Application Calculation Sheet

- Overall GPA- 40 points
- Proficiency Examination - 40 points
- Clinical Observation Evaluations Mean - 20 points
- Clinical Observation Hours 10 points
- Interview-10 points

The total accumulation of points = 120. All scores are converted to a percentage based on 100% and the average score is taken

#### **Athletic Training Education Program's Retention Criteria**

Retention is a continuing process based on the athletic training student's academic, clinical, and behavioral achievement in accordance with established criteria. The student within the specialization should be aware that following formal acceptance into the athletic training specialization, the following level of achievement is expected:

1. Completion of competencies and proficiencies on schedule. Competencies are completed with successful completion of course-work as all course objectives are tied to competencies. Please see competency matrix in program director's office. Clinical proficiencies are tied to laboratory and clinical experiences.
2. GPA Requirements
  - 2.50 = Overall GPA
  - 2.75 = Health and Exercise Science Core
  - 3.00 = Athletic Training Specialization Core
  - No grade lower than a C in athletic training core or C- in other courses
3. CPR and First Aid certification. All students must maintain CPR and First Aid certification. Students are required to give the Program Director a copy of all certification cards each year of attendance at Rowan University. These will be kept in the student's file.
4. Confidentiality of Medical Records and Information. Students are expected abide by the policy that was signed when accepted into the formal specialization. Please see disciplinary action for breaking confidentiality of medical records and information.

5. NATA Code of Ethics. Students must conform to the standards of the NATA Code of Ethics (pg 6 of this document) when practicing Athletic Training related skills within their clinical assignments. Students must also conform to the standards of behavior expected of intercollegiate athletes with regard to substance abuse, controlled and dangerous substances, harassment and hazing (See Rowan University Student Handbook, page 22). Violations of this type will place the student under immediate review by the Athletic Training Education Program's Student Issues Committee (RUATEP SIC) and also the Rowan University Student Issues Committee.
  
6. Academic Honesty. Since the primary goal of education is to increase one's own knowledge, academic dishonesty will not be tolerated at Rowan University. Violation of the Rowan University's Academic Honesty Policy (See Rowan University Student Hand Book, page 39-41) will place the student under immediate review by the RUATEP SIC. Possible outcomes resulting from academic dishonesty may include:
  - probation, suspension or expulsion from the program
  - written reprimand from the RUATEP
  - receiving an "F" for the course
  - contacting the Provost's Office
  - suspension or expulsion from Rowan University
 Academic dishonesty includes the following examples, as well as similar conduct aimed at making false representation with respect to academic performance:
  - cheating on an examination
  - collaborating with others in work to be presented contrary to the stated rules of the course
  - Plagiarizing, including the submission of others' ideas or papers as one's own
  - stealing examination or course materials
  - falsifying records, laboratory results, etc.
  - knowing and intentionally assisting another student in any of the above activities or similar activities.
  
7. Clinical Assignment Responsibilities. The student is expected to enthusiastically complete all clinical responsibilities including pre-practice activities, coverage of practices and games, post-practice activities, cleaning and general athletic training room duties, and abide by the NATA Code of Ethics. The RUATEP SIC will determine the disciplinary action for students not meeting their clinical assignment duties and responsibilities.
  
8. Junior and Senior Proficiency Examinations. Juniors and Seniors must pass a comprehensive proficiency examination before they are able to continue within the RUATEP or graduate, respectively. The junior examination will consist of a practical examination on all coursework and clinical experiences taken up to the end of their junior equivalent year. Coursework to be included on the exam are:
  - Introduction to Athletic Training
  - Prevention and Care of Injuries
  - Pathology and Evaluation of Orthopedic Injuries I
  - Pathology and Evaluation of Orthopedic Injuries II
  - Therapeutic Modalities
  - Therapeutic Exercises
  - Clinical Experiences in Athletic Training I & II

The senior level exam will consist of 150 question written test and a practical examination on all Athletic Training courses and clinical experiences taken within the RUATEP. Coursework to be included on the exam are:

- Introduction to Athletic Training
- Prevention and Care of Injuries
- Pathology and Evaluation of Orthopedic Injuries I
- Pathology and Evaluation of Orthopedic Injuries II
- Therapeutic Modalities
- Therapeutic Exercises
- Pharmacology and General Medicine

- Organization and Administration
- Clinical Experience I-IV

Students must receive a 75% or better on each exam before they can continue to matriculate within the RUATEP.

### **Athletic Training Education Program's Exit (Graduation) Requirements**

1. Successful Completion of Clinical Assignments. The student's clinical experiences occur within four content areas (upper extremity, lower extremity, equipment intensive and general medical) over a minimum of two academic years from entering the formal specialization. Students must pass all clinical evaluations provided by the student's respective Approved Clinical Instructors (ACI) before being eligible to graduate. The clinical assignment grade is a portion of the Clinical Experiences in Athletic Training grade.
2. Successful Completion of all RUATEP's coursework. Since coursework is structured around the NATA competencies and clinical proficiencies, successful completion of coursework indicates successful completion and proficiency of these academic requirements. The student can receive no grade lower than a C in the athletic training core and no grade lower than a C- in any other class. In instances where students do not receive the minimum grade, the course(s) must be repeated before being able to graduate.
3. Successful Completion of Senior Proficiency Examination. Students must receive a 75% or higher to be able to graduate from the RUATEP.
4. GPA's needed for graduation. Below are the minimum GPA's needed to graduate from the RUATEP and Rowan University.
  - 2.50 = Overall GPA
  - 2.75 = Health and Exercise Science Core
  - 3.00 = Athletic Training Specialization Core

<b>General Education</b>	43 s.h.
Communications	9 s.h.
COMP01.111 College Composition I	
COMP01.112 College Composition II	
CMS06.202 Public Speaking	
Science and Mathematics	11 s.h.
BIOL10.210 Anatomy and Physiology I	
BIOL10.212 Anatomy and Physiology II	
STAT02.100 Elementary Statistics	
History, Humanities and Language	6 s.h.
H/H/L (W/I, MG) Choice	
H/H/L (M/G Choice)	
Social and Behavioral Sciences	6 s.h.
PSY09.210 Adolescent Development	
PSY01.100 Intro to Psychology: Personal, Emotional and Social Interactions	
Artistic and Creative Experience	3 s.h.
Fine arts choice	
Non Program Electives	8 s.h.
BIOL01.100 Biology I with Lab or 0401.113 General Biology:Human Focus	
PHYS02.202 Physics I or 1902.105 Physics for everyday life	
<b>Major Core</b>	22 s.h.

(a minimum of 2.75 must be maintained)

A grade of C- or better is required in all courses.

PHED35.343 Kinesiology	
PHED35.345 Exercise Physiology with Lab	
HLTH37.192 Contemporary Health I	
HLTH37.193 Contemporary Health II	
PHED35.235 Safety, First Aid & Basic Understanding of Athletic Injuries	
PHED35.352 Technology & Assessment in Health & Exercise Science	
INAR06.200 Basic Nutrition	

**Specialization Courses** 55 s.h.

(minimum GPA of 3.0 must be maintained)

A grade of C or better is required in all courses

PHED35.105	Intro to Athletic Training
PHED35.218	Prevention and Care of Orthopedic Injuries
PHED35.219	Pathology & Evaluation of Orthopedic Injuries I
PHED35.220	Pathology & Evaluation of orthopedic Injuries II
PHED35.401	Exercise Prescription
PHED35.334	Advanced Emergency Care
PHED35.478	Therapeutic Exercises in Athletic Training
PHED35.475	Therapeutic Modalities in Athletic Training
PHED35.338	Clinical Experience in Athletic Training I
PHED35.339	Clinical Experience in Athletic Training II
PHED35.340	Clinical Experience in Athletic Training III
PHED35.341	Clinical Experience in Athletic Training IV
PHED35.405	Organization & Administration of Athletic Training
INAR06.415	Nutrition for Fitness
PHED35.430	Senior Seminar in Athletic Training
PHED35.479	General Medicine & Pharmacology in Athletic Training

**Total Credits in Program**

120 s.h.

## Reading

**Cindi Hasit , Chair**  
**Education Hall**  
**856-256-4772**  
**hasit@rowan.edu**

The Reading Department offers the required reading courses for all undergraduate teacher education programs. While the department does not offer an undergraduate major course of study, it offers an undergraduate endorsement program which leads to a Teacher of Reading Certificate. Students in this program must complete the requirements for the endorsement in addition to the requirements in a chosen education major course of study.

### Reading Requirements for All Teacher Certification Candidates

Candidates for teacher certification are required to have coursework in reading. The courses they must complete are determined by specific certification program requirements which may include the following:

READ30.120	Literacies in Today's World
READ30.280	Teaching Literacy
READ30.351	Differentiated Literacy Instruction
READ30.320	Language Development, Emergent Literacy & Reading in Young Children

Students should consult certification program advisors.

### Teacher of Reading Endorsement

**Jeffrey A. Margolis , Advisor**  
**Education Hall**  
**856-256-4500 x3089**  
**margolis@rowan.edu**

An endorsement program that leads to certification as a Teacher of Reading is available to students who have 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, have a minimum grade of B in all reading courses, and have an overall GPA of at least 3.0 (based on 30 semester hours). The program requires students to successfully complete 30 semester hours of coursework in reading and reading-related areas to obtain Teacher of Reading Certification. Courses are selected from three different categories as noted below. Two courses (Category B) require students to tutor in reading. Students who are admitted to the Co-Teach program and Early Childhood Education program should consult with their advisors regarding specific requirements.

#### Category A: Basic Reading Methods Courses (4-7 courses)

Students must select a minimum of 4 courses from this bank.

\*\*means that a prerequisite is required; check catalog course description.

- READ30.280 Teaching Literacy \*\*
- READ30.351 Differentiated Literacy Instruction \*\*
- ELEM02.338 Practicum in Mathematics and Literacy \*\*
- READ30.347 Phonics and Spelling in the Reading/Writing Classroom\*\*
- READ30.350 Using Children's Literature in the Reading/Writing Classroom\*\*

#### Category B: Clinic Courses (2-4 courses)

Students are required to complete both courses in this bank. (Courses include a tutoring component).

- READ30.421 School Reading Problems-WI\*\*
- READ30.451 Supervised Clinical Practice in Reading\*\* (Admittance to this course requires program advisor's signature).

#### Category C: Reading Related Courses

Students select a maximum of 4 courses from this bank.

- READ30.120 Literacies in Today's World
- SPED08.130 Human Exceptionality
- FNDS21.130 Characteristics of Knowledge Acquisition
- ELEM02.272 Teaching in Learning Communities II
- SECD03.350 Teaching Students of Linguistic and Cultural Diversity
- ELEM02.350 Educational Studies II: Problems of Practice
- SPED08.230 Language and Cognition of Students with Special Needs
- SPED08.307 Assessing Students with Special Needs
- PSY22.215 Educational Psychology
- PSY22.320 Learning and Behaviorism
- OR
- PSY02.308 Research in Learning and Behaviorism-WI
- ENGL01.401 The Writer's Mind
- CMS05.280 Semantics
- CMS05.380 Linguistics
- CMS06.105 Voice and Articulation
- PSY01.327 Cognitive Psychology
- OR
- PSY01.327 Research in Cognitive Psychology-WI
- PSY06.300 Psychological Tests and Measurements
- PSY09.209 Child Development

NOTE: Candidates for Reading Teacher Certification in the State of New Jersey must pass the Praxis II Specialty Area Test: Introduction to the Teaching of Reading.

## Special Education Services/Instruction Department

**Donna Cook , Chair**  
**Education Hall**  
**856-256-4767**  
**hathaway@rowan.edu**

The Special Educational Services/Instruction Department offers the required special education courses for all undergraduate teacher education programs. While the department does not offer an undergraduate major course of study, it offers a post-baccalaureate endorsement program, with an undergraduate (Blended) track, which leads to a Teacher of Students with Disabilities Certificate. Students in this program must complete the requirements for the endorsement in addition to the requirements in a chosen education major course of study.

## **Special Education Requirements for All Teacher Certification Candidates**

Candidates for teacher certification are required to have coursework in special education. The courses they must complete are determined by specific certification program requirements which may include the following:

<a href="#">SPED08.130</a>	Human Exceptionality
<a href="#">SPED08.316</a>	Differentiated Instruction in the Inclusive Classroom

## **Teacher of Students with Disabilities Endorsement**

**Margaret Shuff , Coordinator**

**Education Hall**

**856-256-4500 X3883**

**shuff@rowan.edu**

An endorsement program that leads to certification as Teacher of Students with Disabilities is available to students who have been admitted to teacher certification programs or who already hold, or are eligible for, New Jersey teaching certificates. Teacher of Students with Disabilities certification is granted only when a student has fulfilled all requirements for an initial teaching certification.

To matriculate, students must complete the Human Exceptionality course (SPED08.130), with a minimum grade of B and have an overall GPA of at least 2.75 (based on 30 semester hours). 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. Required courses are listed below. Students who are admitted to the Early Childhood Education program should consult with their advisors regarding specific requirement.

<a href="#">SPED08.130</a>	Human Exceptionality
<a href="#">SPED08.360</a>	Positive Behavioral Support Systems for Students with Exceptional Learning Needs
<a href="#">SPED08.316</a>	Differentiated Instruction in the Inclusive Classroom
<a href="#">READ30.280</a>	Teaching Literacy
<a href="#">READ30.351</a>	Differentiated Literacy Instruction
<a href="#">SPED08.307</a>	Assessment of Students with Exceptional Learning Needs
<a href="#">SPED08.415</a>	Specialized Instruction for Students with Exceptional Learning Needs
<a href="#">SPED08.445</a>	Clinical Seminar in Special Education
<a href="#">SPED08.450</a>	Clinical Practice in Special Education

NOTE: Candidates for the Teacher of Students with Disabilities Certification must pass the Praxis II Specialty Area Test: Application of Core Principles across Categories of Disabilities (0352) prior to admission to Clinical Seminar/Clinical Practice.

## **Teacher Education (Early Childhood, Elementary Education, Subject Matter)**

**Jill A. Perry , Chair**

**Education Hall**

**856-256-4736**

**perry@rowan.edu**

**Donna W. Jorgensen , Assistant Chair**

**Education Hall**

**856-256-4500 x3856**

**jorgensen@rowan.edu**

"Teachers are more than any other class the guardians of civilization."  
- Bertrand Russell, British Philosopher and Writer

The Department Teacher Education proudly offers a variety of opportunities for caring, academically focused, and dedicated undergraduate, post-baccalaureate, and graduate students to pursue certification as early childhood, elementary, or K-12 subject-matter teachers and engage with others committed to being and becoming scholars of education. We are committed to fostering our students' growth as instructional leaders who have a developmental perspective, cooperative disposition, and reflective orientation.

Our nationally accredited undergraduate, post-baccalaureate, and graduate programs recognize the impact that teachers have on the future. Our undergraduate, post-baccalaureate, and MST programs are designed for students seeking in-depth preparation to teach in P-12 classrooms and New Jersey teaching endorsements in grades P-3, K-5, and K-12 Subject-Matter. Our M.Ed. in Standards-Based Practice is designed for inservice teachers who wish to expand their studies of teaching and learning.

Program guides for each major and program are available in the Teacher Education office on the third floor of Education Hall or on our web page:

[http://www.rowan.edu/colleges/education/departments/teacher\\_ed/](http://www.rowan.edu/colleges/education/departments/teacher_ed/)

## **B.A. in Education, Specialization in Early Childhood Education**

The B. A. in Education, with Specialization in Early Childhood Education has four required strands of study: 1) General Education courses, 2) Common Education Core courses, 3) the Professional Specialization Sequence, and 4) the dual major requirements, where Early Childhood Education Specialization candidates are required to complete major requirements in one of three academic disciplines approved by the University for certification. Students accepted into the Specialization are expected to adhere to the prescribed sequence of courses and to consult with their advisors in Education at least once a semester.

<b>General Education Requirements</b>	61 s.h.
Communication 9 s.h.	
<a href="#">COMP01.105</a> Integrated College Composition	
OR	
<a href="#">COMP01.111</a> College Composition I	
<a href="#">COMP01.112</a> College Composition II	
<a href="#">CMS06.202</a> Public Speaking	
Science and Mathematics 10 s.h.	
Physical Science	
Biology Lab Science	
<a href="#">MATH01.115</a> Contemporary Mathematics	
Social and Behavioral Sciences (Courses may vary depending on dual major) 12 s.h.	
<a href="#">POSC07.110</a> American Government	
<a href="#">GEOG06.201</a> Geography of U.S. and Canada	
<a href="#">SOC08.220</a> Sociology of the Family	
<a href="#">FNDS21.230</a> Characteristics of Knowledge Acquisition	
History, Humanities and Language 12 s.h.	
<a href="#">HIST05.150</a> U. S. History to 1865	
<a href="#">HIST05.151</a> U.S. History since 1865	
<a href="#">FNDS21.150</a> History of American Education	
<a href="#">ENGL02.113</a> Readings in U.S. Literature	
Artistic and Creative Experience Bank 3 s.h.	
<a href="#">DESN09.110</a> Experiencing Art	
Non-Program Courses 15s.h.	
<a href="#">PSY01.104</a> Introduction to Psychology: Brain, Mind, and Behavior	
<a href="#">PHED35.103</a> Health and Wellness	
<a href="#">PSY22.215</a> Educational Psychology	
<a href="#">CMS01.203</a> Mass Media and Their Influences	
<a href="#">SPED08.130</a> Human Exceptionality	
<b>Dual Major Requirements</b>	30-42 s.h.
Early Childhood Education majors may choose one of the following dual majors:	
American Studies	33 s.h.
Communication: Writing Arts	30 s.h.
Sociology	33 s.h.

## Professional Major Requirements

38 s.h.

Early Childhood Education.  
Curriculum Sequence

ECED23.220	Inquiries in Teaching and Learning
ECED23.221	Family, Community, and School Relationships
ECED23.320	Growth and Learning: Birth - 5 years
READ30.320	Language Development
ECED23.320	Growth and Learning K - 3rd Grade
ECED23.321	Integrating and Adapting Curriculum: Math/Science
ECED23.430	Observation, Assessment, and Evaluation
ECED23.431	Integrating and Adapting Curriculum: Across Content Areas
ELEM02.446	Clinical Practice in Early Childhood Education
ELEM02.447	Early Childhood Education Clinical Seminar
SMED33.420	Educational Technology
SECD03.350	Teaching Students of Linguistic and Cultural Diversity

### Total Credits for Program

125-134 s.h.

Only students accepted into the Early Childhood Education Specialization may enroll in courses with the 0823 code.

## Collaborative Education

**Marjorie Madden , Coordinator**

**Education Hall**

**856-256-4500 x3834**

**madden@rowan.edu**

Co-Teach is a five-year program that combines undergraduate preparation in education and the liberal arts with graduate study that leads to certification in elementary and special education. It also includes an option for certification in reading. Co-Teach was designed to prepare teachers for the diverse classrooms that have become the norm in the 21st century. Students with a range of learning abilities are increasingly being taught in the same classroom, often by two or more teachers working together. The Co-Teach program was designed to prepare prospective teachers for this new reality. Students completing the program earn a Bachelor of Arts degree in a liberal arts field (American Studies) as well as in Collaboration Education. In addition, they earn a master's degree. Students in the program are part of a cohort group that study together as a learning community. Many of the courses will be co-taught by faculty from different departments. Field experiences are also an integral part of the program. Once admitted to the major, students must apply for admission to the certification program at the end of the sophomore year. An overall grade point average (GPA) of 2.5, a professional GPA of 3.0, and qualifying scores on the Praxis I:PPST are required for admission to the certification program. To complete the five-year program, students must apply to The Graduate School at the end of their fourth year for admission into the Collaborative Teaching Program which will lead to a Master of Science in Teaching degree. Students must have maintained an overall GPA of 2.75 and a professional GPA of 3.0 to be admitted to the fifth year component. Also the appropriate scores on the Praxis II exam and the Graduate Record Exam (GRE) must be attained. The GRE exam will be waived for students who maintain a GPA of 3.5 or better.

This program is currently accepting no new applicants.

## B.A. in Education, Specialization in Subject-Matter Education

**Lori A. Block , Program Advisor**

**Education Hall**

**856-256-4500 x3087**

**block@rowan.edu**

The Subject-Matter Education program prepares K-12 teachers in the following Jersey state teaching certification in their chosen content area, as well as a B.A. in Education.

Teacher candidates in Subject-Matter Education develop expertise in their chosen subject matter and learn to apply that expertise to the planning and execution of effective, standards-based lessons in K-12 classrooms. In keeping with the College of Education's overarching focus on the theme of "learning community," faculty in Subject-Matter Education strive to transcend traditional rote forms of learning and model a more collaborative, interactive, and intellectually challenging pedagogy that is true to the richness and rigor of the academic disciplines they represent. As teacher candidates experience and participate in such learning environments in their Subject-Matter Education classes at Rowan, they develop the commitment, confidence, and ability to go into the field and create K-12 classroom environments in which students work actively with the teacher and with each other to investigate important and meaningful ideas in a particular academic discipline.

Students begin the program in their sophomore year by taking general education courses that include field experiences. In the junior year, as they make progress toward the completion of their content area major, they also take a two-course sequence on teaching and learning in that content area. The junior-year sequence includes a weekly field experience in which candidates teach at least one full lesson in a middle or high school classroom. Finally, during the senior year, candidates complete a semester-long Clinical Practice experience (student teaching) in which they assume a full teaching load in a South Jersey public school. By the end of the program, teacher candidates in Subject-Matter Education are ready not only to enter the teaching profession, but to help transform it.

Admission to Rowan University does not guarantee admission to the Subject-Matter Education Program. Each subject area admits only 25 students per year. For most majors, we are able to admit all qualified students. However, admission to English and social studies is highly competitive and based on GPA.

The subject-matter program requirements vary from major to major, according to the instructional competencies set forth by the New Jersey Department of Education. Students MUST consult with their academic major advisor and Subject-Matter Education advisor regarding program and degree requirements.

Program requirements for each content-area specialization can be obtained by contacting the program advisors and by visiting the program website given below.

### **Post-Baccalaureate Certification (K-12 Subject-Matter)**

**Jeffrey A. Margolis , Program Advisor**  
**Education Hall**  
**856-256-4500 x3089**  
**margolis@rowan.edu**

This non-degree program is designed for the college graduate wishing certification in a single subject area for the purpose of teaching elementary through high school. Specializations are available in art, music, general business, biological science, physical science, English, Spanish, mathematics and social studies.

Requirements for admission include the minimum of a bachelor's degree from an accredited college or university, the completion of a comprehensive general education, an overall grade point average of 2.75 and a grade point average of at least 3.0 in certification specialty. Post-baccalaureate applicants must pass the Praxis I test before they can be admitted. Currently, seminars are conducted throughout the year to provide more detailed information for the certification process. Please call 856-256-4761 for more information on the seminars.

### **B.A. in Education, Specialization in Elementary Education**

The B. A. in Education, with Specialization in Elementary Education has four required strands of study: 1) General Education courses, 2) Core Education courses, 3) the Professional Specialization Sequence, and 4) the dual major requirements, where Elementary Education Specialization candidates are required to complete major requirements in one of nine academic disciplines approved by the University for certification. Students accepted into the Specialization are expected to adhere to the prescribed sequence of courses and to consult with their advisors in Education at least once a semester.

<b>General Education Requirements</b>	61 s.h.
Communication	9-10 s.h.
COMP01.105	Integrated College Composition or
COMP01.111	College Composition I
COMP01.112	College Composition II
CMS06.202	Public Speaking
Mathematics and Science	10 s.h.
Physical or Biology Lab Science	
MATH01.201	Structures of Mathematics
MATH01.115	Contemporary Mathematics
Social and Behavioral Sciences	12 s.h.
(Courses may vary depending on dual major)	
SPED08.130	Human Exceptionalities
PSY09.209	Child Development
GEOG06.201	Geography of U.S. and Canada (or approved substitute)
FNDS21.230	Characteristics of Knowledge Acquisition
History, Humanities, and Languages	12 s.h.
HIST05.150	U. S. History to 1865
OR 2205.151	U.S. History since 1865
English Literature	
SECD30.120	Literacies in Today's World
Artistic and Creative Expression	3 s.h.
<b>Art, Music or Theatre Arts Elective</b>	
Non-Program Electives	15 s.h.
PHED35.103	Health and Wellness
SOC08.336	Sociology of Education
Non-lab	Science (Biological or Physical)
FNDS21.150	History of American Education
SOC09.209	Elective
<b>Dual Major Requirements</b>	30-42 s.h.
Elementary Education majors may choose one of the following dual majors:	
• Child Drama	
• English.	
• Geography	
• History	
• Liberal Arts: American Studies	
• Liberal Arts: Mathematics/Science	
• Mathematics	
• Spanish	
• Writing Arts: Communications	
<b>Professional Major Requirements</b>	34 s.h.
Elementary/Early Childhood Education.	
Curriculum Sequence	
EDUC01.104	Teaching: An Introduction to the Profession
EDUC02.270	Teaching in Learning Communities I
EDUC02.272	Teaching in Learning Communities II
READ30.280	Teaching Literacy
ELEM02.317	Inquiry and Discovery in the Elementary Classroom
ELEM02.318	Practicum: Assessment in Elementary Classrooms
SPED08.316	Differentiated Instruction in the Inclusive Classroom
ELEM02.336	Mathematics Pedagogy for Elementary Teachers
ELEM02.338	Practicum in Mathematics and Literacy
READ30.351	Differentiated Literacy Instruction
SECD03.350	Teaching Students of Linguistic and Cultural Diversity
33.420	Educational Technology
ELEM02.448	Clinical Practice in Elementary Education
ELEM02.445	Elementary Education Clinical Seminar
<b>Total Credits for Program</b>	125-135 s.h.
Only students accepted into the Elementary Education Specialization may enroll in courses with that code.	

# College of Engineering

**Dianne Dorland , Dean**  
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**Steven Chin , Associate Dean**  
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## 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.

## Objectives

The objectives of the undergraduate engineering programs are to enable students to:

- understand and apply the core science and mathematics principles that form the basis of engineering disciplines,
- work individually and in teams to identify and solve complex engineering problems and develop an understanding of interdisciplinary problem solving,
- understand and apply advanced technology (computers and laboratory equipment) to solve complex engineering problems,
- understand the importance of the humanities and social sciences as part of a well rounded education and the practice of engineering,
- have a strong sense of the importance of ethics in an engineering setting as well as other aspects of their lives,
- develop communication skills so that they can perform engineering functions effectively.

## Accreditation

All four engineering programs (Chemical, Civil, Electrical & Computer, and Mechanical) are ABET accredited. ABET is a professional accrediting organization that is nationally recognized by the Council on Higher Education Accreditation (CHEA). In cooperation with its associated professional and technical societies, ABET has developed criteria, or standards, for the evaluation of educational programs. The criteria require that the programs demonstrate that graduates have mastered the knowledge and skills required and that the institution has in place a process for continuous improvement. The Engineering Accreditation Commission (EAC) of ABET administers the criteria, conducts the evaluations and accredits the programs.

## Programs Offered

The College of Engineering has four programs leading to bachelor of science degrees in chemical, civil, electrical and computer, and mechanical engineering. A concentration in bioengineering is available, which allows students to study this broad and interdisciplinary field related to areas of established and emerging biotechnologies and biosciences. A GPA in the major of 2.0 or greater is required for graduation from all undergraduate programs. The undergraduate programs include technology focus areas throughout the curricula. The technology areas are monitored continuously to maintain a leading edge as technology advances. The flexibility inherent in this approach allows the College to respond quickly to changes in technology, and to be responsive to the needs of students, the region, industry, and the profession.

## **Core Requirements**

All Engineering undergraduate students take a common core of courses within the Freshman year. These courses are:

- Fr Clinic I, II (Rowan Seminar experience is embedded in Fr Clinic)
- College Composition I
- Calculus I, II
- Physics I (calculus based)
- Advanced College Chemistry I
- Computer Science (see major requirements for specific course)

## **Chemical Engineering**

**Robert P. Hesketh , Chair**  
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Chemical Engineering is the application of mathematics and sciences, with special emphasis on chemistry, in the development, design, and supervision of processes to manufacture useful products. Chemical engineers are part of numerous industries and technologies including petrochemicals, pharmaceuticals, biotechnology, food and consumer products, polymers, microelectronics, electronic and advanced materials, sustainable technologies, safety, health and environment.

The Rowan University Chemical Engineering Program is a student-centered, primarily undergraduate program that incorporates leading-edge educational methods and technology with engineering practice. We prepare students for careers in the global chemical process industry and related fields, and for advanced degree study. Our program provides students with a strong foundation in chemical engineering science and design, and emphasizes the development of effective communication and teaming skills, and professional responsibility in preparation for a career in a diverse global workforce. Throughout the curriculum, students are exposed to chemical engineering methods using hands-on, state-of-the-art experiments, modern computer tools, and problem synthesis and solution approaches. The Chemical Engineering Program is committed to technical excellence, professional responsibility, and lifelong learning.

We use this mission statement along with the following four goals, to try to achieve the best possible learning environment for our students.

- Goal 1 Develop students who understand and apply the core scientific, mathematical, and engineering principles that form the basis of chemical engineering.
- Goal 2 Develop students who work individually and in diverse teams and effectively utilize advanced technology to solve complex engineering problems.
- Goal 3 Develop students who gain a perspective on the role of engineering in a global society including the importance of ethics, professional responsibility, diversity and culture, lifelong learning, safety, and the environment.
- Goal 4 Develop students who communicate their ideas effectively in various formats to both technical and non-technical audiences.

## Materials Specialization

**James Newell , Advisor**  
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This specialization provides a mechanism to give students credit for their focused study in materials on their transcripts. Extending this opportunity to students is valuable to them because of growing industrial interest in these areas of chemical engineering.

In South Jersey, there are a number of local industries, such as Sony, Solvay Solexis, Metrologic, DuPont, Huntsman ICI and VWR Scientific, whose success is based on the application of materials science. Within the region, there are only a limited number of schools that can supply qualified people to meet the needs of their labor force. By providing skilled graduates, this project will ensure that these companies can meet these needs and allow them to expand their enterprises. The local economy has an ever-increasing pressure for well-trained technicians, scientists, and engineers.

Materials science is inherently multidisciplinary, requiring of its practitioners a broad range of knowledge and a variety of skills. Students in the proposed program will be able to follow the complete cycle of materials science from concept to research design to synthesis, to measurement of and explanation for the physical properties of the material to successful application. Coupled with the organization of learning for chemical engineering students within the program comes a distinct and strong effort to motivate students to pursue careers in materials research. Ultimately, these efforts should help us retain a diverse pool of talented students in New Jersey instead of being lost to out-of-state institutions.

This specialization is a cohesive set of courses that focus on materials within chemical engineering. To obtain this specialization in materials at least 12 semester hours of credit are required. The requirements to earn a specialization in materials are as follows:

### Course Credits

Materials Science (ENG01.281)	2 s.h.
Jr/Sr Clinic Materials-related project (ENG01.301, 302, 401 and 402)	4 s.h.
ChE or Chemistry Elective - from approved list	3 s.h.
Out of Discipline Elective - from approved list	3 s.h.
Total:	12 s.h.

In order to earn the specialization in materials, students can earn four credits by working on an approved materials project in 2 semesters of Junior/Senior Engineering Clinic. These projects can be housed in any of the four engineering disciplines, but must be approved by the Chemical Engineering faculty as having substantial materials content. Note that students can also fulfill the project requirement through independent study on materials-related projects (Independent Study in Engineering ENGR01.391).

Students earn the remaining six credits towards the specialization by taking one elective from each of the following lists. In order to underscore the diverse applications and multidisciplinary nature of materials science, we will require students to take one chemistry or chemical engineering elective, and one materials elective outside of chemical engineering. Note that a chemistry course can be used to fulfill either requirement, but no one course can be used to fulfill both.

#### Approved Materials Electives from ChE or Chemistry

0906.466	3 Polymer Processing
0906.490	3 Approved Special Topics Course
1905.430	3 Approved Advanced Topics in Chemistry
1907.405	3 Introduction to Polymer Chemistry
1907.475	4 Polymer Synthesis
1907.478	4 Polymer Characterization
Other Approved Courses	

#### Approved Materials Electives from outside Chemical Engineering

0908.301	2 Civil Engineering Materials
0910.422	3 Introduction to Computational Fluid Dynamics
1905.430	3 Approved Advanced Topics in Chemistry
1907.405	3 Introduction to Polymer Chemistry
1907.475	4 Polymer Synthesis
1907.478	4 Polymer Characterization
4901.486	3 Interdisciplinary Materials Science

#### Other Approved Courses

Faculty in chemical engineering and throughout the College routinely manage Junior/Senior Engineering Clinic projects in materials. Following is a list of 13 Spring 2005 Junior/Senior Clinic projects that would be acceptable for this specialization:

ME-01	Plastics Ignition Experiment Development
ME-06	Development and Testing of Component Packaging for an Optical Filter
ME-07	Magneto-Rheological Rubber Development and Testing
ECE-01	Nano-Imprint Lithography
ECE-02	Molecular Electronics
ECE-03	Materials For Biomedical Research
CEE-07	Measurement and Visualization of Strain Using Computer Vision
CEE-10	Evaluation of New Pavement Design Guide
CEE-11	Evaluating Sources of Rutting within New Pavement
CEE-12	Evaluating Mixture Performance using Design Guide
CEE-14	Anchorage of Rebar in Fiber Reinforced Concrete
CHE-03	Performance Testing of Kevlar-Derakane Composites
CHE-04	Materials Science Education

#### Biological Engineering Specialization

**Brian G. Lefebvre , Advisor**

**Henry M. Rowan Hall**

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This specialization provides a mechanism to give students credit for their focused study in bioengineering. Extending this opportunity to students is valuable to them because of growing industrial interest in these areas of chemical engineering. In 1992, NIH defined "biomolecular engineering" as:

*"Research at the interface of chemical engineering and biology with an emphasis at the molecular level."* Recent trends in chemical engineering research, the decisions of government agencies, and the opinions of leading academics were taken as the platform for the development of the bio-related specialization.

Modern biology has emerged as an underlying fundamental science in chemical engineering. Advances in biology are prompting new discoveries in the biotechnology, pharmaceutical, medical technology, and chemical industries. Developing commercial-scale processes based on these advances requires that new chemical engineers clearly understand the biochemical principles behind the technology, in addition to developing a firm grasp of chemical engineering principles. Many jobs in the "Fast Company 25 Top Jobs for 2005" list are bio-related. Finally, New Jersey is a global and national leader in the biotechnology and pharmaceutical industries.

Instead of working at the "macro" scale, as traditional biochemical engineers have, there is a need for students to be able to work across scales - from the molecular level to the microscopic to the macroscopic. Traditional biochemical engineering focused on bioreactor design, agitation, and microbial cultures as a whole - macroscopic processes. Current and future applications will require students to be familiar with the molecular details of the product of interest, which help determine how to design and operate microscopic and macroscopic operations for production and purification.

This specialization is a cohesive set of courses that focus on a biological engineering within chemical engineering and requires at least 12 semester hours of credit. The requirements to earn a specialization in biological engineering are as follows:

## Course Credits

Biological Systems and Applications 0401.210: 4 credits

Jr/Sr Clinic Bio-related project 0901.301, 302, 401 and 402: 2-4 credits

Electives - from approved list: 4-6 credits

Total

12

The Biological Systems and Applications course is a required course in chemical engineering that was added as a response to the growing national interest in biochemical engineering. This course is prerequisite for all subsequent work towards a biological engineering specialization.

Junior/Senior Engineering Clinic is a required 2-credit course for students in all engineering disciplines. This course is a hallmark of the Rowan College of Engineering and provides undergraduate students with hands-on experience on practical engineering research and design problems, frequently in collaboration with local industrial sponsors. All engineering students are required to take four semesters (8 credits) of Junior/Senior Clinic. Students who wish to earn a specialization in biological engineering must select an approved Junior/Senior Clinic project for at least one of their four semesters. Note that students can also fulfill the project requirement through independent study on bio-related projects (Independent Study in Engineering ENGR901.391).

Because the department wishes to maintain a "depth and breadth" approach to the biological engineering specialization, a student will not be allowed to apply more than 4 credits worth of Junior/Senior Clinic to their specialization. Students must earn the balance of the 12 credits by taking any combination courses from the following list:

### Approved list of electives - chemical engineering

0906.462	3 bioprocess engineering
0906.472	3 principles of biomedical processes
0906.476	3 principles of bioseparation processes
0906.482	3 principles of food engineering
0906.483	4 principles of engineering exercise physiology
0906.484	3 fundamentals of controlled release
0906.486	3 membrane processes
0906.490	3 approved special topics course

### Approved list of electives - other engineering disciplines

0908.412	3 environmental treatment process principles
0909.404	3 principles of biomedical systems and devices

### Approved list of electives with bio focus

0401.430	4 cell biology
0401.435	4 cell culture technology
0401.440	2 special topics in biological sciences
0411.405	4 environmental microbiology
0414.348	3 intro to biochemistry
0422.410	4 concepts in human genetics
0422.450	4 molecular genetics
1907.348	4 biochemistry
1907.410	3 medicinal chemistry
1908.305	4 biophysical chemistry

The current chemical engineering curriculum requires students to take two advanced chemical engineering electives and one advanced chemistry elective. Consequently, the biological engineering specialization is readily attainable under the current chemical engineering curriculum: it requires a focused selection of project work and electives but no "additional" courses.

## B.S. in Chemical Engineering

**Robert P. Hesketh , Advisor**

**Henry M. Rowan Hall**

**856-256-5313**

**hesketh@rowan.edu**

**Program Requirements****General Education**

45-47 s.h.

## Communication

3-4 s.h.

COMP01.111 College Composition I

(College Composition II and Public Speaking are integrated into Sophomore Engineering Clinic I\* and II\*, respectively)

## Mathematics and Science

16 s.h.

MATH01.130 Calculus I

MATH01.131 Calculus II

CHEM06.105 Adv. College Chemistry I

CHEM06.106 Adv. College Chemistry II

## History, Humanities and Languages

6 s.h.

Approved HHL Course

Approved HHL Course

## Social and Behavioral Sciences

6 s.h.

ECON04.102 Microeconomics

Approved SBS Course

## Art and Creative Experience

3 s.h.

Approved ACE Course

## Non-Program Courses

11-12 s.h.

PHYS02.200 Physics I

CS04.103 Computer Science and Programming

OR

CS01.104 Intro to Scientific Programming

OR

CS01.102 Introduction to Programming

BIOL01.210 Biological Systems and Applications

**Major Requirements**

86 s.h.

ENGR01.101 Freshman Engineering Clinics I

2 s.h.

ENGR01.102 Freshman Engineering Clinics II

2 s.h.

ENGR01.201 Sophomore Engineering Clinic I

3 s.h.\*

ENGR01.202 Sophomore Engineering Clinic II

3 s.h.\*

CHE06.201 Principles Chemical Processes I

2 s.h.

CHE06.302 Principles Chemical Processes II

2 s.h.

MATH01.235 Math for Engineering Analysis I

4 s.h.

MATH01.236 Math for Engineering Analysis II

4 s.h.

ENGR01.341 Fluid Mechanics I

2 s.h.

CHEM07.200 Organic Chemistry I

4 s.h.

CHE06.309 Process Fluid Transport

2 s.h.

CHE06.311 Heat Transfer Processes

2 s.h.

CHE06.312 Separations Processes I

2 s.h.

CHE06.310 Chemical Engineering Thermodynamics I

3 s.h.

CHE06.315 Chemical Engineering Thermodynamics II

3 s.h.

ENGR01.301 Junior Engineering Clinics I

2 s.h.

ENGR01.302 Junior Engineering Clinics II

2 s.h.

ENGR01.281 Materials Science

2 s.h.

CHE06.316 Chemical Reaction Engineering

4 s.h.

CHE06.403 Unit Op Exp Design &amp; Analysis

2 s.h.

CHE06.404 Unit Operations Lab II

2 s.h.

CHE06.405 Process Dynamics and Control

3 s.h.

ENGR01.401 Senior Engineering Clinics I

2 s.h.

ENGR01.402 Senior Engineering Clinics II

2 s.h.

CHE06.401 Chemical Process Component Design

4 s.h.

CHE06.406 Chemical Plant Design

3 s.h.

\* ENGR01.201 Sophomore Engineering Clinics I (lab component; 1 s.h.)

\* ENGR01.202 Sophomore Engineering Clinics II (lab component; 1 s.h.)

Approved Chemical Engineering Electives I and II

6 s.h.

Approved Adv. Chemistry Elective I and II

6 s.h.

**Total Credits in Program**

131 s.h.

## Civil and Environmental Engineering

**Ralph A. Dusseau , Chair**  
**Henry M. Rowan Hall**  
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Civil Engineering includes all aspects of the planning, design, evaluation, construction, and maintenance of the infrastructure of modern life. This includes buildings, bridges, highways and airports, water and waste treatment facilities, dams and flood control, off-shore structures, rocket launch pads, space stations, communication towers and many other engineering works. The curriculum is designed to prepare students to enter this broad field.

The Civil Engineering Program strives to prepare students for professional careers by providing a broad-based civil engineering education through a rigorous curriculum including hands-on laboratory and design experiences integrated throughout. The program is committed to the integration of teaching, research, scholarly, and service activities within a collaborative educational environment as part of its students' preparation for both engineering practice and graduate school. The program endeavors to produce graduates ready to communicate their ideas in a diverse and multidisciplinary workplace.

Rowan Civil Engineering graduates will be:

1. Knowledgeable engineers, versed in multiple areas of the civil engineering profession, who remain current during their professional careers;
2. Problem-solvers, who can collect and utilize needed information to reach creative and realistic solutions to engineering problems;
3. Well rounded engineers who understand their professional, ethical, and global/social responsibilities and are able to work in multidisciplinary and diverse groups;
4. Communicators, who are able to disseminate information to professional and lay audiences.

### B.S. in Civil Engineering

**Ralph A. Dusseau , Advisor**  
**Henry M. Rowan Hall**  
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#### Program Requirements

<b>General Education</b>	45-46 s.h.
Communications	3-4 s.h.
COMP01.111 College Composition I (College Composition II and Public Speaking are integrated into Sophomore Engineering Clinic I and II, respectively)	
Science and Mathematics	8 s.h.
MATH01.130 Calculus I	
CHEM06.105 Adv. College Chemistry I	
History, Humanities and Languages	6 s.h.
Approved HHL Courses	
Approved HHL Courses	
Social and Behavioral Sciences	6 s.h.
ECON04.102 Microeconomics	
Approved SBS Course	
Artistic and Creative Experience	3 s.h.
Approved ACE Course	
Non Program Courses	18 s.h.
MATH01.131 Calculus II	
PHYS02.200 Physics I	
CS01.104 Introduction to Scientific Programming	
OR	
CS04.103 Computer Science and Programming	

CHEM06.106 Adv. College Chemistry II

STAT02.260 Statistics I

### Major Requirements

87 s.h.

CEE08.382 Structural Engineering 3 s.h.

CEE08.383 Analysis and Design of Steel Frames 3 s.h.

CEE08.311 Environmental Engineering I 3 s.h.

CEE08.312 Environmental Engineering II 3 s.h.

CEE08.301 Civil Engineering Materials 2 s.h.

CEE08.342 Water Resources Engineering 3 s.h.

CEE08.351 Geotechnical Engineering 3 s.h.

CEE08.305 Civil Engineering Systems 2 s.h.

CEE08.361 Transportation Engineering 3 s.h.

CEE08.203 Surveying & Engineering Graphics 4 s.h.

CEE08.491 Civil Engineering Design Project I 2 s.h.

CEE08.492 Civil Engineering Design Project II 2 s.h.

CEE08.490 Civil Engineering Practice 1 s.h.

MATH01.235 Math for Engineering Analysis I 4 s.h.

MATH01.236 Math for Engineering Analysis II 4 s.h.

ENGR01.101 Freshman Engineering Clinic I 2 s.h.

ENGR01.102 Freshman Engineering Clinic II 2 s.h.

ENGR01.201 Sophomore Engineering Clinic I 4 s.h.

ENGR01.202 Sophomore Engineering Clinic II 4 s.h.

ENGR01.301 Junior Engineering Clinic I 2 s.h.

ENGR01.302 Junior Engineering Clinic II 2 s.h.

ENGR01.401 Senior Engineering Clinic I 2 s.h.

ENGR01.402 Senior Engineering Clinic II 2 s.h.

ENGR01.271 Statics 2 s.h.

ENGR01.272 Solid Mechanics 2 s.h.

ENGR01.281 Material Science 2 s.h.

ENGR01.291 Dynamics 2 s.h.

ENGR01.341 Fluid Mechanics I 2 s.h.

Civil Engineering Electives (4) 3 s.h. each

Technical Elective 3 s.h.

**Total Credits in Program** 131 s.h.

## Electrical & Computer Engineering

**Shreekanth A. Mandayam , Chair**

**Henry M. Rowan Hall**

**856-256-5333**

**shreek@rowan.edu**

Electrical and Computer Engineering (ECE) uses principles drawn from physics and allied sciences in combination with a broad range of mathematics to analyze and develop components and systems made up of those components. Applications of such engineered systems can be found in many familiar areas such as audio, computer, control, integrated electronics, manufacturing, navigation, networks, power, telecommunications, and video. To prepare students to contribute in this rapidly evolving field, the curriculum begins with foundation courses in science, mathematics, and engineering sciences. Core and elective courses provide breadth and depth in electrical and computer engineering. Additional inter- and multi-disciplinary experiences in design centered courses and clinics provide a unique opportunity to integrate the students' theoretical background into the solution of practical engineering problems.

The overarching goal of creating an "effective electrical and computer engineer" is supported by the following six specific objectives. We expect our graduates to:

1. Perform as agile problem solvers.
2. Communicate capably.
3. Possess an entrepreneurial spirit.

4. Facilitate transdisciplinary discourse.
5. Be sensitized to contemporary issues.
6. Be competent in essential engineering and ECE knowledge.

We seek to create effective electrical and computer engineers. We are committed to the total engineer who can function effectively in a variety of environments and sustain productivity throughout their career.

## B.S. in Electrical and Computer Engineering

**Linda M. Head , Advisor**  
**Henry M. Rowan Hall**  
**856-256-5335**  
**head@rowan.edu**

### Program Requirements

<b>General Education</b>	42 s.h.
Communications	3-4 s.h.
<b>COMP01.111</b> College Composition I	
College Composition II and Public Speaking have been approved for inclusion in the Sophomore Engineering Clinics (I & II).	
Science and Mathematics	8 s.h.
<b>MATH01.130</b> Calculus I	
<b>CHEM06.105</b> Adv. College Chemistry I	
History, Humanities and Languages	6 s.h.
Approved HHL Course	
Approved HHL Course	
Social and Behavioral Sciences	6 s.h.
<b>ECON04.102</b> Intro to Microeconomics	
Approved SBS Course	
Artistic and Creative Experience	3 s.h.
Approved ACE Course	
Non-Program Courses	12 s.h.
<b>MATH01.131</b> Calculus II	
<b>PHYS02.200</b> Physics I	
<b>PHYS02.203</b> Physics II	
<b>CS04.103</b> Computer Science and Programming	
<b>Major Requirements</b>	86 s.h.
<b>MATH01.235</b> Math for Engineering Analysis I 4 s.h.	
<b>MATH01.236</b> Math for Engineering Analysis II 4 s.h.	
<b>ENGR01.101</b> Freshman Engineering Clinics I 2 s.h.	
<b>ENGR01.102</b> Freshman Engineering Clinics II 2 s.h.	
<b>ENGR01.201</b> Sophomore Engineering Clinics I 4 s.h.	
<b>ENGR01.202</b> Sophomore Engineering Clinics II 4 s.h.	
<b>ENGR01.301</b> Junior Engineering Clinics I 2 s.h.	
<b>ENGR01.302</b> Junior Engineering Clinics II 2 s.h.	
<b>ENGR01.401</b> Senior Engineering Clinics I 2 s.h.	
<b>ENGR01.402</b> Senior Engineering Clinics II 2 s.h.	
<b>CS04.103</b> Computer Science and Programming 3 s.h.	
<b>ENGR01.271</b> Statics 2 s.h.	
<b>ECE09.201</b> Network I 2 s.h.	
<b>ECE09.202</b> Network II 2 s.h.	
<b>ENGR01.291</b> Dynamics 2 s.h.	
<b>ECE09.241</b> Digital I 3 s.h.	
<b>ECE09.242</b> Digital II: Microprocessors 3 s.h.	
<b>ECE09.311</b> Electronics I 2 s.h.	
<b>ECE09.301</b> Engineering Electromagnetics I 2 s.h.	
<b>ECE09.302</b> Engineering Electromagnetics II 2 s.h.	
<b>ECE09.351</b> Digital Signal Processing 3 s.h.	
<b>ECE09.321</b> Systems and Control 3 s.h.	
<b>ECE09.331</b> Electrical Communications Systems 4 s.h.	

CS04.225	Data Structures for Engineers 3 s.h.
ECE09.443	Computer Architecture I 2 s.h.
ECE09.498	Seminar: Engineering Frontiers 1 s.h.
ECE09.400	Clinic Consultant (1 s.h. - 4 modules)

EE Core Elective (1)

ECE Elective (1)

CpE Elective (1)

CpE Core Elective (1)

Technology Focus Electives (2)

Approved Electives (2)

**Total Credits in Program**

128 s.h.

## Mechanical Engineering

**Anthony J. Marchese , Chair**

**Henry M. Rowan Hall**

**856-256-5340**

**marchese@rowan.edu**

Mechanical Engineering involves the design and building of machines and devices. This includes the conversion of energy from one form to another, the dynamics of mechanical devices, and the control systems for operation of machines. Design of thermal and mechanical systems are integrated into the curriculum.

We seek to create effective engineers who are well prepared for the next phase of their career, whether that be in industry or government, in graduate engineering studies, or in other advanced studies.

1. Create well-rounded engineers who possess theoretical and practical skills, and understand the significance of humanities and social sciences.
2. Produce graduates who have the necessary teamwork and leadership skills to excel in multidisciplinary team environments.
3. Develop innovative and creative thinking with an understanding of entrepreneurship.
4. Develop science, mathematics, analytical, computational, and experimental skills and apply them to formulate and solve engineering problems.
5. Instill in students an appreciation of the impact of engineering solutions in a global and societal context, including the broad implications of professional ethics.
6. Develop the flexibility to adapt to changing technology and an understanding of the need for continuous improvement and lifelong learning.

## B.S. in Mechanical Engineering

**Anthony J. Marchese , Advisor**

**Henry M. Rowan Hall**

**856-256-5343**

**marchese@rowan.edu**

### Program Requirements

#### General Education

42-43 s.h.

Communications

3-4 s.h.

**COMP01.111** College Composition I

(College Composition II and Public Speaking are integrated into Sophomore Engineering Clinic I and II, respectively)

Science and Mathematics

20 s.h.

**MATH01.130** Calculus I

**CHEM06.105** Adv. College Chemistry I

History, Humanities and Languages

6 s.h.

Approved HHL Course

Social and Behavioral Sciences

6 s.h.

**ECON04.102** Intro to Microeconomics

Approved SBS Course

Artistic and Creative Experience

3 s.h.

Approved ACE Course		
Non-Program Courses		16 s.h.
MATH01.131	Calculus II 4 s.h.	
PHYS02.200	Physics I 4 s.h.	
PHYS02.201	Physics II 4 s.h.	
CS04.103	Computer Science and Programming 4 s.h.	
<b>Major Requirements</b>		86 s.h.
CS04.103	Computer Science and Programming	
MATH01.235	Math for Engineering Analysis I 4 s.h.	
MATH01.236	Math for Engineering Analysis II 4 s.h.	
ENGR01.101	Freshman Engineering Clinics I 2 s.h.	
ENGR01.102	Freshman Engineering Clinics II 2 s.h.	
ENGR01.201	Sophomore Engineering Clinics I 4 s.h.	
ENGR01.202	Sophomore Engineering Clinics II 4 s.h.	
ENGR01.301	Junior Engineering Clinics I 2 s.h.	
ENGR01.302	Junior Engineering Clinics II 2 s.h.	
ENGR01.401	Senior Engineering Clinics I 2 s.h.	
ENGR01.402	Senior Engineering Clinics II 2 s.h.	
ENGR01.271	Statics 2 s.h.	
ENGR01.272	Solid Mechanics 2 s.h.	
ENGR01.281	Material Science 2 s.h.	
ENGR01.282	Manufacturing Processes 2 s.h.	
ENGR01.291	Dynamics 2 s.h.	
ME10.201	Vibrations 2 s.h.	
ME10.311	Engineering Thermodynamics I 2 s.h.	
ME10.312	Engineering Thermodynamics II 2 s.h.	
ME10.241	Machine Design 2 s.h.	
ME10.341	Mechanical Design and Synthesis 4 s.h.	
ECE09.201	Networks I 2 s.h.	
ME10.342	Quality and Reliability in Design and Manufacturing 3 s.h.	
ENGR01.341	Fluid Mechanics I 2 s.h.	
ME10.313	Fluid Mechanics II 2 s.h.	
ME10.343	Mechanical Systems Dynamics and Control 3 s.h.	
CHE06.311	Transfer Processes I - Heat 2 s.h.	
ECE09.311	Electronics I 2 s.h.	
ME10.403	Emerging Topics in Mechanical Engineering 2 s.h.	
Approved Science/Math Elective		3 s.h.
Technical Elective		3 s.h.
Approved Major Electives		12 s.h.
- Two electives from energy systems and two from mechanical systems.		
<b>Total Credits in Program</b>		128 s.h.

### Concentration in Bioengineering

**Jennifer A. Kadlowec , Advisor**  
**Henry M. Rowan Hall**  
**856-256-5340**  
**kadlowec@rowan.edu**

There are two basic components to earning a concentration in bioengineering for mechanical engineering:

- A. A focused selection of mechanical engineering, non-mechanical engineering and science electives and jr / sr clinic projects that are part of the standard curriculum
- B. One more bioengineering-related non-mechanical engineering course

Component A consists of a focused selection of three mechanical engineering electives (9 s.h.), one non-mechanical engineering elective (3 s.h.), one science elective (3-4 s.h.) and one jr / sr clinic project 2 s.h. that are required for the standard mechanical engineering degree. One semester of jr / sr clinic must be spent on a bioengineering related project. This project can be from any engineering discipline, as long as it has a substantial bioengineering component. Your selection of junior and senior year electives must also be focused on bioengineering electives. Three of the four mechanical engineering electives must be from the approved list of bioengineering electives within mechanical engineering. Of the four mechanical engineering electives (three of which are bioengineering related) you must ensure that you meet the mechanical engineering degree requirement that two fulfill the thermal-fluid sciences stem and two fulfill the mechanical systems stem. For the concentration, the technical elective in the standard curriculum is a non-ME engineering course that must be replaced with one of the non-ME bioengineering electives below. Also for the concentration, you must take an approved biological science elective in place of the standard math/science elective.

Component B consists of one additional bioengineering-related course (3-4 s.h.) outside of mechanical engineering, which is beyond the ME degree requirements. This course must be from the list of approved electives in biology, chemistry, and other engineering disciplines. You must determine how this will fit into your schedule. The most likely mechanism is for you to complete your general education requirements early, and then fill this open space in your schedule with an approved elective. Currently, general education blocks appear in the curriculum during both semesters of the freshman year and in the spring of the senior year.

More detailed information about the requirements can be found in the document available on the web at: [http://www.rowan.edu/colleges/engineering/current\\_students/program\\_of\\_study/2005/Program-Fall\\_2005-BIOENGR.doc](http://www.rowan.edu/colleges/engineering/current_students/program_of_study/2005/Program-Fall_2005-BIOENGR.doc)

# College of Fine and Performing Arts

**Jon R. Cart , Dean**  
**Wilson Hall**  
**856-256-4548**  
**cart@rowan.edu**

## History

The School of Fine and Performing Arts at Rowan University was founded in 1971. Additionally, Wilson Hall was completed at this time, built to house a music program of first rank. Upon Rowan's emergence as a University in 1997, the School became the College of Fine and Performing Arts. The College consists of an Art, Music and Theatre/Dance departments, it offers baccalaureate and graduate programs in the four arts disciplines and the Maynard Ferguson Institute of Jazz Studies. Forty-one full-time faculty engage with 540 major students to form a first-rate creative Arts Learning Community at Rowan.

The College also presents over 250 arts experiences and events for the benefit of both the university community and the surrounding region. The College is dedicated to the fostering of artistic and creative endeavor in the Arts. Specifically, it provides professional training in the arts for majors and arts curricula and aesthetic experiences for all students that enhance the educational programs at the University.

## Mission

The College of Fine and Performing Arts fosters a dynamic intellectual and creative environment that produces transcendent experiences of discovery and expression. The College nurtures authentic learning communities through rigorous degree programs that educate artists of the future and provide classroom and applied arts experiences for non-majors and enriching programs for the public.

## Accreditation

National specialized arts accreditation has been bestowed on the art, music, and theatre programs of the University.

- National Association of Schools of Art & Design for the BA and BFA in Studio Art;
- The National Association of Schools of Music for the BA, BM, MA in Music Education, and MM;
- The National Association of Schools of Theatre for the BA, MA in Theatre.

## Programs Offered

In the professional area, the College offers rigorous degree programs that are designed to develop technical and creative abilities to the highest level, as well as provide a comprehensive socio-historical awareness for the Arts practitioner.

Elective courses in the arts allow all students to partake of the unique, intellectual and emotional experiences that the arts provide. Performing/creating experiences are open to all and are designed to foster the artistic discipline that is expected in such activities. Further, they provide social and collegial experiences desirable in a college education. Through participation in musical ensembles, dance ensembles, theatre productions and art exhibits, artistic expression becomes an integral part of the educational experience.

In the Liberal Arts area, arts curricula are offered that provide extensive study of the fine and performing arts through Minor programs, Concentrations and, for Elementary Education Majors, Coordinate Majors. In these Bachelor of Arts programs, a focus on one particular segment of the arts allows the student to share the diversity of our cultural base and also to gain the perspective, if not the expertise, of the professional artist.

A program of study in the College can lead to:

A professional career in the arts

A teaching career in the arts

Graduate study in the arts

Other career options not tied fully to the arts, but which draw on the knowledge and rigor inherent in them.

Central to a productive environment for the study of the arts is a vital community of arts professionals, both faculty and student artists, scholars, educators and performers whose careers are dedicated to the creative pursuit and advancement of the arts, in terms of their own individual creation and, also, in edification of the audience. The arts faculty at Rowan consist of some of the finest arts professionals in the nation, all dedicated to fostering a creative, productive atmosphere in which all of the arts can flourish.

## **Programs**

Major programs consist of a Bachelor of Arts in Art, Music and Theatre Arts (with specializations in Theatre or Child Drama); a Bachelor of Fine Arts in Studio Art and a Bachelor of Music.

Minor programs are available in Art, Dance, Music and Theatre.

## **Dual Majors in Teaching**

Art, Music and Theatre majors can apply for a dual major in Education. Students must complete the general education and other requirements specified by the appropriate departments within the College of Education.

## **Requirements**

At Rowan, we recognize and embrace the importance of the general education curriculum in all academic programs. Obtaining the Bachelor of Arts degree in an arts area broadens the background of the student, establishing a foundation for further study in many diverse areas. Of the 120-135 semester hours to be completed for the BA, at least 45 shall be at the 300 or 400 level and at least 90 shall be in courses using the A-F grading system.

Core Foundation Courses in each major are specified in each degree program outline of courses within each department. In addition to the General Education Core Requirements a BA degree requires 60 credits and a Professional degree requires 45 credits.

## **Departments**

The College consists of the departments of Art, Music and Theatre/Dance.

## **Services**

Company-In-Residence

Contact with professionals in the field is very important to any arts educational program. At Rowan, the following professional arts company is in residence year round: Atlantic Brass Band

## **Art**

**Skeffington N. Thomas , Chair**

**Westby Arts Center**

**856-256-4522**

**thomass@rowan.edu**

The Art Department offers two degree programs: The Bachelor of Fine Arts in Studio Art (BFA) and the Bachelor of Arts in Art (BA).

All students are considered foundation students for the first year. In the first year, all students take the Foundation Core: Representational Drawing, Figure Drawing, Expressive Drawing, Two-Dimensional Design, Three-Dimensional Design, Color Theory, and Digital Media & Techniques. During the semester a student is completing the final studio courses in the Foundation Core, he/she signs up for the Foundation Core Portfolio Review. After passing the Studio Core and completion of three additional studio courses, an application to the BFA program may be initiated if desired.

Each candidate applying for admission as an art student is required to personally present a portfolio containing twelve examples (a minimum of six original representational drawings) of his/her best work for review by the art faculty. Photographs or slides may be substituted for large or three-dimensional work. A 250-word essay discussing why the applicant wishes to pursue studies in the visual arts is also required. Applicants may schedule appointments by contacting the Art Office (856) 256-4520.

These admission standards apply to all art students: freshmen, transfers from other institutions and Rowan University students changing their majors. Note: In addition to tuition, fees and normal book costs, art majors should anticipate additional fees for materials and equipment used in studio courses.

### **Bachelor of Fine Arts in Studio Art (BFA)**

**David E. Vaccaro , Advisor**  
**Westby Arts Center**  
**856-256-4091**  
**vaccaro@rowan.edu**

The Bachelor of Fine Arts in Studio Art (BFA)

A professional, studio-intensive, degree program for students who wish to become illustrators, designers or fine artists. The standards are high, the work is demanding, and the rewards are great.

The BFA at Rowan is a general fine arts degree. It provides students with a thorough grounding in fundamental principles and techniques with opportunities for emphasis in one or more specific fine arts areas. Studios include Ceramics, Glass, Graphic Design, Illustration, Jewelry/ Metalry, Photography, Printmaking, Sculpture, Drawing and Painting.

<b>General Education</b>	42 s.h.
Communications	9 s.h.
COMP01.111 College Composition I	
COMP01.112 College Composition II	
CMS06.202 Public Speaking	
Science and Mathematics	7 s.h.
Social and Behavioral Sciences	6 s.h.
History, Humanities and Languages	12 s.h.
Artistic and Creative Experience	6 s.h.
Non-Program Courses	8 s.h.
<b>Major Requirements</b>	78 s.h.
A. Foundation Core	19.5 s.h.
ART02.100 Representational Drawing	
ART02.110 Figure Drawing	
ART02.200 Expressive Drawing	
ART02.105 Color & Design - 2D	
ART02.207 Color & Design - 3D	
ART09.308 Color Theory	
ART09.101 Digital Media & Techniques	
ART02.222 Studio Core Portfolio Review	
B. Studio Choices	33 s.h.
Primary Studio and support courses determined with academic and studio advisors.	
Studios include Ceramics, Computer Art, Drawing, Graphic Design, Illustration, Jewelry/ Metalry, Photography, Printmaking, and Sculpture.	
ART09.390 Work in Progress Review 0 s.h.	
ART09.490 Senior Thesis/Exhibition 0 s.h.	

C. Art Studio Electives	13.5 s.h.
D. Art History	12 s.h.
ARHS03.103 Art History Survey I	
ARHS03.104 Art History Survey II	
ARHS03.205 Art History Survey III	
Art History/Theory Choice	
<b>Program Total</b>	<b>120 s.h.</b>

### **Bachelor of Arts in Art (BA)**

**David E. Vaccaro , Advisor**  
**Westby Arts Center**  
**856-256-4091**  
**vaccaro@rowan.edu**

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

<b>General Education</b>	54 s.h.
Communications	9 s.h.
COMP01.111 College Composition I	
COMP01.112 College Composition II	
CMS06.202 Public Speaking	
Science and Mathematics	7 s.h.
Social and Behavioral Sciences	6 s.h.
History, Humanities and Language	12 s.h.
Foreign language suggested	
Artistic and Creative Experience	6 s.h.
Non-Program Courses	14 s.h.
<b>Major Requirements</b>	<b>39 s.h.</b>
A. Foundation Core	19.5 s.h.
ART02.100 Representational Drawing	
ART02.110 Figure Drawing	
ART02.200 Expressive Drawing	
ART02.105 Color and Design-2D	
ART02.207 Color and Design-3D	
ART09.308 Color Theory	
ART09.101 Digital Media & Techniques	
ART02.222 Studio Core Portfolio Review	
ARHS03.103 Art History Survey I	
ARHS03.104 Art History Survey II	
ARHS03.205 Art History Survey III	
B. Studio Choices	10.5 s.h.
Select studios in consultation with advisor.	
C. ART09.401 Senior Show or Project	0 s.h.
<b>Free Electives</b>	<b>27 s.h.</b>
<b>Program Total</b>	<b>120 s.h.</b>

### **B.A. in Art / B.A. in Education with Endorsement to teach Art K -12**

**Jane E. Graziano , Coordinator**  
**Westby Arts Center**  
**856-256-4045**  
**graziano@rowan.edu**

This unique program offers students an opportunity to satisfy degree requirements for a BA in Art and a BA in Education with New Jersey State Art Teacher Endorsement for grades K-12. With artistic studies in art history and studio, the program combines the broad perspectives of a liberal arts education with a focus on educational theories and methodologies. The purpose of the program is to provide future teachers with a strong foundation in educational theory and practice for teaching art in the public schools. Equal emphasis is placed on acquiring artistic knowledge and techniques through a variety of lecture and studio experiences. Students enrolled in this dual major program are expected to integrate the roles of artist and educator and may choose to apply for the Bachelor of Fine Arts degree program during the end of sophomore year for more in-depth studio opportunities.

Information about this program can be obtained from the Art Department (856) 256-4520 and the Department of Secondary Education (856) 256-3867. For Post-Baccalaureate endorsement in the teaching of art K-12, obtain information from The Graduate School (856) 256-4050.

<b>General Education Requirements</b>	58 s.h.
Communications	9 s.h.
COMP01.111 College Composition I	
COMP01.112 College Composition II	
CMS06.202 Public Speaking	
Science and Mathematics	7 s.h.
Math Elective	
Lab Science	
Social and Behavioral Sciences	6 s.h.
PSY09.209 Child Development	
PSY09.210 Adolescent Development	
History, Humanities and Language	12 s.h.
Broad-based Literature	
Aesthetics or Philosophy option	
Foreign language suggested	
Artistic and Creative Experience	6 s.h.
Non-Program Courses	23 s.h.
FNDS21.230 Characteristics of Knowledge Acquisition	
SPED08.130 Human Exceptionality	
FNDS21.150 History of American Education	
READ30.120 Literacies in Today's World	
SMED09.200 Theory & Analysis of Art Education	
Elective	
<b>Education Requirements</b>	32 credits
EDUC01.104 Teaching: An Introduction to the Profession	
EDUC01.270 Teaching in the Learning Community I	
EDUC01.282 Teaching in the Learning Community II-Art	
SECD03.350 Teaching Students Cult. & Ling. Diversity	
READ30.280 Teaching Literacy	
SMED31.350 Elementary Methods: Teaching & Learning Art (content) A	
SECD03.330 Practicum A	
SMED31.360 Secondary Methods: Teaching & Learning Art (content) B	
SECD03.332 Practicum B	
SMED31.450 Clinical Practice in Art Education	
SMED31.451 Clinical Seminar in Art Education	
SMED33.420 Integrating Ed. Technology into Teaching	
<b>Academic Major</b>	
Art Requirements	39 credits
A. Foundation Core	19.5 s.h.
ART02.100 Drawing I (Representational)	
ART02.110 Drawing II (Figure)	
ART02.200 Drawing III (Expressive)	
ART02.105 Color & Design I	
ART02.207 Color & Design II	
ART09.101 Digital Media & Techniques	

ART09.308	Color Theory	
ART02.222	Studio Core Portfolio Review	
B. Art History		9 s.h.
ARHS03.103	Art History Survey I	
ARHS03.104	Art History Survey II	
ARHS03.205	Art History Survey III	
C. Studio		12 s.h.
Studio		
D. Senior Project Art (ART09.401)		0 s.h.
<b>Total Credits</b>		<b>129 s.h.</b>

### Minor in Art

**David E. Vaccaro , Advisor**  
**Westby Arts Center**  
**856-256-4091**  
**vaccaro@rowan.edu**

Eligibility: The Minor in Art is open to any interested Rowan student. A portfolio review is required. Transfer students are required to take a minimum of fifteen credit hours toward the minor at Rowan University. Program: The Minor in Art consists of 24 semester hours: five core courses and three studio electives, as follows:

#### Foundation Core:

ART02.100	Representational Drawing
ART02.105	Color and Design-2D
ART02.200	Expressive Drawing
ART02.207	Color and Design-3D
ARHS03.130	Art Appreciation

#### Studio Electives:

(Choose three) Note: If intermediate courses are selected, prerequisites listed in the catalog descriptions of these courses must be met.

ART11.250	Photography I
ART11.275	Photography II
ART02.220	Painting I
ART02.240	Sculpture I
ART02.260	Printmaking I
ART09.210	Jewelry and Metalry I
ART09.225	Puppetry I
ART09.240	Ceramics I
ART09.228	Illustration I
ART09.343	Graphic Design I
ART09.351	Computer Art I
ART02.110	Figure Drawing
ART02.225	Painting II
ART02.251	Sculpture II
ART02.261	Printmaking II
ART09.226	Puppetry II
ART09.211	Jewelry and Metalry II
ART09.344	Graphic Design II
ART09.241	Ceramics II
ART09.229	Illustration II
ART09.452	Computer Art II
ART39.347	Advanced Photography

## Bachelor of Fine Arts in Studio Art (BFA) With Specialization in Graphic Design

**David E. Vaccaro , Advisor**  
**Westby Arts Center**  
**856-256-4091**  
**vaccaro@rowan.edu**

The Bachelor of Fine Arts in Studio Art Specialization in Graphic Design (BFA)

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

**General Education** 42 s.h.

Communications 9 s.h.

[COMP01.111](#) College Composition I  
[COMP01.112](#) College Composition II  
[CMS06.202](#) Public Speaking

Science and Mathematics 7 s.h.

Social and Behavioral Sciences 6 s.h.

History, Humanities and Languages 12 s.h.

Aesthetics/Philosophy option

Artistic and Creative Experience 6 s.h.

Non-Program Courses 8s.h.

**Major Requirements** 78 s.h.

A. Foundation Core 19.5 s.h.

[ART02.100](#) Representational Drawing  
[ART02.110](#) Figure Drawing  
[ART02.200](#) Expressive Drawing  
[ART02.105](#) Color & Design - 2D  
[ART02.207](#) Color & Design - 3D  
[ART09.308](#) Color Theory  
[ART09.101](#) Digital Media & Techniques  
[ART02.222](#) Studio Core Portfolio Review

B. Primary Studios and Studio Choices 33 s.h.

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

Not all courses are offered each semester.

Primary Studios

[ART09.343](#) Introduction to Graphic Design I  
[ART09.344](#) Intermediate Graphic Design II (Typography)  
[ART09.349](#) Intermediate Graphic Design III (Visual Identity)  
[ART09.350](#) Intermediate Graphic Design IV (Packaging) \*Fall semester  
[ART09.363](#) Advanced Graphic Design V (Publication) \*Spring semester  
[ART09.364](#) Advanced Graphic Design VI (Visual Communication)\*Fall semester  
[ART09.464](#) Advanced Graphic Design VIII (Portfolio) \*Spring semester

Support studios include Ceramics, Computer Art, Drawing, Graphic Design, Illustration, Jewelry/Metalry, Photography, Printmaking, and Sculpture.

[ART09.390](#) Work in Progress Review 0 s.h.

[ART09.490](#) Senior Thesis/Exhibition 0 s.h.

C. Art Studio Electives	13.5 s.h.
D. Art History	12 s.h.
ARHS03.103 Art History Survey I	
ARHS03.104 Art History Survey II	
ARHS03.205 Art History Survey III	
Art History/Theory Choice	
Program Total	120 s.h.

### Minor in Art History

**David E. Vaccaro , Advisor**  
**Westby Arts Center**  
**856-256-4091**  
**vaccaro@rowan.edu**

Eligibility: The Minor in Art History is open to any interested Rowan student. Transfer students are required to take a minimum of twelve credit hours toward the minor at Rowan University. Program: The Minor in Art History consists of 18 semester hours. There are three required Art History core courses and three Art History electives, as follows:

#### Art History Core Courses:

Note: These courses are offered every semester.

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

#### Art History Electives (choose three):

Note: If intermediate courses are selected, prerequisites listed in the catalog descriptions of these courses must be met. Courses marked with an asterisk (\*) are not offered every semester.

ARHS03.210	History of American Art
ARHS03.220	Modern Art
ARHS03.250	Concepts in Art: Survey*
ARHS03.252	Concepts in Art: Criticism (WI) (*)
ARHS03.253	Concepts in Art: Sociological (*)
ARHS03.230	Survey of Women Artists (*)
ARHS03.401	Survey of Asian Art (*)
ARHS03.420	Art Since 1945 (*)
ARHS03.425	Special Problems Art History (course may be repeated)

### Music

**Robert Rawlins , Chair**  
**Wilson Hall**  
**856-256-4557**  
**rawlinsr@rowan.edu**

The Department of Music develops the total artist through a series of studies and experiences designed to inspire the creative process. The non-verbal language of music enhances communication through perception, interpretation, expression and evaluation and teaches the self-discipline, problem-solving and creativity that are necessary for success in work and life.

Based on this philosophy, a program of study for the music major can lead to:

- a performing career in the arts
- a teaching career in the arts
- graduate study in the arts
- a broader cultural knowledge appropriate for many career options.

For music majors, Baccalaureate degrees are offered with the following program options: Bachelor of Music in (a) Performance (b) Music Education (c) Jazz Studies (d) Music Education - Jazz (e) Composition. The Master of Arts in Music Education degree provides advanced study for the music specialist, and the Master of Music degree in Music Performance is offered for advanced study. (Please see the Graduate Catalog.)

Options in Applied Performance, Jazz Studies or Composition combine in-depth study of music with required courses in general education to provide the initial preparation for careers as performers, composers, scholars and college teachers. These three curricula provide instruction in all orchestral instruments, saxophone, voice, piano, organ, classical guitar, accordion, composition, and jazz studies. Options in Jazz Studies: Music Education specialization and in Music Education curriculum combine broad study in music with required courses in general and professional education to qualify graduates for a career in public school teaching with K-12 teacher certification.

The Bachelor of Arts in Music curriculum, a liberal arts program with a major in music, is designed for students who want to combine a broad academic background with sufficient musical training for further study in fields such as musicology, music criticism or music therapy. This program is for those who want a career outside of music performance or teaching.

For admission to the music major program, one must demonstrate, by audition, a high level of proficiency in some area of music performance. Each semester, participation in ensembles and attendance at master classes and departmental recitals is required of all music students. All music majors, except those in the B.A. Music curriculum, present a senior recital. Requirements for the Bachelor of Music in Applied Performance and Jazz Studies include a junior recital as well. Students required to take Music Fundamentals and/or Sight Singing/Ear Training will automatically be tracked into the BA program until Music Fundamentals coursework has been successfully completed.

Non-majors can find artistically fulfilling experiences as (1) music minors by combining a flexible sequence of music course with a separate major outside music, as (2) elementary education majors with a coordinate major in music, or (3) as students in other disciplines who participate in music for academic credit and/or aesthetic pleasure. Non-majors are invited to take part in ensembles and other activities of the Department of Music.

The Department of Music is a fully accredited member of the National Association of Schools of Music and sponsors a chapter of Phi Mu Alpha Sinfonia and Sigma Alpha Iota.

## Bachelor of Arts in Music

**Thomas Wade , Advisor**  
**Wilson Hall**  
**856-256-4651**  
**wade@rowan.edu**

<b>Total Program</b>	120 s.h.
<b>General Education</b>	60 s.h.
Communication	9 s.h.
<b>COMP01.111</b> College Composition I	
<b>COMP01.112</b> College Composition II	
<b>CMS06.202</b> Public Speaking	
Mathematics and Science	7 s.h.
Behavioral and Social Sciences	6 s.h.
History, Humanities and Language	9 s.h.
Artistic and Creative Experience	6 s.h.
<b>Non Program Electives</b>	16 s.h.
<b>Free Electives</b>	28 s.h.
<b>Major Requirements</b>	39 s.h.
Major Applied Instrument/Voice I-VI MUS97.105 MUS97.106 MUS97.107 MUS97.108 MUS97.205 MUS97.206 MUS97.207 MUS97.208 MUS97.225 MUS97.305 MUS97.306 MUS97.307 MUS97.308 Piano Class I-II MUS97.100 MUS97.101	

Music Theory I-II MUS04.130 MUS04.132 MUS04.131 MUS04.133

General Music History MUSG06.102

Music in World Cultures MUSG06.447

OR Growth and Development of Jazz MUSG06.115

Student Recitals

Ensemble Choices

Choose two from Musical Styles I-III

Choose five credits from: Music Fundamentals, Sight Singing/Ear Training/Music Theory III-IV,

Piano Class III-IV; Computer Technology and Music I-II

## Bachelor of Music - Music Education

**Lawrence Depasquale , Advisor**

**Wilson Hall**

**856-256-4896**

**depasquale@rowan.edu**

### Teacher Certification K-12 with specializations:

Guitar, Instrumental, Keyboard, and Vocal

136-141 s.h.

### General Education

42-43 s.h.

Communications

9 s.h.

[COMP01.111](#) College Composition I

[COMP01.112](#) College Composition II

Public Speaking CMS06.202

Science and Mathematics

7 s.h.

Biological or Physical Lab Choice

Math Choice

Social and Behavioral Sciences

6 s.h.

[SOC08.120](#) Intro to Sociology

[PSY09.209](#) Child Development

Humanities, History and Language

6 s.h.

[FNDS21.150](#) History of American Education

Literature Choice

Artistic and Creative Experience

3 s.h.

Non-program Electives

12 s.h.

[PHED35.103](#) Health and Wellness

[MUSG06.102](#) General Music History

Technology course Choice

Social/Behavioral Science Choice

Ensembles

### Professional Education

30 s.h.

### Major Requirements

64-69 s.h.

Development of Musical Styles I, II, III MUSG06.214, MUSG06.215, MUSG06.335

\* Music Theory I-IV, Written and Aural MUS04.130, MUS04.132, MUS04.131, MUS04.133, MUS04.240, MUS04.242, MUS04.241, MUS04.243

\* Major Applied Instrument or Voice I-VIII MUS97.105, MUS97.106, MUS97.107, MUS97.108, MUS97.205, MUS97.206, MUS97.207, MUS97.208, MUS97.225, MUS97.305, MUS97.306, MUS97.307, MUS97.308, MUS97.405, MUS97.406, MUS97.407, MUS97.408

Piano Class I-IV (except keyboard spec.) MUS97.100, MUS97.101, MUS97.200, MUS97.201

Voice Class (except vocal spec.) MUS97.405

Instrumental or Choral Conducting I, II MUS97.212, MUS97.312, MUS97.213, MUS97.313

Orchestration or Vocal Arranging MUS04.404, MUS04.403

Ensemble I-VII MUS04.127, MUS04.128, MUS04.227, MUS04.228, MUS04.327,

MUS04.328, MUS04.427

Student Recitals I-VII MUS04.050

Music Fundamentals MUS04.118

Choral Literature (except instrumental) MUSG06.303

Language/VR (except instrumental and keyboard)

Instrument Classes (check with advisor)

Keyboard Specialization Only

Piano Pedagogy  
Keyboard Literature  
Vocal Specialization Only  
Vocal Literature or Ensemble VII-VIII

Music Fundamentals, Ensemble III-VII, Music in World Cultures, and Development of Styles I-III are counted as 20 s.h. of General Education beyond the 42 s.h. required in the B.M. for the purpose of complying with state certification regulations.

### **Bachelor of Music - Performance**

**Thomas Wade , Advisor**  
**Wilson Hall**  
**856-256-4651**  
**wade@rowan.edu**

**Applied Performance** Keyboard, or Instrumental or Vocal 120 or 121 s.h.

**General Education** 42-43 s.h.

(Same as Music Education except no required courses in Social & Behavioral Sciences Bank, and only required Gen Ed electives are MUSG06.102, General Music History and MUSG06.447 and MUSG06.448, Music in World Cultures or MUSG06.115, Growth and Development of Jazz.)

**Major Requirements** 77-79 s.h.

Development of Musical Styles I, II, III MUSG06.214 MUSG06.215 MUSG06.335

Music Theory I-IV, Written and Aural MUS04.130 MUS04.131 MUS04.132 MUS04.133 MUS04.240  
MUS04.241 MUS04.242 MUS04.243

Professional Appl. Instrument/Voice I-VIII MUS04.121 MUS04.122 MUS04.221 MUS04.222  
MUS04.321 MUS04.322 MUS04.421 MUS04.422 MUS04.123 MUS04.124 MUS04.223 MUS04.224  
MUS04.323 MUS04.324 MUS04.423 MUS04.424

Piano Class I-IV (except keyboard majors) MUS97.100 MUS97.101 MUS97.200 MUS97.201

Instrumental or Choral Conducting I-II MUS97.212 MUS97.312 MUS97.213 MUS97.313

Chamber Music I, II MUS04.309. MUS04.310

Music in World Cultures MUSG06.447 MUSG06.448

Form/Score Analysis (except vocal majors) MUS04.450

Student Recitals I-VIII MUS04.505

Ensembles

Electives

Voice Specialization Only

Secondary Applied Instrument I&II (piano) MUS97.114 MUS97.115

Language Through Vocal Repertory MUS04.202 MUS04.203 MUS04.204

Vocal Pedagogy, Arranging, Literature SMED32.218

Keyboard Specialization Only

Keyboard Literature MUSG06.120

Piano Pedagogy and Accompanying SMED32.219

### **Bachelor of Music - Jazz Studies**

**Denis Diblasio , Advisor**  
**Wilson Hall**  
**856-256-4651**  
**diblasio@rowan.edu**

**Jazz Studies Curriculum** 122 s.h.

**General Education** 42 s.h.

(see note under Applied Performance)

**Major Requirements** 85 s.h.

Major Applied Instrument I-VIII MUS97.105, MUS97.106, MUS97.205, MUS97.206, MUS97.305,  
MUS97.306, MUS97.405, MUS97.406

Improvisation I-VIII Applied MUS04.105, MUS04.106, MUS04.207, MUS04.208, MUS04.305,  
MUS04.306, MUS04.407, MUS04.408

Music Theory I-IV, Written and Aural MUS04.130, MUS04.132, MUS04.131, MUS04.133,  
MUS04.240, MUS04.242, MUS04.241, MUS04.243

Piano Class I-II MUS97.100, MUS97.101  
 Secondary Applied Piano I and II (Jazz) MUS04.229, MUS04.230  
 Ensembles  
 Student Recitals (8 semesters)  
 Computer Technology and Music I MUS04.350  
 Audio Recording MUS04.344  
 Project Audio Recording MUS04.411  
 The Business of Music MUS97.335  
 Stage Band Rehearsal Techniques MUS04.333  
 Development of Musical Styles II-III MUSG06.214, MUSG06.215, MUSG06.335  
 Composing in Traditional and Contemporary Styles MUS04.363  
 Arranging MUS04.361

## **Bachelor of Music - Composition**

**Thomas Wade , Advisor**  
**Wilson Hall**  
**856-256-4651**  
**wade@rowan.edu**

**Composition** 126 s.h.  
**General Education** 42 s.h.  
 (see note under Applied Performance.)

**Major Requirements** 79 s.h.

Development of Musical Styles I, II, III MUSG06.214, MUSG06.215, MUSG06.335  
 Composition I-VIII MUS04.125, MUS04.225, MUS04.226, MUS04.325, MUS04.326, MUS04.425, MUS04.426  
 Music Theory I-IV, Written and Aural MUS04.130, MUS04.131, MUS04.132, MUS04.133, MUS04.240, MUS04.242, MUS04.241, MUS04.243  
 Contemporary Music Ensembles I-VIII MUS04.128  
 Piano Class I-IV (except piano secondary) MUS97.100, MUS97.101, MUS97.200, MUS97.201  
 Secondary Applied Instrument or Voice I-VIII MUS97.114, MUS97.115, MUS97.124, MUS97.125, MUS97.214, MUS97.215, MUS97.224, MUS97.225, MUS97.314, MUS97.315, MUS97.324, MUS97.325, MUS97.414, MUS97.415, MUS97.424, MUS97.425  
 Choral and Instrumental Conducting I MUS97.212, MUS97.213  
 Form/Score Analysis MUS04.450  
 Orchestration MUS04.404  
 Computer Technology and Music I MUS04.350  
 Counterpoint MUS04.455  
 Vocal Arranging MUS04.403  
 Student Recitals I-VIII MUS04.050  
 Ensemble I-VIII MUS04.127, MUS04.128, MUS04.227, MUS04.228, MUS04.327, MUS04.328, MUS04.427, MUS04.428  
 Chamber Music I-II MUS04.309, MUS04.310

## **Minor in Music**

**Thomas Wade , Advisor**  
**Wilson Hall**  
**856-256-4651**  
**wade@rowan.edu**

**Music Minor (for Non-Music Majors)** 25-29 s.h.  
 A. Requirements 16/17 s.h.

Secondary Applied Instrumental  
*OR*  
 Vocal I- VI 1097.114, 1097.115, 1097.124, 1097.125, 1097.214, 1097.215, 1097.224, 1097.225, 1097.314, 1097.315, 1097.324, 1097.325

Music Fundamentals & Sight Singing 1004.118, 1004.110

Music Theory I 1004.130, 1004.132  
*OR*  
Music Theory I and II 1004.131, 1004.133

Piano Class I and II (except Piano SAI) 1097.102, 1097.103  
General Music History 1006.102  
Ensemble I-VI 1004.127 1004.128, 1004.227, 1004.228, 1004.327, 1004.328  
Student Recitals I-VI 1004.050

**B. Electives:**

Choose 9 s.h. from the following:

Ensemble Choice  
Music Theory III, IV 1004.240, 1004.242, 1004.241, 1004.243  
Musical Styles I, II, III 1006.214, 1006.215, 1006.335  
Form and Analysis 1004.450  
Conducting I, II (Instrumental or Choral) 1097.212, 1097.312, 1097.213, 1097.313  
Orchestration 1004.404  
Vocal Arranging 1004.403  
Acoustics of Music  
Music in World Cultures I, II 1006.447, 1006.448  
Computers and Music Technology I 1004.350  
Selected Topics in Music  
Growth and Development of Jazz 1006.115  
Stage Band Rehearsal Techniques 1004.363  
New Jazz Structures 1006.439

NOTE: For comprehensive information on the individual music specializations, students should request from the Department of Music the appropriate curriculum guide which details each specialization.

**Coordinate Major**

**Lili Levinowitz , Advisor**  
**Wilson Hall**  
**856-256-4500 x3716**  
**levinowitz@rowan.edu**

Coordinate Major in Music (for Elementary Education Majors) 35 s.h.minimum

A. Major courses 24 24s.h. minimum

Music Theory I and II MUS04.130 MUS04.132 MUS04.131 MUS04.133  
Student Recitals I-VI MUS04.050  
General Music History MUSG06.102  
Major Applied Instrument or Voice I-VI MUS97.105 MUS97.106 MUS97.107 MUS97.108  
MUS97.205 MUS97.206 MUS97.207 MUS97.208 MUS97.305 MUS97.306 MUS97.307  
MUS97.308  
Music in World Cultures MUSG06.448  
*OR*  
Growth and Development of Jazz MUSG06.115

B. Other Requirements 14 s.h.minimum

A minimum of five hours chosen from:  
Computer Technology and Music I, II MUS04.350 MUS04.351  
Music Fundamentals MUS04.118  
Sight Singing and Ear Training MUS04.110  
Music Theory III, IV MUS04.240 MUS04.242 MUS04.241 MUS04.243  
Piano Class III, IV MUS97.200 MUS97.201

Choose two:

Development of Music Styles and Forms I, II or III MUSG06.214 MUSG06.215 MUSG06.335

**Ensemble Requirement:**

All coordinate majors must register for at least six semesters of ensemble, concurrently satisfying the following requirements:

**Vocal Track:** at least four semesters of Chamber Choir, Choral Union or Concert Choir. Other eligible ensembles include Collegium Musicum, Contemporary Music Ensemble and Opera Workshop.

**Instrumental Track:** at least four semester of either Orchestra or Band. Other eligible ensembles include: Collegium Musicum, Contemporary Music Ensemble, and Lab Band.

Non-Keyboard majors are required to take Piano Class I and Piano class II.

**Voice Major:** For General Education language requirements, select two courses from French I, Italian I and German I

**Guitar Major:** For General Education language requirements, elect Spanish I and II.

## **Theatre and Dance**

**Phillip Graneto , Chair**  
**Edgar F. Bunce Hall**  
**856-256-4392**  
**graneto@rowan.edu**

The Department of Theatre and Dance educates students in the contemporary practice of theatre and dance through a liberal arts curriculum. Accredited by the National Association of Schools of Theatre, the Department provides a broad-based education that uniquely integrates theatre and dance to develop versatile theatre artists. There are two Bachelor of Arts degree specializations: Theatre for those interested in performing, teaching, directing or designing and Child Drama for those interested in teaching or creating theatre for young people. Undergraduate students can opt for an interdisciplinary approach by choosing to also minor/concentrate in theatre or dance.

A Bachelor of Art in Theatre consists of 52 credits of General Education courses, 34-39 in our major, and 21-29 credits of free electives. The free elective hours can be used to complete a minor in a related field.

The Department of Theatre and Dance offers two specializations within the major: Theatre and Child Drama. The Child Drama specialization is a coordinate major of elementary education and prepares students to become general classroom teachers at the elementary level.

The Theatre Specialization offers three tracks: Performance, Design/Technical, and Liberal Arts. The three tracks share a core curriculum of theatre arts courses and allow students extended study in their specific field of interest. Elementary and secondary school teaching certification is available.

A full range of theater and dance production opportunities supplements coursework and encourages students to develop performance and production skills through the creation of live theatre. All students may participate in one or more of the department's performance groups: Campus Players, Dance Extensions, or Lab Theater. These groups produce approximately 10 events per year, ranging from full-scale mainstage shows to student directed and choreographed workshops. These performances provide students practical experience as performers, directors, designers and technicians and allow them to creatively apply the methods and skills learned in the classroom.

Bunce Hall, the first building constructed on campus, houses the Theatre and Dance Department. We present our mainstage theater and dance season in Bunce Hall's historic 450 seat Tohill Theater, as well as additional shows and events in the Studio Theatre. Bunce Hall also contains rehearsal spaces, a well-equipped costume and scene shop, prop and costume storage, a computer-equipped design studio, an acting studio and department offices. Memorial Hall houses our two newly renovated dance studios.

Admission to the department requires an on-campus interview and audition. Students auditioning for the theatre major present two contrasting one-minute monologues or one monologue and a song. Students auditioning for the dance minor present a three-minute dance. Students seeking admission to the design/technical track are not required to audition but will present a portfolio or folder demonstrating their experience and ability. For specific information on interview or audition requirements, call or write the department chairperson.

The Department of Theatre and Dance values the process of academic advisement and believes that effective mentorship leads to successful careers. Students are encouraged to meet with their academic advisors on a regular basis.

The Minor in Theatre provides an overview of plays, performance and production studies that involve students in both the practical and scholarly aspects of Theatrical Art. Students in any program are eligible for the Minor in Theatre and should formally apply and be advised before completing the requirements.

The minor in Theatre Arts consists of 19 semester hours of study: 10 semester hours of required courses, 9 hours of electives.

The purpose of the Theatre Concentration is to provide an art major with sufficient background in theatre to seek a position as a set and/or lighting designer or general theatrical technician.

The Minor in Dance provides a flexible program of study that combines technique with theory courses.

The Minor in Dance consists of 18-24 hours of study: the core course, Elements of Dance, plus 6-12 hours of technique and 6-12 hours of theory.

The Dance Concentration is designed for the dance student interested in pursuing dance as a career and for students in the related arts and humanities disciplines. The courses provide a solid framework through which students may pursue selected interests in the areas of performance, history, research and education.

Students in the Child Drama specialization may choose theatre as a coordinate major within the elementary education program. Theatre majors within the Liberal Arts track may also opt for K-12 certification in Theatre.

Contact our department for advisement.

## **B.A. in Theatre**

**Phillip Graneto , Advisor**  
**Edgar F. Bunce Hall**  
**856-256-4392**  
**graneto@rowan.edu**

The Rowan Bachelor of Arts in Theatre features two specializations: Theatre and Child Drama.

The Theatre specialization prepares students to work in the professional field with focus on performance, design/technical or liberal arts.

The Child Drama specialization focuses on skill associated with education and the creation of theatre for young audiences.

## **General Education**

- |                                 |                                        |        |
|---------------------------------|----------------------------------------|--------|
| 1. Communications Bank          |                                        | 9 s.h. |
| COMP01.111                      | College Composition I (Writing)        |        |
| COMP01.112                      | College Composition II                 |        |
| CMS06.202                       | Public Speaking                        |        |
| 2. Science and Mathematics Bank |                                        | 7 s.h. |
| BIOL10.210                      | Human Anatomy and Physiology or choice |        |

MathChoice		
3. Social and Behavioral Sciences Bank		6 s.h.
PSY01.100	Intro to Psychology: Personal, Emotional & Social	
CMS01.203	Mass Media & Influence	
4. History, Humanities, and Language Bank		6 s.h.
HIST05.120	World History since 1500 (M/G)	
ENGL02.113	Readings in U.S. Lit OR	
ENGL02.110	Readings in British Lit OR	
ENGL02.116	Readings in Non-Western Lit (M/G)	
5. Artistic and Creative Experience Bank		9 s.h.
Music Choice		
Art Choice		
Arts History Course (select from the following)		
ARHS03.131	History of American Art	
ARHS03.220	Modern Art	
MUSG06.102	General Music History	
MUSG06.115	Growth and Development of Jazz	
THD08.436	Dance History	
6. Non-Program Courses (Suggested)		15 s.h.
(Child Drama 19 s.h.)		
PHIL09.311	Aesthetics	
ENGL02.250	Shakespeare I	
OR		
ENGL02.350	Shakespeare II	
OR		
ENGL02.151	Readings in Shakespeare	
MATH01.200	Computing Environments	
ENGL02.424	Modern American Dramatists	
OR		
RTF10.270	Film History I	
OR		
RTF10.271	Film History II	
Choice		
<b>Specializations:</b>		
A. Theatre Specialization		39 s.h.
<b>Core</b>		23 s.h.
THD07.111	Colloquium I	
THD07.112	Colloquium II	
THD07.113	Colloquium III	
THD07.114	Colloquium IV	
THD07.201	Introduction to the Theatre	
THD07.230	Stagecraft I	
THD07.231	Stagecraft II	
THD07.203	Costuming I	
THD07.205	Costuming II	
THD07.105	Introduction to Acting	
THD07.339	History of the Theatre to 1700	
THD07.340	History of the Theatre from 1700 to 1956	
THD07.440	Contemporary World Theatre (WI) (Lit)	
<b>Theatre Tracks</b>		16 s.h.
<i>Performance Track</i>		
THD08.135	Elements of Dance	
THD07.103	Speech for the Stage	
THD07.235	Acting I	
THD07.236	Acting II	
THD07.345	Rehearsal and Performance I	
THD07.345	Rehearsal and Performance II	
THD07.430	Directing I	
THD07.460	Senior Project in Theatre	
<i>Design/Tech Track</i>		

THD07.300 Drawing and Rendering for the Theatre  
 THD07.232 Stagecraft III  
 THD07.233 Stagecraft IV  
 THD07.310 Foundations of Theatrical Design  
 THD07.390 Technical Supervision I  
 THD07.391 Technical Supervision II  
 THD07.460 Senior Project in Theatre

Select two of the following:

THD07.350 Scenic Design  
 THD07.353 Lighting Design  
 THD07.356 Costume Design

*Liberal Arts Track*

THD07.103 Speech for the Stage  
 THD07.235 Acting I  
 THD07.236 Acting II  
 THD07.390 Technical Supervision I  
 THD07.391 Technical Supervision II  
 THD07.430 Directing I  
 THD07.250 Children's Theatre  
 THD07.460 Senior Project in Theatre

**Free Electives**

29 s.h.

**Total Credits in Theatre Specialization**

120 s.h.

**B. (Non-Program Courses for Child Drama**

19 s.h.

Child Drama Specialization

34 s.h.

THD07.111 Colloquium I  
 THD07.112 Colloquium II  
 THD07.201 Intro to Theatre  
 THD07.105 Intro to Acting  
 THD07.230 Stagecraft I  
 THD07.231 Stagecraft II

Theatre History-one course from:

THD07.339 History of the Theatre to 1700  
 OR  
 THD07.340 History of the Theatre from 1700 to 1956  
 OR  
 THD07.440 Contemporary World Theatre  
 THD07.105 Voice and Articulation  
 OR  
 THD07.103 Speech for the Stage  
 THD07.135 Oral Interpretation of Literature  
 DESN09.225 Puppetry I  
 DESN09.226 Puppetry II  
 THD07.250 Children's Theatre  
 THD07.435 Creative Dramatics  
 THD08.315 Creative Dance for Children  
 OR  
 THD08.135 Elements of Dance

**Free Electives**

30 s.h.

**Total Credits in Child Drama Specialization**

120 s.h.

**Minor in Theatre**

**Bartholomew Healy , Advisor**  
**Edgar F. Bunce Hall**  
**856-256-4232**  
**healy@rowan.edu**

The minor in theatre provides an overview of plays, performance and production studies that involve students in both the practical and scholarly aspects of Theatrical Art. Students in any program are eligible for the Minor in Theatre and should formally apply and be advised before completing the requirements.

The minor in Theatre Arts consists of 19 semester hours of study: 10 semester hours of required courses, 9 hours of electives.

**Required Courses** 10 s.h.

THD07.111	Colloquium I
THD07.112	Colloquium II
THD07.130	Living Theatre
THD07.105	Introduction to Acting
THD07.230	Stage Craft I
THD07.231	Stage Craft II
<i>OR</i>	
THD07.203	Costuming I
THD07.205	Costuming II

**Electives** 6 s.h.

THD07.250	Childrens Theatre
THD07.360	Musical Theatre
THD07.350	Scene Design Studio
THD07.353	Stage Lighting
THD07.103	Speech for the Stage
THD07.235	Acting I
THD07.236	Acting II
THD07.430	Directing I
THD07.431	Directing II
THD07.365	Theatre Management
THD08.126	Movement for the Actor
THD07.356	Costume Design
THD07.310	Foundations of Design
THD07.230	Stagecraft I
THD07.231	Stagecraft II
THD07.203	Costuming I
THD07.205	Costuming II
THD07.435	Creative Dramatics
THD08.135	Elements of Dance
THD07.215	Experiencing Acting

**History/Literature Elective** 3 s.h.

THD07.339	History of the Theatre to 1700
THD07.340	History of the Theatre 1700 to 1956
THD07.440	Contemporary World Theatre (WI)

**Minor in Dance**

**Leslie A. Elkins , Advisor**  
Memorial Hall  
856-256-4231  
elkins@rowan.edu

**Melanie Stewart , Advisor**  
Memorial Hall  
856-256-4034  
stewartm@rowan.edu

The Minor in Dance provides a flexible program of study that combines technique with theory. Students take courses in technique, dance education, and dance history. The Minor in Dance consists of 18-24 hours of study: the core course, Elements of Dance, plus 6-12 hours of technique and 6-12 hours of theory.

**Required** 3 s.h.

THD08.135 Elements of Dance

**Electives - Technique** 6-12 s.h.

THD08.146 World Dance Forms

THD08.202 Tap Dance I

THD08.203 Tap Dance II

THD08.236 Modern Dance I

THD08.237 Modern Dance II

THD08.377 Modern Dance III

THD08.246 Ballet I

THD08.247 Ballet II

THD08.346 Ballet III

THD08.256 Jazz Dance I

THD08.257 Jazz Dance II

THD08.360 Jazz Dance III

THD08.222 Dance for the Musical Stage

**Electives - Theory** 6-12 s.h.

THD08.226 Dance Composition I

THD08.337 Choreography

THD08.436 Dance History

THD08.315 Creative Dance for Children

THD08.465 Dynamics of Human Movement

THD08.126 Movement for the Actor

## Dance Concentration

**Leslie A. Elkins , Advisor**

**Memorial Hall**

**856-256-4231**

**elkins@rowan.edu**

The dance concentration is for the dance student interested in pursuing dance as a career and for students in the related arts and humanities disciplines. The courses provide a solid framework through which students may pursue selected interests in the areas of performance, history, research and education.

THD08.135 Elements of Dance

THD08.236 Modern Dance I

THD08.237 Modern Dance II

THD08.246 Ballet I

THD08.247 Ballet II

THD08.326 Dance Composition

THD08.336 Choreography

THD08.436 Dance History

## Theatre Design Concentration

**Bartholomew Healy , Advisor**

**Edgar F. Bunce Hall**

**856-256-4232**

**healy@rowan.edu**

The purpose of this concentration is to provide an art major with sufficient background in theatre to seek a position as a set and/or lighting designer or general theatrical technician.

## Program Requirements

Students may follow any BA in Art degree program, but some courses in Puppetry are recommended. In place of free electives, the following courses are required:

### Concentration Courses

18 s.h.

THD07.203	Costuming I
THD07.205	Costuming II
THD07.230	Stage Craft I
THD07.231	Stage Craft II
THD07.232	Stage Craft III
THD07.233	Stage Craft IV
THD07.350	Scene Design Studio
THD07.353	Stage Lighting Design and Practice

One course 3 s.h. from the following:

THD07.339	History of the Theatre to 1700
THD07.340	History of the Theatre 1700 to 1956
THD07.375	Theatre Workshop

Living Theatre or Introduction to Theatre are recommended in order to give the student a broad introduction and background in the art of theatre.

# College of Liberal Arts and Sciences

**Jay Harper , Dean**  
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## Mission

The College of Liberal Arts & Sciences offers educational experiences designed to enhance the intellectual development, the future careers, and the overall quality of life of our students. The various curricula in the College combine the richness of liberal arts and sciences theories and traditions with applications for the workplace in the new millennium.

## Programs Offered

The College provides General Education courses in the humanities, mathematics and the natural sciences, and the social and behavioral sciences. These courses give our students a breadth of knowledge while developing skills in oral and written communication, quantitative reasoning, computing, critical thinking, and research.

Our students go on to acquire a depth of knowledge in one of the major programs in the College. Expert faculty who have distinguished themselves in their disciplines through research, scholarship, and other professional activities help our students learn both in the classroom, through engaging lectures and interactive pedagogical approaches, and outside of the classroom, through laboratories and research projects. Our faculty care genuinely about the success of our students and make themselves available for advising, mentoring, and academic discussion.

The College also offers pre-professional programs in law, medicine, and allied health. Articulation agreements between Rowan University and professional schools of dentistry, medicine, medical technology, optometry, podiatry and veterinary science help our students make a smooth transition to those schools.

The College offers minors in most of our disciplines, concentrations in several disciplines, and Interdisciplinary concentrations in African American Studies, Asian Studies, Environmental Studies, International Studies, and Women's Studies. These minors and concentrations, along with the free elective component of their major programs, allow students to complement their major area of study in ways that are particularly appropriate to their individual interests and career goals.

## Departments

The departments in the College are Biological Sciences, Chemistry and Biochemistry, Computer Science, Economics, English, Foreign Languages and Literatures, Geography and Anthropology, History, Law and Justice Studies, Mathematics, Philosophy and Religion, Physics and Astronomy, Political Science, Psychology, and Sociology.

## Services

The College operates the Liberal Arts and Sciences Institute for Research and Community Service, which offers a variety of seminars and workshops, as well as research support and community assistance.

## Biological Sciences

**Luke T. Holbrook , Chair**  
**Science Hall**  
**856-256-4500 x3585**  
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The Biological Sciences Department offers a liberal arts major which leads to a Bachelor of Science degree in Biology. While the Department's major program ensures that students become well-rounded, it is also flexible enough that students can specialize in a particular area of interest. The Department emphasizes excellence and innovation in teaching in the classroom as well as in the laboratory and in the field. Students are encouraged to become engaged in research with faculty members not just as seniors but also as underclassmen.

Students can take advantage of Rowan's affiliations in the areas of osteopathic medicine (University of Medicine & Dentistry of New Jersey and Philadelphia College of Osteopathic Medicine), dentistry (University of Medicine & Dentistry of New Jersey), optometry (Pennsylvania College of Optometry), and podiatry (Temple University School of Podiatric Medicine). These affiliations allow students to earn a combined B.S./doctorate in seven years instead of eight. Additional affiliations include George Washington University School of Medicine, Kirksville College of Osteopathic Medicine, New York School of Podiatric Medicine, Ross University School of Medicine, and Ross University School of Veterinary Medicine. Our Department also has an early acceptance affiliation with the physical therapy program at Drexel University.

Students interested in pursuing a teaching career may complete a series of education courses and obtain a Biological Science Certificate required for public school teaching. Students will also find numerous research opportunities in the Department that will prepare them for graduate research programs.

The Department also offers a Bachelor of Science in Nursing (BSN) Degree Program in conjunction with the University of Medicine and Dentistry of New Jersey-School of Nursing (UMDNJ-SN). Graduates of the Joint BSN Program are awarded the BSN degree by UMDNJ and Rowan University. Both institutions are accredited by the Middle States Association. The Joint BSN Program is also accredited by the National League for Nursing Accrediting Commission (NLNAC).

The Department is housed in a brand new science building with state-of-the-art laboratories and classrooms. The Department also has an environmental field station located in Cape May County, New Jersey. The field station property is an ecotone ranging from marshland to deciduous forest, and provides opportunities for numerous student and faculty research projects.

The department offers an Environmental Studies concentration and a Pre-medical concentration. Students interested in these concentrations must meet with the department curriculum coordinator before any courses are attempted.

These concentrations are subject to periodic revision. Students are encouraged and advised to check for the most current biological sciences department curricular requirements.

Students are invited to learn more specifics and recent changes regarding the Department's programs and facilities by visiting at <http://www.rowan.edu/biology>

The Biological Sciences Department also supports a variety of other programs on campus as well as General Education. The Department offers a number of courses intended for non-majors, including:

**BIOL01.110**      Human Biology  
**BIOL20.100**      Introduction to Natural Resources

<a href="#">BIOL01.112</a>	General Biology: Environmental Focus
<a href="#">BIOL01.113</a>	General Biology: Human Focus
<a href="#">BIOL01.115</a>	General Biology: Plants & People
<a href="#">BIOL01.105</a>	Essentials of Biology
<a href="#">BIOL20.401</a>	Principles of Ecology and
<a href="#">BIOL01.210</a>	Biological Systems and Applications

Biology majors should be aware that the above courses may not be counted towards the Biology major.

## **B.S. Nursing**

**Virginia Wilson , Coordinator**  
**Science Hall**  
**856-256-4841**  
**wilsonv@rowan.edu**

The general education component of the program is offered by the faculty of Rowan University and the nursing component is offered by the faculty of UMDNJ. Health care facilities and community agencies in southern New Jersey are used as the primary education sites for clinical nursing courses. The Joint BSN Program combines the strengths of Rowan University and UMDNJ to offer a unique educational experience for the baccalaureate student. As a university distinguished for its multicultural education, Rowan University offers an interdisciplinary orientation in its philosophy and purpose. As a preeminent academic health sciences university, UMDNJ offers an interdisciplinary health services network and impacts on government and public affairs in New Jersey. Graduates of this program will be prepared to provide nursing care collaboratively with other health professionals within complex health care systems. These graduates, equipped with the knowledge and skills for professional practice, will be prepared to render quality nursing care as well as effect positive change within health care systems.

The Joint BSN Program admits registered nurses, with an associates' degree or diploma in nursing, and graduates them at the BSN level. Students also have the option of entering the Joint BSN Program with the intention to progress into the MSN Program at UMDNJ-SN. Matriculated students in the Joint BSN Program may apply for the Advanced Placement Program in the MSN Program of UMDNJ-SN. In this program, students may take two (2) courses at the MSN level (Nursing Research and Pathophysiology) which is then included on the BSN transcript as transfer credits.

Admission Requirements for the Joint BSN Program: The criteria for admission to the Bachelor of Science in Nursing RN/BSN Program include academic achievement, dependability, scholarship, professional behavior, accountability, and interpersonal skills.

Admissions' decisions are based upon review of the following minimum requirements:

1. Graduation from an Associate of Applied Science (A.A.S.) in Nursing Program, an Associate of Science (A.S.) in Nursing Program, or a Diploma in Nursing Program accredited by an appropriate agency or association at the time of graduation from the program.
2. Licensure as a registered nurse in New Jersey. Individuals licensed as registered nurses in other states must be eligible for New Jersey State Board of Nursing licensure as a registered professional nurse.
3. Cumulative grade point average (G.P.A.) of 2.5 or higher.
4. A grade of "C" or higher in all nursing, science, and English composition courses.
5. A minimum score of 550 on the Test of English as a Foreign Language (T.O.E.F.L.) for applicants who are not graduates of a United States college or university.
6. A criminal background check.

Some major requirements are offered onsite at Rowan University and others on-line via Web-CT. Clinicals are offered at nearby facilities. Required grades in Nursing courses and Nursing prerequisite courses are determined by the UMDNJ-SN faculty and printed in the UMDNJ-SN Catalog.

## Environmental Studies Concentration

Terry O'Brien , Coordinator

Science Hall

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obrien@rowan.edu

The interdisciplinary nature of the Environmental Studies Concentration is designed to broaden students' awareness of contemporary environmental issues. The concentration provides an instructional framework through which students may pursue interests in the areas of Environmental Planning, Environmental Sciences, and Environmental Testing and Technology. The following are requirements and recommended courses for each career track:

### Environmental Planning

18-24 s.h. required

GEOG06.308	Geographic Information Systems (GIS) I
GEOG06.309	Geographic Information Systems (GIS) II
GEOG06.325	Geomorphology
GEOG06.103	Geology I
GEOG06.104	Geology II
GEOG06.310	Land Use & Resource Development
BIOL20.100	Intro to Natural Resources
PSY05.205	Environmental Psychology
GEOG06.304	Population Geography
ANTH02.321	Cultural Ecology
SOC15.322	The Sociology of Populations
SOC08.320	Urban Sociology
GEOG06.302	Urban Geography
GEOG06.355	Metropolitan & Regional Planning
SOC08.400	Environment Policy & Society
INTR99.300	Environmental Internship

### Environmental Sciences

18-24 s.h. required

BIOL20.330	Environmental Science
GEOG06.308	Geographic Information Systems (GIS) I
GEOG06.309	Geographic Information Systems (GIS) II
GEOG06.325	Geomorphology
GEOG06.103	Geology I
GEOG06.104	Geology II
CHEM05.301	Chemistry in the Environment
BIOL20.100	Intro to Natural Resources
BIOL11.405	Environmental Microbiology
BIOL20.425	Environmental Toxicology
BIOL20.321	Physiological Ecology
BIOL01.405	Conservation Ecology
BIOL18.400	Limnology
BIOL02.410	Stream Ecology
BIOL18.360	Marine Biology
BIOL20.310	Ecology
BIOL20.474	Tidal Marsh Ecology Oceanography
BIOL19.425	Marine Geology
GEOG06.304	Population Geography
INTR99.300	Environmental Internship
OR one of the following:	
BIOL01.325	Mycology
BIOL01.352	Ornithology
BIOL02.201	Plant Diversity
BIOL01.300	Phycology
BIOL01.454	Herpetology
BIOL01.458	Mammalogy

BIOL01.470	Ichthyology	
BIOL07.200	Invertebrate Zoology	
BIOL21.401	Entomology	
<b>Environmental Testing &amp; Technology</b>		18-24 s.h. required
BIOL20.330	Environmental Science	
BIOL20.100	Intro to Natural Resources	
BIOL11.405	Environmental Microbiology	
BIOL20.425	Environmental Toxicology	
CHEM05.301	Chemistry in the Environment	
CHEM06.100	Chemistry I	
CHEM06.101	Chemistry II	
CHEM07.200	Organic Chemistry I	
CHEM07.201	Organic Chemistry II	
CHEM09.250	Quantitative Analysis	
CHEM09.410	Instrumental Methods	
INTR99.300	Environmental Internship	

## B.S. in Biology

Starting in Fall 2006, students majoring in Biology are required to take a four semester introductory sequence (Biology 1 through Biology 4). While the new sequence offers greater content knowledge coverage compared to a traditional Biology I & II sequence, it also includes extensive development of skills in the areas of reading and researching primary literature, scientific writing, experimental design, and data analysis.

Beyond the core sequence, majors must take an additional 22 semester hours of biology courses which must include at least four different laboratory courses. A course in Special Topics in Biological Sciences is required during the student's Junior or Senior year. A grade of C or higher must be earned in each biology course.

Transfer students must earn at least 20 s.h. in Rowan University biology courses above the level of Biology I and II to be awarded a degree.

The Department of Biological Sciences advises all students that all Biology courses may require observation of, dissection of, manipulation of and experimentation with living or preserved organisms. These exercises are an integral part of biology courses and provide an essential experience.

The Department also advises students that course schedules are such that students should not assume that they will be able to complete their degree by enrolling in night courses only.

<b>General Education</b>		42 s.h.
(See the General Education requirements in the Academic Affairs section in this catalog)		
A. Communications		9 s.h.
B. Science and Mathematics		8 s.h.
Required:		
MATH01.130	Calculus I	
CHEM06.100	Chemistry I	
C. Social and Behavioral Sciences		6 s.h.
D. History, Humanities and Language		6 s.h.
Required:		
PHIL09.369	Philosophy of Science	
E. Artistic and Creative Experience		3 s.h.
F. Non-Program Courses		10 s.h.
<b>Major Requirements</b>		62 s.h.

A. Common Core		40 s.h.
BIOL01.104	Biology 1: Diversity, Evolution, & Adaptation	
BIOL01.106	Biology 2: Concepts in Genetics	
BIOL01.203	Biology 3: Introduction to Cell Biology	
BIOL01.204	Biology 4: Global Ecology	
CHEM06.101	Chemistry II	
CHEM07.200	Organic Chemistry I	
CHEM07.201	Organic Chemistry II	
PHYS02.202	Physics I	
PHYS02.203	Physics II	
STAT02.280	Biometry	

B. Biology Electives		22 s.h
Required:		
BIOL01.440	Special Topics (Senior Seminar)	

<b>Free Electives</b>		16 s.h.
<b>Program Total</b>		120 s.h.

### Minor in Biological Sciences

The Minor in Biology consists of 23-24 semester hours, with a minimum of 15 of these to be taken at Rowan University. The 300- or 400-level courses may be taken in any order. In keeping with the policy of the Biology major, any Biology grade below a C will not count towards the Minor.

BIOL01.104	Biology 1: Adaptation, Diversity & Evolution
BIOL01.106	Biology 2: Concepts in Genetics
BIOL01.203	Biology 3: Introduction to Cell Biology
BIOL01.204	Biology 4: Global Ecology
Two (2) additional Biology courses, both of which must be 300-level or above.	

### Pre-Medical Concentration

**Richard Meagher , Program Advisor**  
**Science Hall**  
**856-256-4500 x3570**  
**meagher@rowan.edu**

This concentration is open to any major at Rowan University and is intended primarily for non-biology majors who intend to enter medical or professional school following graduation at Rowan. The concentration involves 22-23 s.h. The courses incorporated into the concentration are those most often required or recommended for admission to accredited medical schools in the United States. These courses are as follows:

BIOL22.335	Genetics
PHYS02.203	Physics II
MATH01.131	Calculus I
CHEM07.348	Biochemistry
OR	
BIOL14.440	Introduction To Biochemistry
PSY01.100	Psychology

Plus one of the following:

CHEM09.250	Quantitative Analysis
BIOL07.301	Comparative Anatomy
BIOL27.403	Embryology
BIOL11.330	Microbiology

## **Chemistry and Biochemistry**

**Catherine Yang , Chair**

**Science Hall**

**856-256-5455**

**yang@rowan.edu**

The Department of Chemistry and Biochemistry offers a B.S. in Chemistry and a B.S. in Biochemistry and also co-offers a B.S in Physical Sciences with the Department of Physics and Astronomy.

Our goal is to prepare students to be contributing members of the scientific community and society at large. We believe this is essential to each student's success in his/her professional career. We believe in rigorous, employment-based learning. It is also important to the students' potential employers and graduate faculty and to society in general as well as to Rowan University and the Department of Chemistry and Biochemistry. We will strive to accomplish this goal using a wide variety of techniques that include modern, strong coursework, using state-of-the-art instrumentation, hands-on activities, teamwork, and the requirement of research and seminar capstone experiences. In addition, our students will participate fully in the general education plan at Rowan. Students are invited to learn more detailed information about the Department and Programs by visiting <http://www.rowan.edu/chemistry>

Chemistry and Biochemistry graduates will be able to:

- Demonstrate contemporary skills and knowledge for entry-level positions in the field, or for admission to graduate or professional school.
- Ask questions, design experiments, analyze data, and interpret results
- Obtain and use data from the chemical literature
- Effectively communicate orally and in writing
- Work effectively as a member of a team
- Make accurate and precise measurements and observations using scientific instrumentation.
- Work safely and with a safety-conscious attitude
- Exhibit ethical scientific conduct
- Behave and think in patterns leading to innovation
- Demonstrate scientific curiosity
- Demonstrate leadership
- Become a lifelong learner

### **B.S. in Physical Sciences (with Physics and Astronomy)**

**Ernst D. Knoesel , Advisor**

**Science Hall**

**856-256-4366**

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**Robert Newland , Advisor**

**Science Hall**

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**newland@rowan.edu**

See the program description listed in the Department of Physics and Astronomy

### **B.S. in Chemistry**

**Kandalam V. Ramanujachary , Coordinator**

**Science Hall**

**856-256-5451**

**chary@rowan.edu**

The B.S. degree in Chemistry, approved by the American Chemical Society, prepares students for graduate study and for careers in industry, government or medicine. Laboratories are equipped with modern instrumentation and computers for hands-on use by students at all levels. Each student is expected to carry out a laboratory based research project.

**General Education** 43 s.h.  
(See the General Education requirements in the Academic Affairs section in this catalog)

- A. Communications 9 s.h.
- B. Science and Math 11 s.h.
  - MATH01.130 Calculus I\*
  - CS01.104 Intro to Scientific Programming
  - PHYS02.200 Physics I with Calculus\*
- C. Social and Behavioral Sciences 6 s.h.
- D. Humanities, History, Languages 6 s.h.
  - PHIL09.369 Philosophy of Science
- E. Aesthetics 3 s.h.
- F. Non Program Electives 8 s.h.
  - PHYS02.201 Physics II with Calculus\*
  - MATH01.231 Calculus II\*

**Major Requirements** 62 s.h.

- A. Common Core 50 s.h.
  - MATH01.230 Calculus III
  - CHEM06.100 Chemistry I\*
  - OR
  - CHEM06.105 Advanced Chemistry I\*
  - CHEM06.101 Chemistry II\*
  - OR
  - CHEM06.106 Advanced Chemistry II\*
  - CHEM07.200 Organic Chemistry I\*
  - CHEM07.201 Organic Chemistry II\*
  - CHEM09.250 Quantitative Analysis
  - CHEM08.400 Physical Chemistry I
  - CHEM08.401 Physical Chemistry II
  - CHEM08.402 Physical Chemistry Lab I
  - CHEM08.403 Physical Chemistry Lab II
  - CHEM07.348 Biochemistry I
  - CHEM06.300 Advanced Inorganic Chemistry
  - CHEM05.450 Seminar I
  - CHEM09.410 Instrumental Methods
  - CHEM05.440 Research I
  - OR
  - CHEM05.435 Co-op Experience in Chemistry
- B. Restricted Electives 6 s.h.

8 s.h. must be chosen from upper level chemistry courses, the remainder from subjects closely related to chemistry such as physics, biology, and mathematics.

**Free Electives** 15 s.h.  
**Total Credits for Program** 120 s.h.

\*These courses require a grade of C or better.

### Minor in Chemistry

**Catherine Yang , Coordinator**  
**Science Hall**  
**856-256-5455**  
**yang@rowan.edu**

A chemistry minor is available for any student wishing a coherent sequence of chemistry courses. The minor is not available for Physical Sciences B.S. students specializing in chemistry. Transfer students must complete at least 8 s.h. of the minor at Rowan University.

Requirements

23-24 s.h.

- [CHEM06.100](#) Chemistry I  
OR  
[CHEM06.105](#) Advanced Chemistry I  
[CHEM06.101](#) Chemistry II  
OR  
[CHEM06.106](#) Advanced Chemistry II  
[CHEM07.200](#) Organic Chemistry I  
[CHEM07.201](#) Organic Chemistry II  
[CHEM09.250](#) Quantitative Analysis

And one other course that has Organic Chemistry II as a prerequisite

## B.S. in Biochemistry

**Robert Newland , Coordinator**

Science Hall

856-256-4502

[newland@rowan.edu](mailto:newland@rowan.edu)

The B.S. Degree in Biochemistry, an interdisciplinary program, is designed to prepare students for a career in biochemistry or graduate studies. Completion of the degree requirements can also increase a student's chances of success in medical, dental or other related health programs by helping students develop a strong academic foundation needed for success in such professional schools.

The program combines the value of a liberal education with appropriate classroom and laboratory training in chemistry, biology, math and physics. The focus is on a molecular approach to studying living systems. The biochemistry major can choose to specialize in related areas of chemistry, molecular biology, genetics or structural biology by a careful selection of elective courses. The emphasis in all courses is on the acquisition of a solid knowledge base combined with hands-on laboratory work using modern equipment. Each student is expected to carry out a laboratory based research project.

### General Education

44 s.h.

(See the General Education requirements in the Academic Affairs section in this catalog)

- A. Communications 9 s.h.
- B. Science and Math 11-12 s.h.  
[MATH01.130](#) Calculus I\*  
[MATH01.131](#) Calculus II\*  
OR  
[STAT02.260](#) Statistics\*  
[PHYS02.200](#) Physics I with Calculus\*
- C. Social and Behavioral Sciences 6 s.h.
- D. Humanities, History, Languages 6 s.h.  
[PHIL09.369](#) Philosophy of Science
- E. Aesthetics 3 s.h.
- F. Non Program Electives 8 s.h.  
[PHYS02.201](#) Physics II with Calculus\*  
[BIOL01.104](#) Biology 2\*

### Major Requirements

63 s.h.

A. Common Core		43s.h.
CS01.102	Introduction to Programming	
OR		
CS01.200	Computing Environments	
CHEM06.100	Chemistry I*	
OR		
CHEM06.105	Advanced Chemistry I*	
CHEM06.101	Chemistry II*	
OR		
CHEM06.106	Advanced Chemistry II*	
CHEM07.200	Organic Chemistry I*	
CHEM07.201	Organic Chemistry II*	
CHEM09.250	Quantitative Analysis	
PHYS08.305	Biophysical Chemistry	
BIOL01.203	Biology 2	
CHEM07.348	Biochemistry I (with lab)	
CHEM07.408	Advanced Biochemistry	
CHEM05.450	Seminar I	
CHEM05.440	Research I	

B. Restricted Electives		20 s.h.
Chosen with the help of advisor and with consideration for future educational and career		
Two selections from the list:		
BIOL11.330	Microbiology	
BIOL01.430	Cell Biology or 0401.428 Developmental Biology	
BIOL22.450	Molecular Genetics or 0422.410 Human Genetics	

Other appropriate biology course

<b>Free Electives</b>		13 s.h.
Chosen with the help of advisor and with consideration for future educational and career plans.		
<b>Total Credits for Program</b>		120 s.h.

\*Grades of C or better must be earned in these courses.

## Computer Science

**Nancy Tinkham , Chair**  
**Robinson Hall**  
**856-256-4500 x3869**  
**nlt@rowan.edu**

Computer Science deals with computational systems that represent and process symbolic data. Major themes of the Computer Science course offerings include data structures, algorithms, problem-solving techniques, programming languages, software engineering, and the architecture of digital computer systems. The department offers a B.S. in Computer Science with several optional specializations and a wide range of advanced electives. This degree prepares graduates for jobs in business and industry, as well as further study at the graduate level. While not all of the restricted electives are offered at night, the degree can be completed by those who can take courses only at night (at or after 4:45 p.m.). The department also offers a minor in Computer Science and courses in computer literacy and computer programming which are available to all students in the University. Computer facilities include workstations and servers running a variety of operating systems on wired and wireless networks. Students become familiar with a wide variety of computing environments and are not required to purchase their own computers.

## Specializations

In order to give Computer Science majors the opportunity to concentrate, optional specializations have been added to the computer science major at Rowan University. A specialization is composed of four or more specified courses in computer science and other related disciplines that provide a solid foundation in some fundamental area of computer science.

The areas of specialization are software engineering, networking and operating systems, information technology, programming languages and compilers, artificial intelligence, and numerical and scientific computation.

The following table specifies the courses making up each specialization. To obtain one of these specializations, a student must take four or more courses from the specialization's list. An Independent Study CS01.400 course in the area of a specialization will count as a course in that specialization if approved by the student's advisor. The following limitations apply:

- An Independent Study course used by a student to satisfy the requirements of a particular specialization must be 3.0 semester hours or less.
- At most one Independent Study course may be used by a student to satisfy the requirements of any particular specialization.
- A particular Independent Study course may be used at most once by a student to satisfy the requirements of a specialization.
- A student may satisfy the requirements of at most two specializations with Independent Study courses.

### **Software Engineering**

CS04.315	Programming Languages
CS07.340	Design and Analysis of Algorithms
CS07.321	Principles of Software Engineering
CS07.322	Software Engineering Practicum
CS04.380	Object Oriented Design

### **Networking and Operating Systems**

CS04.390	Operating Systems
CS06.410	Data Communications and Networking
CS04.392	System Programming and Operating System Internals
CS06.412	Advanced Computer Architecture
CS06.415	Wireless Networks, Protocols, and Applications
CS04.391	Concurrent Programming
CS04.394	Distributed Systems
CS06.416	TCP/IP and Internet Protocols and Technologies

### **Information Technology**

CS04.305	Web Programming
CS07.321	Principles Software Engineering
CS04.390	Operating Systems
CS04.430	Database Systems: Theory and Programming
CS06.410	Data Communications and Networking

### **Programming Languages and Compilers**

CS04.315	Programming Languages
CS04.380	Object Oriented Design
CS07.210	Foundations of Computer Science
CS04.410	Compiler Design
CS07.321	Principles Software Engineering

### **Artificial Intelligence**

STAT02.360	Introduction to Probability and Statistics I
CS07.210	Foundations of Computer Science
PHIL09.130	Introduction to Symbolic Logic
CS07.450	Artificial Intelligence
CS04.315	Programming Languages
CS07.460	Computer Vision

OR  
CS07.310 Robotics: Software and Mobility

### Numerical and Scientific Computation

CS07.340 Design and Analysis of Algorithms  
MATH01.210 Linear Algebra  
MATH01.231 Ordinary Differential Equations  
MATH01.332 Numerical Analysis  
MATH01.230 Calculus III

### Graphics and Visualization

MATH01.210 Linear Algebra  
CS04.222 Data Structures and Algorithms  
CS07.360 Computer Graphics  
CS07.370 Introduction to Information Visualization  
CS07.380 Introduction to Computer Animation

### B.S. in Computer Science

**Ganesh R. Baliga , Advisor**

**Robinson Hall**

**856-256-4500 x3890**

**baliga@rowan.edu**

The Computer Science major requires courses in mathematics and applied and theoretical computer science. Students, in consultation with faculty advisors, can construct flexible and comprehensive programs. The program prepares students for graduate study in computer science or such related fields as business, operations research, and information sciences. Graduates also find careers in business, industry, government, and education, where they work as applications programmers, scientific programmers, systems programmers, systems analysts, and software engineers. Many students complete a double major with Mathematics, Management Information Systems, Electrical and Computer Engineering or other majors.

Three years of high school mathematics is required for admission; a fourth year of mathematics and at least one programming course is highly recommended. Advanced placement credit is accepted; waivers are available. Applicants for graduation must maintain a 2.5 GPA in College Composition I and the courses taken under major requirements, whether they are taken locally or are transferred. A grade of C- or better in the following courses is required for graduation: Calculus I, Discrete Structures, Introduction to Object-Oriented Programming, Object-Oriented Programming and Data Abstraction, Computer Organization, and Data Structures and Algorithms, whether they are taken locally or are transferred.

### Course Requirements for Major:

#### General Education

- |    |                                                               |         |
|----|---------------------------------------------------------------|---------|
|    |                                                               | 46 s.h. |
| A. | Artistic and Creative Experience                              | 3 s.h.  |
| B. | Communications                                                | 9 s.h.  |
|    | COMP01.111 College Composition I                              |         |
|    | COMP01.112 College Composition II                             |         |
|    | CMS06.202 Public Speaking                                     |         |
| C. | History, Humanities, and Language                             | 6 s.h.  |
|    | A course labeled as General Education Literature is required. |         |
| D. | Social and Behavioral Sciences                                | 6 s.h.  |
|    | One of the courses                                            |         |
|    | INTR01.265 Computers and Society or                           |         |
|    | INTR01.266 Computers and Society (WI) is required             |         |
| E. | Science and Mathematics                                       | 16 s.h. |
|    | Calculus I (MATH01.130) is required.                          |         |

3 classes (including a two-semester sequence) from the following list are required:

BIOL01.100-101 Biology I, II (4 s.h. each)

PHYS02.200-201 Physics with Calculus I, II (4 s.h. each)

CHEM06.100-101 Chemistry I, II (4 s.h. each)

F. Non-Program Electives 6 s.h.  
(must be from A,B,C or D categories)

**Free Electives** 12 s.h.

NOTES: 1. One of the above courses must be labeled as Multicultural/Global Studies.  
2. One of the above courses must be labeled as Writing Intensive.

**Major Requirements** 62 s.h.

A. Required Courses 50 s.h.

MATH03.160 Discrete Structures  
MATH01.131 Calculus II  
MATH01.210 Linear Algebra  
STAT02.360 Probability & Statistics I  
CS04.113 Introduction to Object-Oriented Programming  
CS04.114 Object-Oriented Programming and Data Abstraction  
CS04.222 Data Structures and Algorithms  
CS06.205 Computer Organization  
CS07.210 Foundations of Computer Science  
CS07.321 Principles of Software Engineering  
CS04.315 Programming Languages  
CS06.310 Principles of Digital Computers  
CS06.311 Digital Computer Laboratory  
CS07.340 Design and Analysis of Algorithms  
CS04.390 Operating Systems  
CS04.400 Senior Project

B. Restricted Electives 12 s.h.

CS04.305 Web Programming  
CS04.327 Power Java  
CS04.380 Object Oriented Design  
CS04.392 System Programming and Operating System Internals  
CS04.394 Distributed Systems  
CS04.401 Compiler Design  
CS04.391 Concurrent Programming  
CS04.394 Distributed Systems  
CS04.430 Database Systems: Theory and Programming  
CS06.410 Data Communications and Networking  
CS06.416 TCP/IP and Internet Protocols and Technologies  
CS06.412 Advanced Computer Architecture  
CS06.415 Wireless Networks, Protocols and Applications  
CS07.310 Robotics  
CS07.322 Software Engineering Practicum  
CS07.350 Computer Cryptography  
CS07.360 Computer Graphics  
CS01.395 Topics in Computer Science  
CS07.370 Introduction to Information Visualization  
CS07.380 Introduction to Computer Animation  
CS07.422 Theory of Computing  
CS07.450 Artificial Intelligence  
CS07.460 Computer Vision  
CS99.300 Computer Field Experience

## Minor in Computer Science

Computer Science deals with data structures, algorithms, problem-solving techniques, programming languages, software engineering and the architecture of modern digital computer systems. The rapid rise in computer usage has led to a corresponding increase in the need for people to work in computer-related positions. The Minor in Computer Science will help students prepare to make effective use of computers in their careers. It is expected to be particularly attractive to students from engineering, business administration, education, the social sciences and the life and physical sciences.

### Required Courses

CS04.103	Computer Science and Programming
CS04.112	Java for Object-Oriented Programmers
MATH03.160	Discrete Structures
CS06.205	Computer Organization
CS04.222	Data Structures & Algorithms
CS04.114	Object-Oriented Programming and Data Abstraction

### Elective Courses

Two courses from the following:

CS04.315	Programming Languages
CS06.310	Principles of Digital Computers
CS04.390	Operating Systems
CS07.360	Computer Graphics
CS06.412	Advanced Computer Architecture
CS07.422	Theory of Computing
MATH01.332	Numerical Analysis
CS07.210	Foundations of Computer Science
CS07.340	Design and Analysis of Algorithms
CS07.450	Artificial Intelligence
CS06.410	Data Communications and Networking
CS07.321	Principles of Software Engineering
CS04.380	Object Oriented Design
CS07.322	Software Engineering Practicum
CS07.350	Computer Cryptography
CS07.370	Introduction to Information Visualization
CS07.380	Introduction to Computer Animation

NOTE: A minimum grade point average of 2.0 is required in the courses completed. Also, Introduction to Object-Oriented Programming (04.113) may be substituted for the two courses Computer Science and Programming (CS04.103) and Java for Object-Oriented Programmers (CS04.112).

## Economics

**Habib Jam , Chair**  
**Edgar F. Bunce Hall**  
**856-256-4061**  
**jam@rowan.edu**

In Economics, students acquire skills for analyzing important and stimulating national and global problems. Various relevant possible solutions are developed. Economics deals with many current issues facing our society, such as energy, inflation, unemployment, pollution, urban decay, as well as foreign trade and government budget deficits.

The study of Economics prepares students for graduate studies or for careers in the private sector, governmental service, teaching or research. Graduates with the B.A. degree find that employment opportunities are greatest in business and government.

The Department of Economics offers three programs of study (1) B.A. program requiring 36 hours in economics (2) a minor requiring 21 hours in economics and (3) a coordinate major program fulfilling the major study requirements for elementary education majors.

## B.A. in Economics

### Program Requirements:

#### General Education

(See the General Education requirements in the Academic Affairs section in this catalog)

A. Communications	9-10 s.h.
B. Science and Mathematics	10 s.h.
Required: An introductory statistics course	
Lab Science choice	
C. Social and Behavioral Sciences	9 s.h.
D. History/Humanities/Language	6 s.h.
E. Artistic and Creative Experience	3 s.h.
F. General Education Electives	14 s.h.

#### Major in Economics

36 s.h.

#### Required Courses

18s.h.

<a href="#">ECON04.101</a>	Intro to Economics (Macro)
<a href="#">ECON04.102</a>	Intro to Economics (Micro)
<a href="#">ECON04.282</a>	Economic Statistics
<a href="#">ECON04.301</a>	Intermediate Macroeconomics
<a href="#">ECON04.302</a>	Intermediate Microeconomics
<a href="#">ECON04.492</a>	Seminar in Economics (WI)

#### Economic Electives

18 s.h.

One multi-cultural/global course is required:

<a href="#">ECON04.307</a>	Economic Development M/G
OR	
<a href="#">ECON04.320</a>	Contemporary Economic Systems M/G
<a href="#">ECON04.200</a>	History of Economic Ideas
<a href="#">ECON04.205</a>	American Economic History
<a href="#">ECON04.210</a>	Environmental Economics
<a href="#">ECON04.215</a>	Current Economic Problems & Policies
<a href="#">ECON04.225</a>	Women in the Economy
<a href="#">ECON04.269</a>	Selected Topics in Economics
<a href="#">ECON04.305</a>	Money and Banking
<a href="#">ECON04.310</a>	Global Economics
<a href="#">ECON04.315</a>	Public Finance
<a href="#">ECON04.324</a>	Centrally Planned Economies
<a href="#">ECON04.330</a>	Government and Business
<a href="#">ECON04.340</a>	Regional Economics of Southern New Jersey
<a href="#">ECON04.345</a>	Labor Economics
<a href="#">ECON04.360</a>	Urban Economics
<a href="#">ECON04.395</a>	Economics of Personal Financial Planning
<a href="#">ECON04.410</a>	Internship in Economics
<a href="#">ECON04.541</a>	Managerial Economics (senior standing required)

#### Free Electives

30 s.h.

#### Total Credits in Program

120 s.h.

### Minor in Economics

#### Required courses:

<a href="#">ECON04.101</a>	Introduction to Economics (Macro)
<a href="#">ECON04.102</a>	Introduction to Economics (Micro)

#### Economic Electives

15 s.h.

In consultation with an advisor in the Department of Economics, five courses can be selected from the Departmental offerings with at least two at the junior and senior level.\* Both ECON04.301 Intermediate Macroeconomics and ECON04.302 Intermediate Microeconomics are strongly recommended.

## English

**Catherine W. Parrish , Chair**

**Edgar F. Bunce Hall**

**856-256-4324**

**parrish@rowan.edu**

The English curriculum includes a study of literature, writing, and the English language. Students have many electives which may be used to strengthen the major, add a double major, or develop fields of specialization. The curriculum provides a general background for careers in various fields such as law, sales, personnel work, editing, library science, journalism, teaching, and other professions in which the use of the language is important.

### B.A. in English

**Joseph L. Coulombe , Advisor**

**Edgar F. Bunce Hall**

**856-256-4832**

**coulombe@rowan.edu**

### General Education

61 s.h.

(See the General Education requirements in the Academic Affairs section in this catalog)

- |                                            |         |
|--------------------------------------------|---------|
| A. Communications                          | 9 s.h.  |
| B. Science and Mathematics                 | 7 s.h.  |
| C. Social & Behavioral Sciences            | 12 s.h. |
| D. History/Humanities/Language             | 12 s.h. |
| HIST05.100 Western Civilization to 1660    |         |
| HIST05.101 Western Civilization Since 1660 |         |
| E. Artistic and Creative Experience        | 3 s.h.  |
| F. Non-Program Electives                   | 18 s.h. |

### Major Requirements

36 s.h.

#### A. Required:

- |                            |                                      |
|----------------------------|--------------------------------------|
| <a href="#">ENGL02.101</a> | Literary Studies                     |
| <a href="#">ENGL02.210</a> | British Literature to Romanticism    |
| <a href="#">ENGL02.211</a> | British Literature Since Romanticism |
| <a href="#">ENGL02.213</a> | US Literature to Realism             |
| <a href="#">ENGL02.214</a> | US Literature Since Realism          |
| <a href="#">ENGL02.250</a> | Shakespeare I                        |
| <a href="#">ENGL02.393</a> | English Seminar I - WI               |
| <a href="#">ENGL02.394</a> | English Seminar II-WI                |

- B. Of the remaining courses needed to fill the major requirements, at least two must be at the 300 or 400 level.

#### Free Electives

24 s.h.

#### Total Credits in Program

121 s.h.

### Minor in English

**Joseph L. Coulombe , Advisor**

**Edgar F. Bunce Hall**

**856-256-4832**

**coulombe@rowan.edu**

The Minor in English is a modification of the major, reducing the requirements from 36 hours to 24, but providing a balanced, comprehensive cluster of courses.

- |                            |                  |
|----------------------------|------------------|
| <a href="#">ENGL02.101</a> | Literary Studies |
| <a href="#">ENGL02.250</a> | Shakespeare I    |
| <a href="#">ENGL02.393</a> | Seminar I        |

200-level elective

300/400-level elective

3-course survey sequence (Option A or Option B, below)

Option A

[ENGL02.210](#) British Literature to Romanticism  
[ENGL02.211](#) British Literature Since Romanticism  
[ENGL02.113](#) Readings in US Literature

Option B

[ENGL02.213](#) US Literature to Realism  
[ENGL02.215](#) US Literature Since Realism  
[ENGL02.110](#) Readings in British Literature

## **Environmental Studies**

**David Clowney , Coordinator (Interim)**

**Edgar F. Bunce Hall**

**856-256-4211**

**clowney@rowan.edu**

**Robert Newland , Coordinator (Interim)**

**Science Hall**

**856-256-4502**

**newland@rowan.edu**

The interdepartmental and interdisciplinary Bachelor of Arts in Environmental Studies at Rowan University achieves both breadth and focus in its curriculum in order to respond to the growing need for well-rounded, well-trained environmental experts in industry, government, and education. Environmental problems are priority issues of national and global concern. Basic coursework in biology, chemistry, ethics, geology and social sciences, as well as the application of basic science and research methodology to environmental issues are the strengths of the program. The program emphasizes the interdisciplinary aspects of the environment, providing graduates with the necessary background for environmental positions in industry, government, and education, as well as placement as strong candidates for graduate programs in environmental sciences.

The program draws primarily on the resources of the Departments of Biological Sciences, Chemistry and Biochemistry, Geography and Anthropology, Philosophy and Religion, Physics and Astronomy, Psychology and Sociology. The program has 50 credits of General Education courses, 50-52 credits in the major and 18-20 credits of free electives. The major has a requirement of 25 credits in a common core, including a one-year Senior Seminar project. The 120 credits can be completed in four years.

### **Goals**

The Bachelor of Arts in Environmental Studies provides a broad, interdisciplinary education with specialization tracks in either the Natural Sciences or the Social Sciences. Grounded in specially-designed courses that link the biological, chemical, physical, and social aspects of the environment, this degree provides students the flexibility to focus their work in any of these areas while obtaining some exposure to each field of knowledge. The program highlights the main concerns regarding our environment, and it is especially useful for individuals seeking a broader knowledge base and a deeper understanding of the environment. The program will be useful for a career in many environmental fields, as well as those in the field of education and law and policy making.

Upon completion of the program, students will:

1. Take a more perceptive view of the environment around them by learning ideas, principles and relationships within and between the different environmental components.
2. Be able to apply analytical, quantitative and problem-solving skills in environmental related issues
3. Be able to identify and apply fundamental concepts and theories in environmental related issues
4. Be able to analyze data and draw reasonable and valid inferences

5. Be able to communicate about environmental related issues
6. Be able to apply techniques, methods and tools used in the environmental field.
7. Have an appreciation for the role and impact of ethics in environmental decisions.

<b>General Education requirements</b>	43 credits
A. Communication	9 credits
COMP01.111 College Comp I	
COMP01.112 College Comp II	
CMS06.202 Public Speaking	
B. Math and Science	11 credits
STAT02.260 Statistics I	
PHYS20.150 Physics of Everyday Life	
C. Social and Behavioral Sciences	9 credits
ANTH02.202 Cultural Anthropology	
OR	
ANTH02.201 Physical Anthropology	
ECON04.101 Macroeconomics	
GEOG06.102 Cultural Geography (MG)	
D. History, Humanities and Language	9 credits
PHIL09.369 Philosophy of Science (WI)	
Foreign Language (*)	
Foreign Language (*)	
(*) both courses must be in the same language	
E. Art	3 credits
F. Non-program Electives	6 credits
Free Choice	
Free choice (LIT)	
<b>Major Requirements</b>	60 credits
A. Scientific Foundatons	8credits
CHEM05.102 Chemistry of Everyday Life	
BIOL01.112 General Biology Environmental Focus	
B. Social Science Foundations	6credits
GEOG06.193 Introduction to the Mapping and Geographic Information Science	
SOC08.120 Intro to Sociology	
OR	
SOC08.221 Social Problems	
C. Common Core	28 credits
ENST94.401 Environmental Studies - Physical Perspectives	
ENST94.102 Environmental Studies - Social Perspectives	
ENST94.301 Environmental Ethics	
ENST94.121 Field Methods and Research Design for Environmental Studies	
SOC08.400 Environment Policy and Society	
SOC08.xxx Impact Assesent	
GEOG06.360 Geographic Information Systems (GIS) I	
ENST94.401 Senior Seminar in Environmental Studies I*	
ENST94.402 Senior Seminar in Environmental Studies II*	
(*)an internship may also fulfill this requirement	
D. Envitonmental Studies Electives (At least one course from each bank)	18 credits
<b>Natural Science Bank</b>	
CHEM05.301 Chemistry of the Environment	
BIOL20.330 Environmental Science	
GEOG06.305 Climatology	

GEOG06.325	Geomorphology
GEOG06.103	Geology I
GEOG06.104	Geology II
BIOL11.405	Environmental Microbiology (*)
BIOL20.425	Environmental Toxicology (*)
BIOL20.321	Physiological Ecology (*)
BIOL01.405	Conservation Ecology (*)
BIOL18.400	Limnology (*)
BIOL02.410	Stream Ecology (*)
BIOL20.310	Marine Biology (*)
BIOL20.310	Ecology (*)

(\*) prerequisite, Biology 4

### **Social Science Bank**

ECON04.210	Environmental Economics
PSY05.205	Environmental Psychology
GEOG06.415	Geographic Information Systems (GIS) II
GEOG06.304	Population Geography
ANTH02.321	Cultural Ecology
SOC15.322	Sociology of Populations
SOC08.320	Urban Sociology
GEOG06.310	Land Use & Resource Development
GEOG06.302	Urban Geography
GEOG06.355	Metropolitan and Regional Planning

### **Free Electives**

17 credits

### **Foreign Languages and Literatures**

**Sonia B. Spencer , Chair**

**Edgar F. Bunce Hall**

**856-256-4044**

**spencers@rowan.edu**

The department offers a major in Spanish as well as Coordinate education majors in Spanish. It also offers minors in French, German and Spanish (18 s.h. each) and participates in the interdisciplinary International Studies Concentration (18 s.h.). French courses are offered beyond the 18 s.h. minor providing students with the opportunity to accumulate credits toward a second certification.

### **Minor in French**

**Sonia B. Spencer , Advisor**

**Edgar F. Bunce Hall**

**856-256-4044**

**spencers@rowan.edu**

The French Minor is an intensive program of study which offers courses in French language, literature, civilization and culture. It provides a general background for further study in French or for future professional pursuits in a wide variety of fields such as International Studies, education, international business, social, administrative and governmental work. It is most useful to students interested in pursuing a career where knowledge of a second language is desirable. Previous high school preparation in language is desirable but not required.

### **French Language Minor**

18 s.h.

FREN02.101	Elementary French I
FREN02.102	Elementary French II
FREN02.201	Intermediate French I
FREN02.211	Intermediate French II

Any two upper level courses offered in French

A student who has two or more years of French in high school may start the minor with the Intermediate courses and may take additional upper level courses in French to fulfill the minor requirements.

### Minor in German

**Edward C. Smith III, Advisor**  
**Edgar F. Bunce Hall**  
**856-256-4070**  
**smithe@rowan.edu**

The German Minor is an intensive program of study which offers courses in German language, civilization and culture. This 18-hour minor is open to all students and is of particular benefit to those majoring in the sciences, mathematics, music, economics, business or education. It is also useful to students interested in pursuing International Studies or a career where knowledge of a second language is desirable. Previous high school preparation in the language is desirable but not required.

German Language Minor	18 s.h.
GERM03.101 Elementary German I	
GERM03.102 Elementary German II	
GERM03.201 Intermediate German I	
GERM03.211 Intermediate German II	
Any two upper level courses offered in German	

### B.A. in Spanish

The Spanish program offers a flexible curriculum that makes it possible to develop an intensive study of the Spanish language, its civilization, cultures and literatures. It also provides a general background for future professional studies and advanced degrees in Spanish as well as careers in a variety of fields, such as social, administrative, and governmental work, and international business.

Literature courses in translation cannot be counted for credit toward the major or minor.

Incoming Spanish majors must schedule a placement examination and interview through the Academic Advisment Coordinator prior to registration.

<b>General Education Requirements</b>	52 s.h.
(See the General Education requirements in the Academic Affairs section in this catalog)	
A. Communications	9 s.h.
B. Mathematics and Science	7 s.h.
C. History, Humanities, Languages	9 s.h.
General Education Literature course	
Two Foreign Language courses other than Spanish. Both courses must be in the same language.	
D. Social and Behavioral Sciences	6 s.h.
E. Artistic and Creative Expression	3 s.h.
F. Non-Program Courses	18 s.h.

### Major Requirements 39 s.h.

- SPAN05.212 Spanish Reading and Composition
- SPAN05.301 Appreciation of Hispanic Literature
- SPAN05.320 Spanish Civilization and Culture
- SPAN05.321 Survey of Spanish Literature I
- SPAN05.322 Survey of Spanish Literature II
- SPAN05.323 Survey of Spanish American Literature I
- SPAN05.329 Survey of Spanish American Literature II
- SPAN05.324 Spanish/American Civilization and Culture - M/G
- SPAN05.410 Advanced Spanish Grammar and Composition
- OR
- SPAN05.409 Advanced Spanish Grammar and Composition - W.I.
- SPAN05.411 Advanced Spanish Conversation

One elective from any Spanish course offered on the 300 or 400 level, as well as at least one course from Group I, and at least one from Group II below.

Group I: Peninsular Electives

SPAN05.325	Readings in Contemporary Spanish Literature
SPAN05.381	Contemporary Spanish Theatre
SPAN05.440	Special Topics
SPAN05.481	Generation of '98
SPAN05.482	Modern Spanish Novel

Group II: Spanish American Electives

SPAN05.327	Spanish/American Poetry
SPAN05.328	Spanish/American Theatre
SPAN05.383	Spanish/American Short Story
SPAN05.426	Spanish/American Novel
SPAN05.440	Special Topics

**Free Electives**

30 s.h.

**Total Credits in Program**

121 s.h.

College of Education K-12 Subject Matter Dual Degree

Majors are required to take introduction to Hispanic Linguistics SPAN 05.302.

Prerequisite: SPAN 05.301 or Waiver

This course can be taken as a 300 or 400 level elective in the major.

**Minor in Spanish**

A student who has two or more years of Spanish in high school may start the minor with the intermediate courses and may take additional upper level courses in Spanish to fulfill the minor requirements.

**Spanish Language Minor**

18 s.h.

SPAN05.101	Spanish I
SPAN05.102	Spanish II
SPAN05.201	Spanish III
SPAN05.211	Spanish Reading and Conversation

Any two upper level courses offered in Spanish

**Geography and Anthropology**

**Richard Scott , Chair**

**Robinson Hall**

**856-256-4812**

**scott@rowan.edu**

The department offers four programs in geography. These include a major leading to the bachelor of arts, a minor, an interdisciplinary concentration in cartography, global positioning systems, and geographical information systems (GIS), and a certificate in cartography and GIS. All of these programs integrate theory and practice, blending both academic and applied facets of geography, planning, cartography, and geographical information systems. In support of its computer applications courses and research program, the department directs two computer labs in which students learn to use the latest, high level GIS software using state-of-the-art hardware platforms and peripherals including large format high resolution plotters and scanners. The department also has several global positioning system (GPS) receivers, which students learn to use in building GIS data bases. Students have full access to these labs in which they can pursue class projects and research, often working closely with faculty members. Our department also works closely with the College of Education to ensure that our dual major program meets the requirements and scheduling needs of education majors. Upon graduation geography majors pursue a variety of options including continuing their education at the graduate level, teaching elementary or secondary school, working as planners or as GIS specialists in planning agencies, environmental protection departments, engineering firms, software development firms and in many other areas. Although the department offers most of the advanced courses annually, this is not possible in all cases.

The department also offers anthropology courses in which students are introduced to the study of diverse cultural systems, to archeology and linguistics and to biology as it relates to human evolution and human variation. Courses in anthropology are offered within the general education social and behavioral sciences bank. All anthropology courses are designated multicultural/global as the diversity of world culture, biology and past behavior are the foundation of anthropology. See the general education guide for details.

**B.A. in Geography (Liberal Arts Track, Dual Major Track, Planning Track, Cartography and GIS Track)**

**Denyse Lemaire , Program Advisor**  
**Robinson Hall**  
**856-256-4500 x3976**  
**lemaire@rowan.edu**

The geography major keeps the number of required courses to a minimum so that students can design a program of study that meets individual interests and career goals. There are four recommended course sequences: liberal arts track, coordinate major track, cartography and GIS track, and planning track. All tracks begin with the same common core of courses.

<b>General Education</b>	52-53 s.h.
(See the General Education requirements in the Academic Affairs section in this catalog)	
A. Communications	9 s.h.
B. Science and Mathematics	7-8 s.h.
C. Social & Behavioral Sciences	9 s.h.
D. History/Humanities/Languages	9 s.h.
E. Artistic and Creative Experience	3 s.h.
F. Non-Program Courses	15 s.h.
<b>Major Requirements</b>	37 s.h.
A. <b>Common Core: Required</b>	16 s.h.

**GEOG06.110** Investigations in Physical Geography

Two of the following three courses: [2206.100, 2206.102, 2206.111]

**GEOG06.100** Introduction to Geography and Earth Studies (M/G)

**GEOG06.102** Cultural Geography (M/G)

**GEOG06.111** World Regional Geography (M/G)

**GEOG06.193** Intro to the Mapping and Geographic Information Sciences

**GEOG06.493** Sr Seminar in Geography - WI

B. <b>Specialized Electives</b>	21 s.h. Minimum
1. <u>Liberal Arts Track</u>	
a. Geographic Techniques	

Choose at least one of the following:

**GEOG06.306** Cartography

**GEOG06.307** Directed Geographic Field Experience

**GEOG06.308** Remote Sensing/Air Photo

**GEOG06.309** Remote Sensing II

**GEOG06.315** Field Studies in Geography

**GEOG06.320** Computer Cartography

**GEOG06.321** Advanced Cartography

**GEOG06.350** Quantitative Methods in Geography

**GEOG06.355** Metropolitan and Regional Planning

**GEOG06.360** Geographic Information Systems I

**GEOG06.415** Geographic Information Systems II

b. Systematic Geography

Choose at least one of the following:

**GEOG06.301** Economic Geography

**GEOG06.302** Urban Geography

**GEOG06.303** Political Geography

**GEOG06.304** Population Geography

**GEOG06.305** Climatology

**GEOG06.310** Land Use and Resource Development

**GEOG06.313** Transportation Geography

GEOG06.325 Geomorphology

c. Regional Geography.

Choose at least one of the following:

- GEOG06.201 Geography of U.S. and Canada
- GEOG06.323 Geography of New Jersey
- GEOG06.342 Geography of Europe
- GEOG06.343 Geography of Asia
- GEOG06.344 Geography of Latin America
- GEOG06.345 Geography of Africa
- GEOG06.346 Geography of C.I.S. (former Soviet Union)
- GEOG06.347 Geography of the Middle East

2. Coordinate Major Track

a. Geographic Techniques

Choose one of the following:

- GEOG06.306 Cartography
- GEOG06.308 Remote Sensing/Air Photo
- GEOG06.320 Computer Cartography
- GEOG06.355 Metropolitan & Regional Planning
- GEOG06.360 Geographical Information Systems I

b. Systematic Geography

12 s.h.

- GEOG06.302 Urban Geography
- GEOG06.304 Population Geography
- GEOG06.301 Economic Geography

OR

- GEOG06.303 Political Geography
- GEOG06.305 Climatology

OR

GEOG06.325 Geomorphology

c. Regional Geography

6 s.h.

GEOG06.201 Geography of the U.S. and Canada

One additional regional course-see complete selection listed under Liberal Arts track.

3. Geographical Information Systems and Cartography Track

a. Geographic Techniques

18 s.h.

- GEOG06.306 Cartography
- GEOG06.308 Remote Sensing/Air Photo
- GEOG06.350 Quantitative Methods in Geography
- GEOG06.360 Geographical Information Systems I
- GEOG06.415 Geographical Information Systems II

One additional techniques course-see complete selection listed under Liberal Arts track.

b. Systematic Geography

3 s.h.

- GEOG06.301 Economic Geography
- GEOG06.302 Urban Geography
- GEOG06.310 Land Use
- GEOG06.313 Transportation Geography

4. Planning Track

a. Geographic Techniques

12-15 s.h.

- GEOG06.306 Cartography
- GEOG06.308 Remote Sensing/Air Photo
- GEOG06.355 Metropolitan & Regional Planning
- GEOG06.360 Geographical Information Systems I
- GEOG06.315 Field Studies

OR

GEOG06.415 Geographical Information Systems II

b. Systematic Geography

6-9 s.h.

- GEOG06.302 Urban Geography
- GEOG06.310 Land Use

Choose one of the following:

- GEOG06.301 Economic Geography
- GEOG06.303 Political Geography

GEOG06.304 Population Geography  
 GEOG06.305 Climatology  
 GEOG06.325 Geomorphology

C. **Additional Geography Electives not required.**

GEOG06.425 Metropolitan/Regional Planning Internship  
 GEOG06.491 Independent Study in Geography

Free Electives

30-31 s.h.

**Total Credits in Program**

120 s.h.

**Minor in Geography (General Geography, Regional Geography, Geographic Techniques)**

**Denyse Lemaire , Program Advisor**

**Robinson Hall**

**856-256-4500 x3976**

**lemaire@rowan.edu**

The minor in geography is designed for students from a variety of majors who wish to pursue a structured course of study in geography. The minor has three tracks, each consisting of a common core and a set of specialized elective courses.

**General Geography Track**

A. **Required Core Courses**

7 s.h.

GEOG06.110 Investigations in Physical Geography  
 GEOG06.102 Cultural Geography

B. **Specialized Electives**

12 s.h.

1. Systematic Geography

Select at least one of the following:

GEOG06.301 Economic Geography  
 GEOG06.302 Urban Geography  
 GEOG06.303 Political Geography  
 GEOG06.304 Population Geography  
 GEOG06.305 Climatology  
 GEOG06.310 Land Use  
 GEOG06.313 Transportation  
 GEOG06.325 Geomorphology

2. Regional Geography

Select at least one of the following:

GEOG06.111 World Regional  
 GEOG06.201 U. S. and Canada  
 GEOG06.323 New Jersey  
 GEOG06.342 Europe  
 GEOG06.343 Asia  
 GEOG06.344 Latin America  
 GEOG06.345 Africa  
 GEOG06.346 C.I.S. (former U.S.S.R.)  
 GEOG06.347 Middle East

**Regional Geography Track**

A. **Required Core Courses**

7 s.h.

GEOG06.110 Investigations in Physical Geography  
 GEOG06.111 World Regional

B. **Specialized Regional Electives**

12 s.h.

GEOG06.201 U. S. and Canada  
 GEOG06.323 New Jersey  
 GEOG06.342 Europe  
 GEOG06.343 Asia  
 GEOG06.344 Latin America  
 GEOG06.345 Africa  
 GEOG06.346 C.I.S. (former U.S.S.R.)

GEOG06.347 Middle East

### **Geographic Techniques Track**

- A. **Required Core Courses** 10 s.h.
- GEOG06.110 Investigation in Physical Geography
  - GEOG06.102 Cultural Geography
  - GEOG06.193 Intro to the Mapping Sciences
- B. **Specialized Technical Electives** 9 s.h.
- GEOG06.306 Cartography
  - GEOG06.307 Directed Geographic Field Experiences
  - GEOG06.308 Remote Sensing/Air Photo
  - GEOG06.309 Remote Sensing II
  - GEOG06.315 Field Studies
  - GEOG06.320 Computer Cartography
  - GEOG06.321 Advanced Cartography
  - GEOG06.350 Quantitative Methods in Geography
  - GEOG06.355 Metropolitan & Regional Planning
  - GEOG06.360 Geographic Information Systems I
  - GEOG06.415 Geographic Information Systems II

### **Minor in Anthropology**

**Diane Markowitz , Advisor**  
**Robinson Hall**  
**856-256-4854**  
**markowitz@rowan.edu**

The minor in Anthropology consists of six 3-credit courses. The first three courses constitute a common core taken by all minors. These are:

- ANTH02.202 Cultural Anthropology
- ANTH02.201 Physical Anthropology
- ANTH02.203 Archaeology

Minors select the remaining three courses in consultation with their minor advisor (whom student may choose at any point prior to taking the final three courses). Each student will be encouraged to concentrate in a particular subfield of anthropology (cultural, physical or archaeology). Those who have an interest in which no class is offered may elect an independent study or research course as a final course choice. In alternate years, the research course offers special topics which may include Old World Archeology, New World Archeology, Paleoanthropology or Applied anthropology. Interested students may elect to take more courses than the minimum required by the minor.

### **Certificate and Concentration in Cartography and Geographical Information Systems**

**Richard Scott , Advisor**  
**Robinson Hall**  
**856-256-4812**  
**scott@rowan.edu**

These multi-disciplinary programs enable students from a variety of majors and backgrounds to gain expertise in cartography and geographical information systems. Students who wish to enter the program must meet with the department advisor to plan their curriculum, which will be tailored to the educational and professional objectives of the student. Although all students are welcome to participate in the concentration, those with interests in business (especially marketing), computer science, environmental science, and mathematics may find the program of special interest. The concentration program is designed for students who are currently matriculated at the college and who are pursuing a degree program. The certificate program is designed to accommodate working professionals in planning, public health, engineering, business, and other areas who wish to gain expertise in cartography and GIS. To complete either program, students, in consultation with the advisor, select a total of 21 s.h. from the following courses:

**Business Courses:**

- MIS02.300 Integrated Software Tools for Business  
 MIS02.338 Design of Database Systems

**Computer Science Courses:**

- CS01.102 Intro to Programming  
 CS04.103 Computer Science & Programming 4 s.h.  
 CS04.222 Data Structures & Algorithms  
 CS04.315 Programming Languages

**Mathematics Courses:**

- MATH01.122 Precalculus Mathematics  
 MATH03.125 Calculus: Techniques and Applications  
 MATH01.130 Calculus I  
 MATH01.131 Calculus II  
 MATH03.150 Discrete Mathematics

**Geography Courses:**

- GEOG06.193 Introduction to Mapping and Geographical Information Sciences  
 GEOG06.306 Cartography  
 GEOG06.308 Remote Sensing/Air Photo  
 GEOG06.309 Remote Sensing II  
 GEOG06.310 Land Use & Resource Development  
 GEOG06.313 Geography of Transportation  
 GEOG06.315 Field Studies  
 GEOG06.320 Computer Cartography  
 GEOG06.321 Advanced Cartography  
 GEOG06.350 Quantitative Methods in Geography  
 GEOG06.355 Metropolitan & Regional Planning  
 GEOG06.360 Geographical Information Systems I  
 GEOG06.415 Geographical Information Systems II

**History****Joy D. Wiltenburg , Chair****Robinson Hall****856-256-4819****wiltenburg@rowan.edu**

With faculty specialties ranging from ancient to modern history, covering America, Europe, Latin America, East Asia, Africa, Russia, and the Middle East, the History Department offers students the opportunity both to develop an understanding of broad currents in history and to specialize in a particular area. Students learn how to do historical research, analyze and synthesize information, and present their ideas orally and in writing. Majors are also required to take twelve semester hours of a foreign language. Students considering a major in history are urged to consult a history advisor early in their academic program in order to build a logical program leading to their goal, be it graduate school, professional school, or post-baccalaureate employment. In addition, students are encouraged to earn up to 15 credits in a semester abroad program sponsored by the University. For further clarifications regarding the program, they may consult the department chairperson.

All history majors must develop a portfolio of their historical writing. The portfolio will provide students with a coherent record of their personal growth and development within the discipline. The portfolio can also be used to help students prepare a resume, identify skills that have social (as well as market) value, and prepare for careers and entry into graduate and professional schools.

Students must complete at least SIX of the following assignments and a seminar paper must be included in all portfolios:

1. Historical Essay
2. Document Analysis
3. Data Analysis
4. Image Analysis

5. Abstract of one document or article
6. Book Review
7. Library Research Project
8. Bibliographic Essay
9. Periodical Literature Review
10. Peer Assessment
11. Website Review
12. Historical Fiction
13. Film Review
14. Research Proposal
15. Research Paper

Students should submit portfolio materials on a CD-ROM at the end of Seminar. History majors must have a minimum 2.0 overall G.P.A. and minimum 2.5 in all history courses to qualify for graduation

## **B.A. in History**

**Joy D. Wiltenburg , Advisor**

**Robinson Hall**

**856-256-4818**

**wiltenburg@rowan.edu**

<b>General Education</b>	60 s.h.
(See the General Education requirements in the Academic Affairs section in this catalog.)	
A. Communications	9 s.h.
B. Science and Mathematics	7 s.h.
C. Social and Behavioral Sciences	9 s.h.
Any General Education Economics	
Any General Education Political Science	
Any (M/G)General Education Geography or Anthropology	
D. Humanities	9 s.h.
Two-semester foreign language requirement (Both courses must be the same language)	
Readings in Non-Western Literature	
E. Art	3 s.h.
Art Appreciation/Music Appreciation (Art/Music History with advisor's approval)	
F. Non-Program Courses	23 s.h.
<b>Major Requirements</b>	30 s.h.
Lower Level Courses	
Western Civilization to 1660	
One 100 Level History Elective	
Any Level History Elective	
Historical Methods	
Upper Level Courses	
5 Upper Level History Elective Courses	
(Two of the five upper level courses must be in global history)	
Seminar (Seniors)	
<b>Free Electives</b>	30 s.h.
<b>Total Credits in Program</b>	120 s.h.

\*We recommend that history students take additional 100-level courses as free electives to fill prerequisites for some upper level history courses.\*

## **Minor in History**

This minor is designed to address the needs of students in other fields who wish to gain a broad base in the humanities and social sciences by incorporating historical perspective into their majors and thus enhance their ability to reach higher levels of achievement in their own professional specialization. We believe that a history minor would enrich upper level history courses for all students because of the increased variety of perspectives brought to such classes by students majoring in different disciplines.

The curriculum will consist of 18 credits in History, including:

1. At least three courses at the 300 or 400 level
2. At least one course, at either the introductory or advanced level, must be taken in each of the following areas of concentration: American, European and Global.
3. Minors must maintain at least a 2.5 GPA in history courses
4. Minors are encouraged to take Introduction to Historical Methods

Students pursuing the minor will plan their courses in collaboration with a Department of History advisor in addition to an advisor from their major. All courses for the minor are currently offered within the College of Liberal Arts and Science.

## Law and Justice Studies

**Michael S. Weiss , Chair**

**Wilson Hall**

**856-256-4828**

**weissm@rowan.edu**

The Law and Justice Studies program represents an interdisciplinary approach to the study of crime and the functioning of criminal law and the criminal justice system. It prepares students for professional careers in four major areas: law enforcement and security services, court services, corrections, and human services. Since many of the students who enter the program express an interest in preparation for graduate study and professional schools, the program also offers majors the rigorous preparation necessary to achieve such goals.

The program admits high school graduates at the freshman level and transfer students from community and four-year colleges. Upon notification of acceptance by Rowan University, students should contact the department secretary for assignment to a faculty advisor. The advisor develops with the student an individualized program of study. A departmental advisor is available throughout the student's departmental program. An internship in an appropriate criminal justice or related agency is required in order to provide students with experience, making their classwork more meaningful.

### B.A. in Law and Justice Studies

Students are required to earn a C- or better in all Law and Justice Studies major courses. Students are also required to earn a C- or better in the following required general education courses:

ENGO1.111	College Comp I
ENGO1.112	College Comp II
CMS06.202	Public Speaking
PHIL09.110	The Logic of Everyday Reasoning
SOC08.221	Social Problems
PSY01.100	Intro.to Psychology: Personal, Emotional, & Social Interactions
OR	
PSY01.104	Intro. to Psych: Brain/Mind
POSC07.110	American Government
OR	
POSC01.100	Introduction to Government & Politics

No courses in which the student has earned a grade of less than C- can receive transfer credit within the Law and Justice Studies major. A maximum of 67 s.h. can be transferred from community colleges into the Law and Justice major. Law and Justice majors need to be enrolled at Rowan University during the semester prior to graduation.

Rowan students majoring in fields other than Law and Justice Studies may elect to take courses in the department either as part of their general education requirements, as recommended requirements, as free electives, or as a minor in Law and Justice Studies.

### General Education

51-52 s.h.

General Education includes a minimum of 37 semester hours of credit distributed in the following manner. Please see the General Education requirements in the Academic Affairs section in this catalog.

- A. Communications 9-10 s.h.  
 COMP01.111 College Composition I or  
 COMP01.105 Integrated College Composition I  
 COMP01.112 College Composition II  
 CMS06.202 Public Speaking
- B. Math and Science 7 s.h.  
 Required: One lab science and one math course
- C. Humanities, Language and History 12 s.h.  
 Required:  
 PHIL09.110 Logic of Everyday Reasoning  
 OR  
 Philosophy and Society  
 One general education literature course.
- D. Social and Behavioral Sciences 6 s.h.  
 Required:  
 POSC07.110 American Government or  
 POSC07.100 Intro to Government and Politics  
 SOC08.221 Social Problems
- E. Artistic and Creative Experience 3 s.h.  
 Additionally, students are required to complete the following:
- F. Non-Program Courses 14 s.h.  
 PSY01.100 Intro to Psychology: Personal, Emotional & Social Interactions
- G. Outside Free Electives 33 s.h.
- NOTE: It is strongly recommended that the student consult a faculty advisor for assistance in making these choices.

### Major Requirements

Students must take a minimum of 36 semester hours, including 24 semester hours of core course requirements and 12 semester hours of free electives within the major.

### Required Core Courses

24 s.h.

- LAWJ05.175 Survey of Criminal Justice  
 LAWJ05.255 Criminal Law  
 LAWJ05.356 Criminal Justice Internship I  
 LAWJ05.369 Theories of Crime & Criminality  
 LAWJ05.380 Criminal Justice Research  
 LAWJ05.386 Law and Human Rights  
 LAWJ05.469 Seminar WI

### One of the following

- LAWJ05.105 American Police  
 LAWJ05.110 Intro Courts  
 LAWJ05.115 Intro Corrections

NOTE: Criminal Justice Internship-2105.356: Under special and unusual circumstances, this course may be waived as a required course by the departmental academic advisor, and other coursework may be substituted, where appropriate.

### Law & Justice Elective Offerings

- LAWJ05.120 Intro to Security  
 LAWJ05.205 Minorities, Crime, and Criminal Justice  
 LAWJ05.210 Restorative Justice  
 LAWJ05.220 Victimology  
 LAWJ05.274 Criminal Justice and Community Relations  
 LAWJ05.276 Parole, Probation and Community Corrections  
 LAWJ05.285 Criminal Investigation  
 LAWJ05.290 Forensic Law  
 LAWJ05.305 Law and Evidence  
 LAWJ05.310 Criminal Jurisprudence  
 LAWJ05.312 Criminal Procedure I  
 LAWJ05.315 Criminal Justice and Social Conflict  
 LAWJ05.320 Civil Aspects of Law Enforcement  
 LAWJ05.322 Drugs and Crime in America  
 LAWJ05.324 Sentencing and the Rights of the Convicted

LAWJ05.330	Problems of World Justice
LAWJ05.335	Criminal Procedure II
LAWJ05.337	Treatment of the Offender
LAWJ05.342	Counseling and Guidance of the Offender
LAWJ05.346	Women, Crime and Criminal Justice
LAWJ05.356	Criminal Justice Internship II
LAWJ05.361	Intro to Juvenile Justice
LAWJ05.379	Political Prisoner
LAWJ05.392	Criminal Justice Administration
LAWJ05.395	Incarceration Experience
LAWJ05.415	Selected Topics in Criminal Justice
Total semester hours in program 120 s.h.	

## Minor in Law and Justice Studies

**Herbert Douglas , Advisor**  
**Wilson Hall**  
**856-256-4500 x3538**  
**douglas@rowan.edu**

A minor consisting of 21 s.h. in Law and Justice Studies is available to all students. There are two programs from which a student may choose: a specialization in one of the major banks of Law and Justice Studies or a general minor in Law and Justice Studies.

Students who wish to specialize in one of the four banks into which the curriculum is divided must take the following courses:

LAWJ05.175	Survey of Criminal Justice
LAWJ05.369	Theories of Crime and Criminality
LAWJ05.386	Law and Human Rights

In addition, students must take one required course and a minimum of three others within the specialization bank.

### A. *Police Science*

LAWJ05.105	American Police (required)
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Plus nine s.h. from these courses:

LAWJ05.120	Intro to Security
LAWJ05.285	Criminal Investigation
LAWJ05.290	Forensic Law
LAWJ05.320	Civil Aspects of Law Enforcement
LAWJ05.469	Seminar in Law/Justice

### B. *Law*

LAWJ05.255	Criminal Law (required)
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Plus nine s.h. from these courses:

LAWJ05.110	Intro Courts
LAWJ05.290	Forensic Law
LAWJ05.305	Law and Evidence
LAWJ05.310	Criminal Jurisprudence
LAWJ05.335	Police Procedure and the Supreme Court
LAWJ05.312	Trial Procedure and the Supreme Court
LAWJ05.469	Seminar in Law/Justice

### C. *Social Justice*

LAWJ05.346	Women, Crime and Criminal Justice
LAWJ05.205	Minorities, Crime and Criminal Justice

Plus nine s.h. from these courses:

LAWJ05.210	Restorative Justice
LAWJ05.274	Criminal Justice and Community Relations
LAWJ05.315	Criminal Justice/Social Conflict
LAWJ05.330	Problems in World Justice
LAWJ05.379	Political Prisoner
LAWJ05.469	Seminar in Law/Justice

#### D. *Corrections*

LAWJ05.115 Introduction to Corrections (required)

Plus nine s.h. from these courses:

LAWJ05.276 Parole, Probation and Community Corrections  
LAWJ05.337 Treatment of the Offender  
LAWJ05.342 Counseling and Guidance of the Offender  
LAWJ05.395 Incarceration Experience  
LAWJ05.469 Seminar in Law/Justice

All students are required to complete the following five courses:

LAWJ05.105 American Police  
LAWJ05.110 Introduction to Courts  
LAWJ05.115 Introduction to Corrections  
LAWJ05.369 Theories of Crime and Criminality  
LAWJ05.386 Law and Human Rights

The remaining six s.h. are student's choice to be taken from other course offerings of the department.

Total semester hours in program 21 s.h.

### **Liberal Studies: American Studies**

**Dianne Ashton , Coordinator**

**Edgar F. Bunce Hall**

**856-256-4076**

**ashtond@rowan.edu**

The American Studies curriculum is a guided interdisciplinary program that combines structure with choice. The Introduction to American Studies will help you to synthesize the varying approaches and methods you will master during your college career. You will study in each of the departments in the College of Liberal Arts and Sciences within selected courses addressing issues in American society, culture and geography. The program will introduce you to the diversity of peoples who comprise America. Courses such as Contemporary Social Theory, American Philosophy, Religion in America and American Dramatists will build on the foundation in American Literature and American History that the major provides. The highlight of every major's career is the Senior Seminar in American Studies (12 student maximum), an intense, student participatory capstone experience.

Offering banks of approved courses, the major offers you the flexibility to tailor your program to your personal interests and the time to further explore those courses that interest you or that apply best to your specific career goals.

The Liberal Studies: American Studies major is housed in the Department of Philosophy and Religion.

### **Liberal Studies: American Studies**

**Ellen M. Miller , Program Advisor**

**Edgar F. Bunce Hall**

**856-256-4076**

**millere@rowan.edu**

Except for free electives, no course can be taken as Pass/Fail and all courses must be completed with a grade of C- or better. Students must either complete the course in Computer Literacy or test out of it before they have completed 30 hours at Rowan. Students who have not completed it by 45 hours will be placed on academic suspension. Students must also take a Rowan Seminar.

Elementary Education Majors must also take History of American Education and Child Development.

**General Education** 54 s.h.

A. Communications/Speech

9-10 s.h.

COMP01.111 College Composition I  
OR

COMP01.105 Integrated College Composition I  
COMP01.112 College Composition II

- CMS06.202** Public Speaking 10-11 s.h.
- B. Math/Science
- One Lab Science
- MATH01.115** Contemporary Math or  
**MATH03.150** Discrete Math or  
**MATH01.122** Pre-Calculus
- One Free Elective in either Math or any Science Elementary Education Majors: please consult State Certification requirements (15-16 s.h.) one physical science, one life science and two math courses. Structures of Math and Contemporary Math are recommended for Elementary Education students.
- C. Social/Behavioral Sciences 9 s.h.
- POSC07.110** American Government  
**GEOG06.201** Geography of U.S./Canada  
**SOC08.120** Intro to Sociology
- OR
- SOC08.221** Social Problems
- D. Humanities 9 s.h.
- HIST05.150** U.S. History to 1865  
**HIST05.151** U.S. History Since 1865  
**ENGL02.113** Readings in U.S. Literature
- E. Artistic and Creative Experience 3 s.h.
- ARHS03.210** History of American Art

**Non Program Electives** 12-14 s.h.

**Major Courses** 36 s.h.

At least 15 credits must be 300 or 400 level courses. Introduction to American Studies and the Senior Seminar in American Studies are required of all majors. A 2.30 GPA must be maintained overall. No course may be counted twice; however, any course in the following lists not chosen to fulfill requirements may also be used as a free elective.

Required of all Majors and Coordinate Majors: 6 s.h.

- AMST13.201** Introduction to American Studies  
**AMST13.402** Senior Seminar in American Studies - WI

A. **Core Choices** 15 s.h.  
two courses from:

- ECON04.205** American Economic History  
**PHIL09.325** American Philosophy  
**POSC07.400** American Political Thought  
**HIST05.475** History of New Jersey  
**HIST05.322** Civil War and Reconstruction  
**HIST05.413** Urban History of the U.S.  
**HIST05.324** Twentieth Century U.S.  
**HIST05.425** U.S. Labor History  
**HIST05.375** America Since 1945  
**HIST05.472** Issues in American History  
**HIST05.412** Intellectual History of U.S. or  
**HIST05.410** Cultural History of U.S.  
**HIST05.437** American Military History  
**HIST05.328** Colonial North America  
**HIST05.438** History of the Vietnam War  
**HIST05.301** History of the Revolution and Early Republic  
**HIST05.403** History of the American West  
**HIST05.321** U.S. History of 1820-1861  
**HIST05.338** America from War to War

one course from:

- POSC07.310** American Constitutional Law  
**POSC07.340** Civil Rights & Civil Liberties  
**POSC07.232** Current Issues in American Politics  
**SOC08.331** Classical Sociological Theory  
**LAWJ05.312** Supreme Court  
**LAWJ05.322** Drugs/Crime in America  
**PHIL09.241** Philosophy & Society

two courses from:

ENGL02.213	U.S. Literature to Realism
ENGL02.215	U.S. Literature Since Realism
ENGL02.322	Literature of the American Renaissance
ENGL02.423	The American Novel
ENGL02.327	Modern American Poetry
THD07.360	Musical Theatre
ENGL02.424	American Dramatists
RTF03.372	American Film Directors
ENGL02.228	The Modern Short Story
ENGL02.425	Contemporary Fiction in the United States
ENGL02.301	American English Grammar

**B. *Gender, Race and Class***

9 s.h.

One course from each group:

**Group 1.**

HIST05.419	Women in Western Civilization
PSY01.200	Psychology of Women
HIST05.422	Women in American History
RTF03.272	Images of Women in Film
SOC08.493	Seminar on Gender Roles
SOC08.370	Sociology of Women in Society
POSC07.211	Women and American Politics
ENGL02.200	Women in Literature
LAWJ05.346	Women, Crime & Criminal Justice

**Group 2.**

SOC08.230	Sociology of Minority Groups
POSC07.323	Politics of Race, Poverty, Welfare
ENGL02.216	Afro-American Literature
ANTH02.350	Comparative Cultures
ANTH02.310	Indians of North America
REL10.210	Religion in America
HIST05.376	African American History to 1865
HIST05.377	African American History Since 1865
ENGL02.217	U.S. Literature of Latino & Hispanic Peoples

\* Permission of the Instructor Required

**Group 3.**

SOC08.330	Social Stratification
SOC08.320	Urban Sociology
SOC08.431	Social Psychology of City Life
GEOG06.302	Urban Geography
GEOG06.323	Geography of New Jersey
SOC08.336	Sociology of Education
SOC08.326	Sociology of the Child Through Adolescence

**C. *The U.S. & International Relations***

6 s.h.

Two courses from:

HIST05.414	Diplomatic History of U.S. to 1900
HIST05.415	Diplomatic History of U.S. Since 1900
POSC07.320	International Relations
POSC07.421	International Organizations
ECON04.310	International Economics
POSC07.420	International Law
POSC07.330	Contemporary U.S. Foreign Policy
HIST05.441	Imperialism/Colonialism
ECON04.307	Economic Development of Emerging Nations
POSC07.230	Comparative Political Systems
POSC07.231	Contemporary World Problems
ECON04.320	Contemporary Economic Systems
GEOG06.303	Political Geography
SOC08.327	Comparative Education

**Free Electives**

30 s.h.

Any course listed in the student guide may also be used as a Free Elective. No course can fulfill more than one requirement.

**Total Credits in Program**

120 s.h.

## Liberal Studies: Math/Science

**Paul J. Laumakis , Coordinator**

**Robinson Hall**

**856-256-4500 Ext 3872**

**laumakis@rowan.edu**

**Michael W. Grove , Program Advisor**

**Science Hall**

**856-256-4500 x3579**

**grove@rowan.edu**

The Math/Science specialization of the Liberal Studies major is an interdisciplinary program in mathematics, biological science, earth science, chemistry, computer science, and physics. The specialization is structured to offer students introductory, synthesizing, and culminating experiences, as is recommended by the Association of American Colleges and Universities. The specialization requires 19 semester hours of required lower level courses and 17 semester hours of upper level courses. These courses build on the university's general education requirements (see the General Education requirements in the Academic Affairs section for detail)

## Liberal Studies: Math/Science

### General Education

56 s.h.

Elementary Education double majors should select General Education courses to meet NJ Certification requirements.

- |                                   |                             |         |
|-----------------------------------|-----------------------------|---------|
| A. Communication                  |                             | 9 s.h.  |
| COMP01.111-112                    | College Composition I & II  |         |
| CMS06.202                         | Public Speaking             |         |
| B. Mathematics and Science        |                             | 11 s.h. |
| CHEM05.102                        | Chemistry of Everyday Life  |         |
| PHYS02.150                        | Physics of Everyday Life    |         |
| STAT02.260                        | Statistics I                |         |
| C. History/Humanities/Languages   |                             | 6 s.h.  |
| PHIL09.110                        | Logic of Everyday Reasoning |         |
| xxxx.xxx                          | HHL choice                  |         |
| D. Social and Behavioral Sciences |                             | 6 s.h.  |
| xxxx.xxx                          | SBS choice                  |         |
| xxxx.xxx                          | SBS choice                  |         |
| E. Arts                           |                             | 3 s.h.  |
| F. Non-Program Electives          |                             | 21 s.h. |
| PHIL09.369                        | Philosophy of Science (WI)  |         |
| xxxx.xxx                          | Choice (6 courses)          |         |

### Major Requirements

36 s.h.

- |                        |                                                         |         |
|------------------------|---------------------------------------------------------|---------|
| A. Lower-Level Courses |                                                         | 19 s.h. |
| ASTR11.221             | Exploration of the Solar System                         |         |
| ASTR17.110             | Principles of Earth Science                             |         |
| BIOL01.105             | Essentials of Biology                                   |         |
| BIOL01.201             | Structures of Mathematics                               |         |
| CS01.200               | Computing Environments                                  |         |
| MATH03.150             | Discrete Mathematics                                    |         |
| B. Upper-Level Courses |                                                         | 17 s.h. |
| BIOL20.401             | Principles of Ecology                                   |         |
| CHEM05.301             | Chemistry of the Environment                            |         |
| INTR02.315             | Patterns in Nature II: Projects in Calculus and Physics |         |
| INTR02.492             | Senior Seminar                                          |         |
| MATH03.305             | Patterns in Nature I: Visual Geometry                   |         |

<b>Free Electives</b>	28 s.h.
Required: Pre-Calculus if needed as a prerequisite for Statistics I and Discrete Math.	
<b>Total Credits in Program</b>	120 s.h.

## Mathematics

**Hieu D. Nguyen , Chair**  
**Robinson Hall**  
**856-256-4845**  
**nguyen@rowan.edu**

The Department offers a B.A. and a B.S. in Mathematics. The B.A. provides a broader liberal arts education whereas the B.S. provides a more specialized and extensive training in mathematics. Students pursuing the B.S. must have taken the calculus sequence and linear algebra with a 3.0 GPA or better.

The Department also offers a minor in Mathematics and concentrations in Applied Mathematics and Statistics. The Department offers a Master of Arts degree in Mathematics and also supports the Master of Arts in Subject Matter Teaching: Mathematics Education. While the first concern of the 20 full-time and 3 part-time faculty is excellence in teaching, Department members also do research in statistics, analysis, algebra, mathematics education, geometry, and applied mathematics. The Department also sponsors the Mathematics Club, student competitions, an active faculty-student research agenda, and a regular seminar series. The Department is located in Robinson Hall which houses several microcomputer labs and classrooms.

### B.A. in Mathematics

The Mathematics major consists of 120 semester hours and follows the B.A. Degree model for General Education. The major requires students to take courses in logic, physics, communications, computer science and applied and theoretical mathematics. Students in consultation with faculty advisors can construct flexible and comprehensive programs.

The program prepares students to find careers in business, industry, government or education in positions such as actuaries, statisticians, analysts or teachers.

Three years of high school mathematics are required for admission; a fourth year of mathematics and at least one programming course is highly recommended. Advanced placement credit is accepted; waivers are available.

Majors must pass all required and restricted elective courses needed for graduation with no grade lower than a C-.

<b>General Education</b>	51 s.h.
A. Communications	9 s.h.
<b>COMP01.111</b> College Composition I	
<b>COMP01.112</b> College Composition II	
<b>CMS06.202</b> Public Speaking	
B. Science and Mathematics	14 s.h.
<b>MATH03.150</b> Discrete Mathematics	
<b>PHYS02.200</b> Physics I (for scientists and engineers)	
<b>PHYS02.201</b> Physics II (for scientists and engineers)	
<b>CS01.104</b> Intro to Scientific Programming	
C. Social and Behavioral Sciences	6 s.h.
D. History, Humanities, Languages	6 s.h.
<b>PHIL09.130</b> Intro to Symbolic Logic	
E. Artistic and Creative Experience	3 s.h.
F. Non-Program Electives	13 s.h.
One course must be Multicultural/Global (M/G) and one must be designated Literature (LIT)	
<b>Free Electives</b>	30s.h.
<b>Major Courses</b>	39 s.h.

A. Required Courses		30 s.h.
MATH01.130	Calculus I 4 s.h.	
MATH01.131	Calculus II 4 s.h.	
MATH01.230	Calculus III 4 s.h.	
MATH01.210	Linear Algebra	
MATH01.340	Modern Algebra I	
MATH01.231	Ordinary Differential Equations	
MATH01.330	Introduction to Real Analysis I	
STAT02.360	Introduction to Probability & Statistics I	
MATH01.499	Mathematics Seminar	

B. Restricted Electives		9 s.h.
MATH01.205	Technological Tools for Discovering Math 2 s.h.	
MATH01.310	College Geometry 4 s.h.	
MATH01.430	Intro. to Complex Analysis	
MATH01.332	Numerical Analysis	
MATH01.331	Intro. to Real Analysis II	
MATH01.341	Modern Algebra II	
MATH01.354	Intro. to Topology	
MATH01.352	Theory of Numbers	
MATH01.386	Intro. to Partial Differential Equations	
MATH01.410	History of Mathematics	
STAT02.361	Introduction to Probability and Statistics II	
MATH03.400	Applications of Mathematics	
MATH03.411	Deterministic Models in Operations Research	
MATH03.412	Stochastic Models in Operations Research	

Note: College Geometry is required for mathematics majors seeking certification as secondary education teachers.

**Total Credits in Program** 120 s.h.

## B.S. in Mathematics

The B.S. in Mathematics consists of 120 semester hours and follows the B.S. Degree model for General Education. The major requires students to take courses in logic, physics, communications, computer science, and applied and theoretical mathematics.

The bachelor of science degree in mathematics is, first of all, designed to give the increasing number of our mathematics majors that do not intend to be teachers the opportunity to prepare more thoroughly for graduate work in mathematics and other disciplines, such as engineering, the physical sciences, computer science, and other areas requiring extensive mathematical training. The requirements for this degree are also flexible enough so that students intending to seek employment in business, industry, or government can pursue courses of study that will allow them to enter their professions familiar with more of the relevant mathematics. The program is designed to allow students to study the mathematics that they will need with flexibility, breadth, and depth.

At least a 3.0 GPA in Calculus I, Calculus II, and Linear Algebra is required for admission. Majors must pass all required and restricted elective courses needed for graduation with no grade lower than a C-.

### Course Requirements

This major consists of 120 semester hours and follows the Bachelor of Science degree model. Unless noted, all courses are 3 s.h.

<b>General Education</b>		44 s.h.
A. Communications		9 s.h.
COMP01.111	College Composition I	
COMP01.112	College Composition II	
CMS06.202	Public Speaking	
B. Science and Mathematics		14 s.h.
MATH03.150	Discrete Mathematics	
PHYS02.200	Physics I (for scientists and engineers)	
PHYS02.201	Physics II (for scientists and engineers)	

CS01.104	Intro to Scientific Programming	
C.	Social and Behavioral Sciences	6 s.h.
D.	History, Humanities, Languages	6 s.h.
PHIL09.130	Intro to Symbolic Logic	
E.	Artistic and Creative Experience	3 s.h.
F.	Non-Program Electives	6 s.h.
One course must be Multicultural/Global (M/G) and one must be designated Literature (LIT)		
<b>Free Electives</b>		12 s.h.
<b>Major Courses</b>		64 s.h.
A.	<u>Required Courses</u>	53 s.h.
MATH01.130	Calculus I 4 s.h.	
MATH01.131	Calculus II 4 s.h.	
MATH01.230	Calculus III 4 s.h.	
MATH01.210	Linear Algebra	
MATH01.231	Ordinary Differential Equations	
MATH01.310	College Geometry (4)	
MATH01.330	Intro to Real Analysis I	
MATH01.332	Numerical Analysis	
MATH01.340	Modern Algebra I	
MATH01.341	Modern Algebra II	
MATH01.354	Intro to Topology	
MATH01.430	Intro to Complex Analysis	
MATH01.499	Mathematics Seminar - WI	
STAT02.360	Probability & Statistics I	
PHYS02.300	Modern Physics 4 s.h.	
B.	<u>Restricted Electives</u>	12 s.h.
STAT02.361	Probability & Statistics II	
MATH03.400	Applications of Mathematics	
MATH03.411	Deterministic Models in Operations Research	
MATH03.412	Stochastic Models in Operations Research	
MATH01.386	Intro to Partial Differential Equations	
MATH01.352	Theory of Numbers	
MATH01.410	History of Mathematics	
MATH03.350	Adv Topics in Discrete Math	
CS07.340	Design & Anal. of Algorithms	
CS07.422	Theory of Computing	
PHYS02.325	Mathematical Physics	
<b>Total Credits in Program</b>		120 s.h.

### Minor in Mathematics

The study of Mathematics enables people to understand the nature and functioning of different mathematical systems and the process of solving problems. Moreover, the increasing need for mathematical analysis of modern day problems will provide good employment opportunities for mathematically trained individuals in government and international agencies, education, business and industry. People trained in mathematics will be needed to solve many of the technical problems of the future.

The minor in Mathematics encourages and facilitates the acquisition of mathematical skills and concepts. It thus provides an added dimension to a student's program. Students wishing to minor in Mathematics must take 21 semester hours (except for students majoring in engineering), including 15 semester hours in required core courses and six semester hours in restricted electives in mathematics.

The choice of coursework depends on the student's goals and should be decided in consultation with the department chairperson or the mathematics advisement coordinator.

### Track I (not engineering)

#### Required courses

15 s.h.

MATH01.130	Calculus I
MATH01.131	Calculus II
MATH01.230	Calculus III
MATH01.210	Linear Algebra

Two courses (at least 6 semester hours) from:

MATH01.231	Differential Equations
MATH01.310	College Geometry
MATH01.330	Intro to Real Analysis I
MATH01.331	Intro to Real Analysis II
MATH01.332	Intro to Numerical Analysis
MATH01.340	Modern Algebra I
MATH01.341	Modern Algebra II
MATH01.352	Theory of Numbers
MATH01.354	Topology
STAT02.360	Intro to Probability and Statistics I
STAT02.361	Intro to Probability and Statistics II
MATH01.386	Intro to Partial Differential Equations
MATH03.400	Applications of Mathematics
MATH03.411	Deterministic Models in Operations Research
MATH03.412	Stochastic Models in Operations Research
MATH01.430	Intro to Complex Analysis

### Track 2 (engineering)

#### Required courses

16 credits

MATH01.130	Calculus I
MATH01.131	Calculus II
MATH01.235	Math/Eng. Analysis I
MATH01.236	Math/Eng. Analysis II

Two courses (at least 6 semester hours) chosen from:

MATH01.210	Linear Algebra
MATH01.310	College Geometry
MATH01.330	Intro to Real Analysis I
MATH01.331	Intro to Real Analysis II
MATH01.332	Intro to Numerical Analysis
MATH01.340	Modern Algebra I
MATH01.341	Modern Algebra II
MATH01.352	Theory of Numbers
MATH01.354	Topology
STAT02.360	Intro to Probability and Statistics I
STAT02.361	Intro to Probability and Statistics II
MATH01.386	Introduction to Partial Differential Equations
MATH03.400	Applications of Mathematics
MATH03.411	Deterministic Models in Operations Research
MATH03.412	Stochastic Models in Operations Research
MATH01.430	Introduction to Complex Analysis

### Concentration in Applied Mathematics

The applied mathematics concentration consists of 21 semester hours and increases the mathematics major's ability to apply various fields of mathematics in the formulation, analysis and evaluation of problems in the physical, biological and social sciences. The concentration provides the opportunity for students to participate in the dynamic character of modern mathematics and its uses.

#### Required courses:

18 s.h.

MATH01.210	Linear Algebra
MATH01.231	Ordinary Differential Equations
MATH01.332	Numerical Analysis
STAT02.360	Probability and Statistics I

**MATH03.400** Applications of Mathematics  
CS01. One course in Computer Science (Not CS01.100)

**Elective courses (one):** 3 s.h.

**MATH01.430** Complex Analysis  
**STAT02.361** Probability and Statistics II  
**MATH03.411** Deterministic Models in Operations Research  
**MATH03.412** Stochastic Models in Operations Research  
**PHYS02.315** Analytical Mechanics  
**PHYS02.325** Mathematical Physics

### **Concentration in Statistics and Operations Research**

The concentration in Statistics and Operations Research is designed to increase the mathematics major's abilities in data analysis, mathematical modeling, algorithmic reasoning, and problem solving, as well as one's knowledge in the fields of probability and mathematical statistics. The concentration provides a viable background for graduate study in these fields, employment in virtually any industry, preparation for the first actuarial exam, and the training necessary to teach AP statistics. It consists of 18 credit hours. Nine hours of required courses and nine hours of electives as listed below:

**Required courses:** 9 s.h.

**STAT02.260** Statistics I  
**STAT02.261** Statistics II  
**STAT02.360** Probability and Statistics I

**Electives:** 9 s.h.

**STAT02.361** Probability and Statistics II  
**STAT02.371** Statistical Design of Experiments II  
**STAT02.372** Statistical Design of Experiments II  
**MATH03.411** Deterministic Models In Operations Research  
**MATH03.412** Stochastic Models in Operations Research

### **Philosophy and Religion**

**David Clowney , Chair**  
**Edgar F. Bunce Hall**  
**856-256-4211**  
**clowney@rowan.edu**

### **Minor in Philosophy**

**David Clowney , Advisor**  
**Edgar F. Bunce Hall**  
**856-256-4211**  
**clowney@rowan.edu**

The Philosophy Minor is designed to introduce students to the tradition of philosophical reflection, and to complement and enhance a student's major field of study with courses such as Business Ethics, Philosophy of Science, Philosophy and Society, Aesthetics, and Philosophy of Mind. At the conclusion of the Minor sequence, students register for Selected Topics in Philosophy in order to pursue an independent project 3 s.h. which integrates their work in philosophy with their major field(s) of study.

Philosophy Minor 21 s.h.  
Required Courses 15 s.h.

**PHIL09.120** Introduction to Philosophy  
**PHIL09.110** Logic of Everyday Reasoning  
OR  
**PHIL09.130** Introduction to Symbolic Logic  
**PHIL09.220** Survey of Western Philosophy  
**PHIL09.226** Philosophy of Mind  
OR

- PHIL09.240      Philosophy and Society
- OR
- PHIL09.322      Business Ethics
- OR
- PHIL09.368      Philosophy of Science
- OR
- PHIL09.310      Aesthetics
- PHIL09.440      Selected Topics in Philosophy

Elective Courses 6 s.h.  
 Students may select any other philosophy courses offered including those options not taken from the required list.

### **Concentration in Philosophy and Religion**

**David Clowney , Advisor**  
**Edgar F. Bunce Hall**  
**856-256-4211**  
**clowney@rowan.edu**

The combined Concentration in Philosophy and Religion offers an opportunity to pursue either philosophy or religion in greater depth, or both in equal degree, according to personal interest.

Philosophy and Religion Concentration 18 s.h.  
 Required Courses 6 s.h.

- PHIL09.120      Introduction to Philosophy
- REL10.100      Introduction to Religion

Elective Courses 12 s.h.  
 Elective courses must be distributed in one of the following patterns: 2 in philosophy and 2 in religion; or 1 in philosophy and 3 in religion; or 3 in philosophy and 1 in religion. At least 2 of these electives must be upper division courses.

### **Physics and Astronomy**

**Jeffrey D. Hettinger , Chair**  
**Science Hall**  
**856-256-4397**  
**hettinger@rowan.edu**

The Department of Physics offers a B.S. in Physics and a B.S. in Physical Sciences with specialization in General Science.

#### **Minor in Astronomy**

**David R. Klassen , Program Advisor**  
**Science Hall**  
**856-256-4391**  
**klassen@rowan.edu**

An Astronomy Minor is available to any student desiring a more advanced study of astronomy and astrophysics. This minor is especially useful for physics majors who are thinking about graduate work in astronomy or astrophysics.

- ASTR11.221      Exploration of the Solar System 3
- ASTR11.231      Methods and Techniques in Modern Astronomy 4
- ASTR11.241      Astronomy & Astrophysics 4
- ASTR11.209,      212, 311, 411 Astronomy Research 3
- PHYS02.305      Optics and Light 4

Choice of any 1 Physics or Astronomy course at the 300 level or above or approved math/science elective 3-4 s.h.

## Specialization in Photonics

**Ernst D. Knoesel , Program Advisor**

**Science Hall**

**856-256-4366**

**knoesel@rowan.edu**

A Specialization in Photonics is available to any student desiring a more advanced study of optics and photonics.

This specialization is especially useful for physics majors who are thinking about graduate work and a career in the field of optics and photonics.

<a href="#">PHYS02.305</a>	Optics and Light 4
<a href="#">PHYS02.431</a>	Electricity and Magnetism II 3
<a href="#">PHYS02.333</a>	Introduction to optical design program ZEMAX 3
<a href="#">PHYS02.211,</a>	212, 311, 411 Physics Research (must be in optics) 4

## Concentration in Materials Science

**Ernst D. Knoesel , Program Advisor**

**Science Hall**

**856-256-4366**

**knoesel@rowan.edu**

The Concentration in Materials Science is available to several majors at Rowan and is recommended for Physics and Physical Science with Physics or Chemistry Specialization majors intending to attend graduate school in a materials related field or expect to directly enter the workforce. In addition to your usual major courses, a student seeking this concentration must elect to take Interdisciplinary Materials Science (INTR01 486...3s.h.) and two addition materials related courses outside their major. (Abbreviated lists depending on major are provided below. These courses were selected since you likely have the prerequisites for these courses in your major. Many other courses contain a materials science component and can be selected with the help of your advisor.)

If you major in Physics, select two courses from the following partial list:

<a href="#">CHEM06.300</a>	Advanced Inorganic Chemistry
<a href="#">CHEM07.405</a>	Introduction to Polymer Chemistry
<a href="#">ECE09.413</a>	Principles of Nondestructive Evaluation
<a href="#">CHE06.468</a>	Principles of Electrochemical Engineering
<a href="#">CHE06.474</a>	Fundamentals of Particle Technology

If you major in Physical Science/Physics Specialization, select two courses from the following partial list:

<a href="#">PHYS02.387</a>	Statistical Physics
<a href="#">PHYS02.440</a>	Advanced Laboratory
<a href="#">CHEM06.300</a>	Advanced Inorganic Chemistry
<a href="#">CHEM07.405</a>	Introduction to Polymer Chemistry
<a href="#">CHEM07.405</a>	Introduction to Polymer Chemistry
<a href="#">ECE09.413</a>	Principles of Nondestructive Evaluation
<a href="#">CHE06.468</a>	Principles of Electrochemical Engineering
<a href="#">CHEM08.400</a>	Physical Chemistry I
<a href="#">CHE06.474</a>	Fundamentals of Particle Technology

If you major in Physical Science/Chemistry Specialization, select two courses from the following partial list:

<a href="#">PHYS02.300</a>	Modern Physics
<a href="#">CHEM06.300</a>	Advanced Inorganic Chemistry
<a href="#">CHEM07.405</a>	Introduction to Polymer Chemistry
<a href="#">ECE09.413</a>	Principles of Nondestructive Evaluation
<a href="#">CHE06.468</a>	Principles of Electrochemical Engineering
<a href="#">CHE06.474</a>	Fundamentals of Particle Technology

## B.S. in Physics

**Ernst D. Knoesel , Advisor**

**Science Hall**

**856-256-4366**

**knoesel@rowan.edu**

The B.S. program in Physics prepares students for graduate school in physics or engineering, professional schools and for careers in industry, government, business or teaching (students interested in teaching should pursue a second major from the College of Education). All laboratories, research and teaching, are well-equipped with state-of-the art instrumentation, computers and data collection interfaces. Undergraduate research opportunities exist in diverse areas of experimental physics including optics/laser spectroscopy and condensed matter/materials science, theoretical physics including optical physics and high-energy physics, and in planetary science/astronomy researching comets, Mars, and deep space objects. Many opportunities exist for student/faculty collaborative research. These activities are beneficial to the development of students' analytical skills and are strongly encouraged.

### **General Education** 45 s.h.

#### A. Communications 9 s.h.

[COMP01.111](#) College Composition I

[COMP01.112](#) College Composition II

[CMS06.202](#) Public Speaking

#### B. Science and Math 15 s.h.

[CS01.104](#) Intro to Scientific Programming

OR

[CS04.103](#) Computer Science and Programming

[MATH01.130](#) Calculus I

[CHEM06.100](#) Chemistry I

[CHEM06.101](#) Chemistry II

#### C. Social and Behavioral Sciences 6 s.h.

#### D. Humanities, History, Languages 6 s.h.

[PHIL09.369](#) Philosophy of Science (WI)

OR alternate course approved by advisor

#### E. Artistic and Creative Experiences 3 s.h.

#### F. Non-Program Courses 6 s.h.

Note: At least one Gen. Ed. course must be designated as a LIT course, at least one designated as M/G, and at least one designated as WI (the WI course must be taken after completing College Composition II). Non-program courses are any courses not carrying the PHYS descriptor. All students must also pass the Computer Competency Exam or take Computer Literacy.

### **Major Requirements** 60-62 s.h.

#### **Collateral Required Courses** 11 s.h.

[MATH01.131](#) Calculus II

[MATH01.230](#) Calculus III

[MATH01.231](#) Differential Equations

#### **Physics Required Courses** 35 s.h.

[PHYS02.140](#) Physics of Current Technologies-RS

[PHYS02.200](#) Physics I (with calc)

[PHYS02.201](#) Physics II (with calc)

[PHYS02.300](#) Modern Physics

[PHYS02.315](#) Analytical Mechanics

[PHYS02.430](#) Electricity and Magnetism I

[PHYS02.401](#) Quantum Mechanics I

[PHYS02.387](#) Statistical Physics

[PHYS02.440](#) Advanced Lab

#### **Physics Electives** 6-8 s.h.

Two courses chosen from:

[PHYS02.431](#) Electricity and Magnetism II

[PHYS02.402](#)      Quantum Mechanics II  
[PHYS02.399](#)      Electric Circuits  
[PHYS02.305](#)      Optics and Light  
[PHYS01.310](#)      Independent Study  
[PHYS02.470](#)      Selected Topics  
 PHYS02.211, 212, 311, and 411  
 Physics Research I, II, III, IV

(A maximum of 3 s.h. of Physics Research can be credited toward elective hours.)

**Restricted Electives** 6-8 s.h.

Choose at least two approved courses from Physics, Astronomy, Atmospheric Science, Earth Science, Materials Science, Engineering, Math, Chemistry, Computer Science, Biology, or Education, or any Physics Elective listed above.

**Free Electives** 13-15 s.h.

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

### Minor in Physics

A Physics Minor is available for any student desiring a more extensive introduction to the field and a taste of some more advanced topics in physics. A Physics Minor is particularly valuable for those majoring in Mathematics, Engineering, Computers Science or Chemistry.

**Requirements** 18-20 s.h.

[PHYS02.200](#)      Physics I (with calc)

OR

[PHYS02.202](#)      Physics I (non-calc)

[PHYS02.201](#)      Physics II (with calc)

OR

[PHYS02.203](#)      Physics II (non-calc)

[PHYS02.300](#)      Modern Physics

And any two Physics courses at or above the 300 level

### B.S. in Physical Science (with Chemistry and Biochemistry)

**Robert Newland , Advisor**

Science Hall

856-256-4502

[newland@rowan.edu](mailto:newland@rowan.edu)

**Ernst D. Knoesel , Advisor**

Science Hall

856-256-4366

[knoesel@rowan.edu](mailto:knoesel@rowan.edu)

The B.S. in Physical Science is a joint program of the Department of Physics & Astronomy and the Department of Chemistry and Biochemistry. It provides a broad background in the physical sciences with specializations in chemistry or physics. Students in this program can earn state certification to teach all physical science subjects by earning a second degree from the College of Education. This program can be tailored to provide excellent preparation for careers in science and science-based graduate work as provided in medical, dental, veterinary and optometry schools.

**General Education** 44 s.h.

A. Communications 9 s.h.

[COMP01.111](#)      College Composition I

[COMP01.112](#)      College Composition II

[CMS06.202](#)      Public Speaking

B. Science and Math 11 s.h.  
 GEOG06.103 Geology I  
 MATH01.130 Calculus I  
 CS01.104 Intro to Scientific Programming  
 OR  
 CS04.130 Comp. Sci. and Prog.

C. Social and Behavioral Sciences 6 s.h.

D. Humanities, History and Languages 6 s.h.  
 PHIL09.369 Philosophy of Science OR other approved by advisor

E. Artistic and Creative Experiences 3 s.h.

F. Non-Program Courses 9 s.h.

Note: At least one Gen. Ed. course must be designated as a LIT course, at least one designated as M/G, and at least one designated as WI (the WI course must be taken after completing College Composition II).

Non-program courses are any courses outside the PHYS, PHSC, and CHEM program codes. All students must also pass the Computer Competency Exam or take Computer Literacy.

**Major Requirements** 60-64 s.h.

A. Common Core 45-48 s.h.

MATH01.131 Calculus II  
 PHYS02.140 Physics of Current Technologies-RS  
 PHYS02.200 Physics I (with calc)  
 PHYS02.201 Physics II (with calc)  
 PHYS02.300 Modern Physics  
 CHEM06.100 Chemistry I  
 CHEM06.101 Chemistry II  
 CHEM07.200 Organic Chemistry I  
 CHEM09.350 Quantitative Analysis

An approved Astronomy, Atmospheric Science, or Geology course  
 Two Approved Career Track courses

B. Specialization (Choose Chemistry or Physics)

Chemistry 14-15 s.h.

CHEM07.201 Organic Chemistry II  
 CHEM08.400 Physical Chemistry I  
 CHEM14.348 Biochemistry

An approved Chemistry Elective

Physics 14-16 s.h.

ASTR 11.241 Astronomy and Astrophysics

Two approved 300-level or above Physics courses

An approved Physics Elective

**Free Electives** 12-16 s.h.

**Total Credits in Program** 120 s.h.

\*Students in the General Science specialization may substitute Physics I and II (non-calc), but it is strongly recommended that calculus-based physics be taken.

## Political Science

**Roger L. Butler , Chair**  
**Robinson Hall**  
**856-256-4500 x3985**  
**butlerl@rowan.edu**

The Political Science Department offers a major program of 39 credits leading to a B.A. degree, and a minor program consisting of 21 credits. These programs are open to all students who envision careers as lawyers, government managers and administrators, public policy analysts, journalists, intelligence officers, diplomatic service officers, teachers, lobbyists, public opinion analysts, legislative aides, or any other career in government or business which requires a broad liberal arts background.

The major program aims at ensuring both breadth of knowledge of the discipline and in-depth studies in areas of the student's greatest interest. The total degree model requires 39 credits in the major, 60 credits in general education courses, and 21 credits in free electives for a total of 120 credits for graduation. A grade of C- or better must be earned in all Political Science courses. In addition, all students are required to take courses designated as Writing Intensive, Multicultural/ Global, and a course designated as LIT.

## B.A. in Political Science

**Roger L. Butler , Coordinator**

**Robinson Hall**

**856-256-4500 x3985**

**butlerl@rowan.edu**

### General Education

60 s.h.

(See the General Education requirements in the Academic Affairs section in this catalog. Substitutions for the following courses may NOT be made without an advisors approval.)

A. Communications 9 s.h.

[COMP01.111](#) College Composition I

[COMP01.112](#) College Composition II

[CMS06.202](#) Public Speaking

B. Social and Behavioral Sciences 12 s.h.

[ECON04.101](#) Intro to Macroeconomics

[ECON04.102](#) Intro to Microeconomics

[GEOG06.111](#) World Regional Geography

Directed elective in Sociology, Psychology, or Anthropology

C. History, Humanities and Language 12 s.h.

[HIST05.100](#) Western Civ I

OR

[HIST05.150](#) U.S. History I

[HIST05.101](#) Western Civ II

OR

[HIST05.151](#) U.S. History II

[PHIL09.110](#) Logic of Everyday Reasoning

OR

[PHIL09.130](#) Symbolic Logic

A Masterpieces or Readings Lit Course

D. Artistic and Creative Experience 3 s.h.

[MUSG06.102](#) General Music History

OR

[ARHS03.103](#) History of Art

E. Science and Math 10s.h.

[STAT02.100](#) Elementary Statistics

OR

[STAT02.260](#) Statistics I

Laboratory Science

Math choice

F. Non Program Courses 14 s.h.

Directed elective in History, Humanities or Language

Directed elective in Sociology, Psychology, Geography, or Economics

Non-Program elective

Non-Program elective

Non-Program elective

### Basic Major Requirements

27 s.h.

[POSC07.110](#) American Government

- POSC07.200 Survey Western Political Theory
- POSC07.230 Comparative Political Systems
- POSC07.310 American Constitutional Law
- POSC07.320 International Relations
- POSC07.360 Methodology and Statistics in Political Science Research
- POSC07.490 Seminar in Political Science
- EDPA02.490 Public Service Internship 6 s.h.
- OR
- EDPA02.320 Public Administration
- AND one of the following:
- POSC07.220 State & Local Governments
- POSC07.415 Indepth Study of Supreme Court
- POSC07.421 International Organizations
- OR
- EDPA02.490 Public Service Internship 3 s.h.
- AND any 3 s.h. political science elective

**Political Science Electives**

12 s.h.

Distribution of electives: a minimum of two courses 6 s.h. in one of the three areas below, and one course (3 s.h. each) in each of two other areas.

A. American Politics/Public Administration:

- POSC07.324 Black Americans & American Politics
- POSC07.311 Women & American Politics
- POSC07.220 State and Local Government
- POSC07.308 Current Problems of American Politics
- POSC07.303 Campaigns, Political Parties, and Interest Groups
- POSC07.305 The Legislative Process
- POSC07.306 The Presidency
- POSC07.323 Politics of Race, Poverty, and Welfare in the U.S.
- POSC07.370 Special Topics in Political Science (according to topic)
- POSC07.400 American Political Thought
- POSC07.401 Contemporary Political Thought
- EDPA02.410 Public Policy
- POSC07.491 Independent Study (according to topic)

B. Multi-Cultural/Global Studies and International & Comparative Politics:

- POSC07.321 Contemporary World Problems
- POSC07.350 Intro to Asian Political Systems
- POSC07.330 Contemporary U.S. Foreign Policy
- POSC07.345 Government and Politics of the Middle East
- POSC07.346 Politics and Society of Great Britain
- POSC07.351 Soviet Foreign Policy
- POSC07.370 Special Topics in Political Science (according to topic)
- POSC07.420 International Law
- POSC07.421 International Organizations
- POSC07.491 Independent Study (according to topic)

C. Constitutional Law and the Legal Process:

- POSC07.312 Freedom of Expression
- POSC07.340 Civil Rights and Civil Liberties
- POSC07.370 Special Topics in Political Science (according to topic)
- POSC07.375 Politics of the Judicial Process
- POSC07.410 Selected Problems in Constitutional Law
- POSC07.415 In-Depth Study of the Current Supreme Court
- POSC07.491 Independent Study (according to topic)

**Free electives**

21 s.h.

**Total Credits for Program**

120 s.h.

## Minor in Political Science

**Bernadyne Weatherford , Advisor**  
**Robinson Hall**  
**856-256-4889**  
**weatherford@rowan.edu**

The minor program in political science supplements the curriculum of students majoring outside political science; it helps students expand their career options into such fields as law, journalism, social studies teaching, business, government and intelligence.

The minor requires 21 s.h. of political science courses. Twelve of those semester hours are in basic courses which are required of all who pursue a political science minor, while the other nine are political science electives which students can tailor to their particular career or intellectual interests.

### **Required Courses** 12 s.h.

<a href="#">POSC07.110</a>	American Government
<a href="#">POSC07.200</a>	Survey of Western Political Theory
<a href="#">POSC07.230</a>	Comparative Political Systems
<a href="#">POSC07.320</a>	International Relations

### **Recommended Electives** 9 s.h.

A. For pre-law students outside of political science, or for journalists, we suggest three courses from among the following:

<a href="#">POSC07.310</a>	American Constitutional Law
<a href="#">POSC07.312</a>	Freedom of Expression
<a href="#">POSC07.340</a>	Civil Rights and Civil Liberties
<a href="#">POSC07.375</a>	Politics of the Judicial Process
<a href="#">POSC07.410</a>	Selected Problems of Constitutional Law
<a href="#">POSC07.415</a>	In-Depth Study of Supreme Court

B. For students seeking a career in politics, political journalism or social studies teaching, we suggest:

<a href="#">POSC07.220</a>	State and Local Government
<a href="#">POSC07.232</a>	Current Problems in American Politics
<a href="#">POSC07.303</a>	Campaigns, Political Parties and Interest Groups
<a href="#">POSC07.305</a>	The Legislative Process
<a href="#">POSC07.306</a>	The Presidency
<a href="#">POSC07.330</a>	Contemporary U.S. Foreign Policy

C. For students seeking a career in the diplomatic service, intelligence or international business, we suggest:

<a href="#">POSC07.321</a>	Contemporary World Problems
<a href="#">POSC07.350</a>	Intro to Asian Politics
<a href="#">POSC07.330</a>	Contemporary U.S. Foreign Policy
<a href="#">POSC07.420</a>	International Law

D. For students seeking career opportunities in state, local, or federal government management, we suggest:

<a href="#">POSC07.220</a>	State and Local Government
<a href="#">EDPA02.320</a>	Public Administration
<a href="#">EDPA02.410</a>	Public Policy
<a href="#">EDPA02.412</a>	Administrative Law and the Regulatory Process
<a href="#">EDPA02.490</a>	Public Service Internship

## Psychology

**Janet Cahill , Chair**  
**Robinson Hall**  
**856-256-4500**  
**cahillj@rowan.edu**

The Psychology program at Rowan University prepares students for graduate study in all areas of psychology. The program is also suited to those students who wish to combine psychological principles, concepts and practical skills with some area outside the field of psychology. This area may be a specific career area such as counseling, education, management, social work, labor relations, etc., or a general area such as human services.

The major program has a minimum of 38 hours of study in psychology. Of these, 12 hours are in foundational courses required of all majors, 17 hours are selected from a group of core courses (2 of these courses must be designated as psychology laboratory courses), 3 hours are selected from senior-level courses, and 6 hours are selected from psychology elective courses. Where choices are available, students are expected to consult their academic advisor.

Students wishing to major in psychology must have and maintain a 2.5 grade point average. In order to graduate with a degree in Psychology, students must be officially admitted to the major and must have a minimum cumulative grade point average of 2.5. Students currently enrolled at Rowan University who wish to major in psychology (internal transfer and undeclared majors) must have completed at least 12 credit hours at Rowan University and must complete the form for admission to a restricted major. Please be advised that, although a 2.5 grade point average is necessary to be considered as an internal transfer, it does not guarantee admission to the major. Students who do not maintain a 2.5 average will be expected to meet with their advisor to discuss the situation.

All Psychology majors (including coordinate psychology majors) are expected to meet with their psychology department advisor at least once a semester. The purpose of these meetings is to discuss course selection, progress toward graduation requirements, academic planning, graduate school plans, and career plans.

Transfer students may transfer a maximum of 66 s.h. from other institutions and may not transfer more than 12 s.h. in psychology course work. Transfer students must complete a minimum of 54 s.h. including a minimum of 26 s.h. of psychology course work at Rowan University to earn a psychology degree at Rowan University. The Psychology Department does not accept psychology transfer credits earned more than 25 years ago. All psychology majors are strongly urged to take all their psychology courses at Rowan. Students should consult with their advisor before taking courses at other institutions to make sure they will transfer to Rowan.

Psychology majors may take up to 10% of their Rowan credit hours pass/no credit, including 6 s.h. in psychology (students may not take Statistics and Research Methods, psychology laboratory core courses, nor their Senior Requirement course pass/no credit).

## **B.A. in Psychology**

**Keiko Stoeckig , Advisor**  
**Robinson Hall**  
**856-256-4821**  
**stoeckig@rowan.edu**

### **General Education**

61-63s.h.

General education courses must be selected from the university-approved General Education course list (See the General Education requirements in the Academic Affairs section in this catalog.).

A. Communications (written/spoken) 9-10 s.h.

[COMP01.111](#) College Composition I or  
[COMP01.105](#) Integrated College Composition  
[COMP01.112](#) College Composition II  
[CMS06.202](#) Public Speaking

B. Science and Mathematics 10-11 s.h.

[MATH01.121](#) Pre-Calculus  
OR  
[MATH01.202](#) Intro to Geometry  
OR  
[MATH01.123](#) College Algebra

(If the student is not prepared to take the above courses, Intermediate Algebra must be taken as an elective)

- BIOL01.100 Biology I
- OR
- BIOL01.101 Biology II
- OR
- BIOL10.210 Anatomy & Physiology I
- OR
- BIOL01.113 General Biology:Human Focus

(All students must take either Biology I or General Biology: Human Focus or Physical Anthropology)

C. Social and Behavioral Sciences 12 s.h.

- ANTH02.201 Physical Anthropology
- OR
- ANTH02.202 Cultural Anthropology
- OR
- ANTH02.312 Anthropological Perspectives of Physical Growth

D. History, Humanities and Language 12 s.h.

- General Education Literature course
- PHIL09.120 Intro to Philosophy
- OR
- PHIL09.368 Philosophy of Science
- OR
- PHIL09.226 Philosophy of Mind

E. Artistic and Creative Experience 3 s.h.

F. Non-program Electives 15 s.h.

**Major Program** 38 s.h.

A. Foundational Courses 12 s.h.

- PSY01.100 Intro to Psychology: Personal, Emotional, and Social Interactions
- PSY01.104 Intro to Psychology: Brain, Mind, and Behavior
- PSY07.210 Statistics & Research Meth. in Psychology

B. Core Courses 17 s.h.

- PSY22.320 Theories of Learning
- OR
- PSY02.310 Learning and Behavior
- PSY01.327 Cognitive Psychology
- PSY05.206 Social Psychology
- PSY10.315 Physiological Psychology
- OR
- PSY01.326 Perception
- PSY03.200 Abnormal Psychology
- OR
- PSY01.230 Psychology of Personality
- PSY09.209 Child Development
- OR
- PSY09.210 Adolescent Development

Students are required to take 2 of the above as laboratory courses which will emphasize the research methodology used in that particular discipline. Students must take one course from each of the five groups of courses.

C. Senior Requirement 3 s.h.

- PSY01.422 Field Experience in Psych
- OR
- PSY01.419 Independent Study
- OR
- PSY01.423 Seminar in Psych
- OR
- PSY01.429 Systems in Psychology

D. Psychology Electives 6 s.h.

Any psychology courses may be taken.

**Free Electives** 21 s.h

**Total Credits in Program**

120 s.h.

**Minor in Psychology**

**Keiko Stoeckig , Advisor**  
**Robinson Hall**  
**856-256-4821**  
**stoeckig@rowan.edu**

The department offers a 21 s.h. minor in psychology. This program is designed for students desiring a substantial background in psychology while majoring in another field. The minor is designed to allow students the flexibility to choose courses that will further their career goals. Courses should be selected in consultation with the Academic Advising Coordinator. Minors may transfer a maximum of 6 s.h. in psychology from other institutions.

Foundational Courses		6 s.h.
<b>PSY01.100</b>	Intro to Psychology: Personal, Emotional and Social Interactions	
<b>PSY01.104</b>	Intro to Psychology: Brain, Mind and Behavior	
Two 300/400 level psych courses		6 s.h.
Electives (any psychology courses)		9 s.h.

**State of New Jersey Certified Alcoholism & Drug Counselor (CADC)**

**Linda Jeffrey , Advisor**  
**Robinson Hall**  
**856-256-4874**  
**jeffrey@rowan.edu**

The psychology department, through the Liberal Arts and Sciences Institute, offers six courses (19 s.h.) that satisfy the coursework requirements for a State of New Jersey Certificate in Alcoholism and Drug Counseling (CADC). Students are also required to obtain 4000 hours of supervised alcoholism and/or drug counseling experience in an appropriate setting.

<b>PSY05.125</b>	Introduction to Psychological Study of Alcoholism/Drug Abuse
<b>PSY05.215</b>	The Psychology of the Adolescent Alcoholic/Drug Abuser
<b>PSY05.217</b>	Psychology of Gender and Alcoholism/Drug Abuse
<b>PSY05.250</b>	Psychopharmacology
<b>PSY05.350</b>	Psychological Treatment and Counseling of the Alcoholic/Drug Abuser
<b>PSY05.425</b>	Family Psychology and Alcoholism/Drug Abuse

**Specialization in Behavioral Services for Children and Their Families**

**Mary Louise E. Kerwin , Advisor**  
**Robinson Hall**  
**856-256-4500 x3521**  
**kerwin@rowan.edu**

The Specialization in Behavioral Services for Children and Their Families is designed to train Psychology majors to provide effective services for children with behavior problems and/or developmental disabilities. The specialization curriculum emphasizes learning theory, the application of behavioral principles, knowledge of types of problems and issues for which children may need services, interviewing techniques, and supervised experience working with children and their families in the community. Upon completion of the specialization and additional supervised experience students are eligible to apply to become a Board Certified Associate Behavior Analyst. This specialization is available only to matriculated Psychology majors. The coursework for the specialization requires 4 semesters to complete. Students are encouraged to apply for the specialization by the end of their sophomore year.

<b>PSY02.308</b>	Research in Learning and Behaviorism
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<i>OR</i>	
PSY02.310	Learning and Behavior
PSY02.305	Applied Behavior Analysis
PSY01.316	Behavioral Assessment and Measurement
PSY09.305	Developmental Psychopathology
PSY01.422	Field Experience

Students are encouraged to take the courses in the order in which they are listed.

## **Sociology**

**Mary J. Gallant , Chair**  
**Robinson Hall**  
**856-256-4500 x3511**  
**gallant@rowan.edu**

Students majoring in sociology receive a B.A. in sociology upon completion of all requirements. A major in sociology seeks to develop competence in the analysis and understanding of the effect which social factors have on interaction between individuals, between individual(s) and group(s), and between groups.

The program provides a knowledgeable background in the field of social behavior for all majors. The program also provides the proper foundation courses for students who seek to attend graduate school to become professional sociologists.

The department offers a Specialization in Applied Sociology. Sociological skills are now regarded as critical in the analysis and treatment of social problems, the assessment of community based needs and practices, and the development and evaluation of strategies for positive social change. Accordingly, the Specialization in Applied Sociology introduces students to this ever-developing subfield within the discipline and provides them with the requisite foundation to pursue careers in the human and community services industries. The specialization is restricted to Sociology Majors and consists of a total of 39 semester hours. The core, which is required of all our majors, consists of the beginning (Introductory Sociology), middle (Classical Theory, Social Statistics and Sociological Research Methods) and culminating (Senior Seminar) experiences for our students. The required courses in the specialization include the field internship course where students gain direct experience in applying sociological skills to social problems. The elective banks, consisting of both lower and upper division courses, allow students to explore in greater depth their interests in particular areas of applied sociology. Students should consult with an advisor if interested in pursuing the Specialization in Applied Sociology.

The department also offers a minor in sociology as well as support courses for those majoring in other disciplines.

Admission to the sociology program is open to all those students who are in good academic standing. To graduate with a degree in sociology, students must have a minimum GPA of 2.0 and no grades lower than a C- in all required courses. Students must also have an overall GPA of 2.0. Of the 33 hours, students must complete at least 15 hours at Rowan University and take at least 18 hours in 300 or 400 level sociology courses. Sociology majors must also have a total of 30 hours of upper level courses among the 120 semester hours of course work required for graduation. This minimum of 30 hours--of which 18 upper level hours must be in sociology--can be divided between sociology and other areas of study.

Credit by examination-CLEP and others-may be substituted for Introduction to Sociology. All sociology students should consult their advisors and instructors prior to registering for their 300/400 level courses.

### **B.A. in Sociology**

**Mary J. Gallant , Advisor**  
**Robinson Hall**  
**856-256-4500 x3511**  
**gallant@rowan.edu**

<b>General Education</b>	60 s.h.
A. Communications	9 s.h.
<a href="#">COMP01.111</a> College Composition I	
<a href="#">COMP01.112</a> College Composition II	
<a href="#">CMS06.202</a> Public Speaking	
B. Science and Mathematics	10 s.h.
Science with Laboratory	
STAT02.100 Elementary Statistics	
Science, Math or Computer Science choice	
C. Social and Behavioral Sciences	12 s.h.
<a href="#">ANTH02.202</a> Cultural Anthropology	
<a href="#">PSY01.100</a> Introduction to Psychology	
Economics Courses	
<a href="#">ECON04.101</a> Intro to Macroeconomics	
OR	
<a href="#">ECON04.102</a> Intro to Microeconomics	
Political Science courses	
<a href="#">POSC07.100</a> Intro to Government and Politics	
OR	
<a href="#">POSC07.110</a> American Government	
OR	
<a href="#">POSC07.230</a> Comparative Political Systems	
OR	
POSC07.231 Contemporary World Problems	
Geography Courses	
<a href="#">GEOG06.102</a> Cultural Geography	
OR	
<a href="#">GEOG06.111</a> World Regional Geography	
D. History, Humanities, Language	9 s.h.
History (Choice)	
Literature (Choice)	
Religion or Philosophy (Choice)	
E. Arts and Creative Experience	3 s.h.
Arts Choices	
F. Non-Program Electives	17 s.h.
History, Humanities, Language Elective (Choice of 2)	
College of LAS Elective (Choice of 4)	
<b>Major Requirements</b>	33 s.h.
<a href="#">SOC08.120</a> Introduction to Sociology	
<a href="#">SOC08.331</a> Classical Sociological Theory	
<a href="#">SOC08.375</a> Sociological Research Methods	
<a href="#">SOC08.376</a> Social Statistics	
<a href="#">SOC08.425</a> Senior Seminar	
Sociology Choice (any level)	
Sociology Choice (300-400 level)	
Sociology Choice (300-400 level)	
<b>Free Electives</b>	27 s.h.
Sociology majors are required to take at least 30 s.h. in upper-level courses with a minimum of 18 s.h. in sociology courses.	
<b>Total Credits in Program</b>	120 s.h.

## Minor in Sociology

**Mary J. Gallant , Advisor**

**Robinson Hall**

**856-256-4500 x3511**

**gallant@rowan.edu**

Students who wish to minor in Sociology must complete 21 semester hours in Sociology. Introduction to Sociology and Classical Sociological Theory are required. A minimum of 12 of the 21 semester hours must be taken in 300 or 400 level courses and 12 semester hours must be taken at Rowan University.

### Program Requirements

- [SOC08.120](#) Introduction to Sociology (required)
- [SOC08.331](#) Classical Sociological Theory (required)
- Sociology Choice (any level)
- Sociology Choice (any level)
- Sociology Choice (300-400 level)
- Sociology Choice (300-400 level)
- Sociology Choice (300-400 level)

### Specialization in Applied Sociology

**Mary J. Gallant , Advisor**

**Robinson Hall**

**856-256-4500 x3511**

**gallant@rowan.edu**

### Program Requirements

#### General Education

- |                                                             |         |
|-------------------------------------------------------------|---------|
|                                                             | 54 s.h. |
| A. Communications                                           | 9 s.h.  |
| <a href="#">COMP01.111</a> College Composition I            |         |
| <a href="#">COMP01.112</a> College Composition II           |         |
| <a href="#">CMS06.202</a> Public Speaking                   |         |
| B. Science and Mathematics                                  | 10 s.h. |
| Science with Laboratory                                     |         |
| <a href="#">STAT02.100</a> Elementary Statistics            |         |
| Science, Math or Computer Science choice                    |         |
| C. Social and Behavioral Sciences                           | 12 s.h. |
| <a href="#">ANTH02.202</a> Cultural Anthropology            |         |
| <a href="#">PSY01.100</a> Introduction to Psychology        |         |
| Economics Courses                                           |         |
| <a href="#">ECON04.101</a> Intro to Macroeconomics          |         |
| OR                                                          |         |
| <a href="#">ECON04.102</a> Intro to Microeconomics          |         |
| Political Science courses                                   |         |
| <a href="#">POSC07.100</a> Intro to Government and Politics |         |
| OR                                                          |         |
| <a href="#">POSC07.110</a> American Government              |         |
| OR                                                          |         |
| <a href="#">POSC07.230</a> Comparative Political Systems    |         |
| OR                                                          |         |
| <a href="#">POSC07.231</a> Contemporary World Problems      |         |
| Geography Courses                                           |         |
| <a href="#">GEOG06.102</a> Cultural Geography               |         |
| OR                                                          |         |
| <a href="#">GEOG06.111</a> World Regional Geography         |         |

D. History, Humanities, Language History (Choice) Literature (Choice) Religion or Philosophy (Choice)	9 s.h.
E. Artistic and Creative Experiences Arts Choice	3 s.h.
F. Non-Program Electives History, Humanities, Language Elective (Choice of 2) CLAS Elective (Choice of 2)	11 s.h.
<b>Specialization Requirements</b>	39 s.h.
<a href="#">SOC08.120</a> Introduction to Sociology	
<a href="#">SOC08.221</a> Social Problems	
<a href="#">SOC08.331</a> Classical Sociological Theory	
<a href="#">SOC08.339</a> Sociological Practice	
<a href="#">SOC08.375</a> Sociological Research Methods	
<a href="#">SOC08.376</a> Social Statistics	
<a href="#">SOC08.425</a> Senior Seminar	
<a href="#">SOC08.494</a> Field Experience	6 s.h.
Sociology Choice	
Practice Bank Choice	
Applied Bank Choice	
Specialization Bank Choice	
<b>Free Electives</b>	27 s.h.
Sociology majors are required to take at least 30 s.h. in upper-level courses with a minimum of 18 s.h. in sociology courses.	
<b>Total Credits in Program</b>	120 s.h.

# College of Professional and Continuing Education

Horacio A. Sosa , Dean  
Education Hall  
856-256-5121  
sosa@rowan.edu

## Mission

The mission of the College of Professional and Continuing Education (CPCE) is to facilitate access to Rowan University's high quality academic programs for individuals seeking education, training, and enrichment in a convenient and affordable setting. CPCE students are characterized as non-traditional because of their personal and professional lives and their preference for studying part-time with flexible schedules and convenient and innovative instructional modes of delivery.

## Academic Offerings

Through partnerships with Rowan University's academic departments, CPCE offers a selection of programs (courses, concentrations, specializations, certificates, and terminal degrees) currently available on campus to traditional students, but in a different format. Programs are available online, accelerated during evenings and/or weekends, as degree completions at partner community colleges, and combinations of the above.

Current offerings include:

- B.S. degree completion and graduate programs at partner community colleges.

- Online graduate programs.

- Accelerated and hybrid graduate programs.

For more information and a list of available programs visit <http://www.rowan.edu/cpce/>

## Admission and Graduation Requirements

CPCE students are admitted according to the same standards and requirements established by the Admission's office, the School of Graduate Studies, and the corresponding departments.

CPCE does not have its own degrees, nor does it "own" a curriculum. It is simply a vehicle to offer existing degrees to a different population of students through different modes of delivery. Therefore, the respective academic unit will grant the same diploma and/or certificate to students pursuing a degree through CPCE as it would to a traditional student.

## Support Services

Academic advising and student support services are provided by the professional staff of CPCE, and will follow the processes, plans of study, and academic standards established by the academic departments. Support services will be provided based upon the needs of our students. In addition to normal business hours, CPCE staff will be accessible via email during evening and weekend hours.

## Continuing Education

In addition to credit education, CPCE offers customized education and training to corporations, school districts, and other for- and not-for-profit agencies and organizations. The college offers Continuing Credit Units (CEU) and Professional Development Hours (PDH) in selective areas of study.

# Courses

## Accounting

### **ACC 03.210: 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 03.211: 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 03.300: Supervised Internship in Accounting**

**3 s.h.**

*Prerequisites: ACC 03310*

This course includes accounting field experience in government, industry or non-profit organizations. Trainees are given assignments that prepare them for productive employment upon graduation. The learning process is monitored by an Accounting faculty member.

### **ACC 03.310: Intermediate Accounting I - Fall semester only**

**3 s.h.**

*Prerequisites: ACC 03211*

This course includes a review of the accounting process, the preparation of each of the financial statements; i.e., Statement of Financial Position, Statement of Income, Statement of Changes in Owner's Equity, and Statement of Changes in Financial Position, and the specific principles related to the accounting for current assets, with particular emphasis on inventory. A special section is devoted to the time value of money as related to accounting.

### **ACC 03.311: Intermediate Accounting II - Spring semester only**

**3 s.h.**

*Prerequisites: ACC 03211*

This course includes the accounting principles related to investments, operating assets, current and long-term liabilities and owner's equity accounts. In addition, special topics cover accounting for leases, pensions and current value accounting.

### **ACC 03.316: Concepts in Federal Taxation**

**3 s.h.**

*Prerequisites: ACC 03310*

This course presents an overview of the Federal Tax System in a conceptual framework with emphasis on transactions common to all entities. It exposes students to taxation and its interrelationship between individuals, corporations, partnerships and other business entities. Students will review recent tax legislation and will gain experience in research and preparation of tax returns in a manual and computerized environment.

### **ACC 03.320: Accounting Information Systems**

**3 s.h.**

*Prerequisites: ACC 03310 and CS 01200*

The course is designed to give the accounting student an introduction to the concepts and tools related to the use, development, and adaptation of computer-based accounting information systems. The course will emphasize information system analysis and design, internal controls, and technology of accounting systems. Students will gain hands-on experience with a commercial accounting software system throughout the course.

### **ACC 03.326: Cost Accounting - Fall semester only**

**3 s.h.**

*Prerequisites: ACC 03211 or ACC 02211*

This course deals with techniques and systems used for internal control. It views the cost accounting system as the connecting link between planning and control functions of management. Topics include: cost accumulation procedures; job order and process cost accounting cycles; variance analysis; master and flexible budgets; cost-volume-profit analysis; and transfer pricing.

### **ACC 03.328: Entrepreneurial Accounting**

**3 s.h.**

*Prerequisites: ACC 03211 or ACC 03405*

This course provides students with the accounting and financial tools essential for effective decision-making in starting and managing small to mid-sized businesses. It focuses on the measurement and evaluation of financial performance, effective cash management techniques, internal control concepts, good decision-making for growth and long-term solvency of the business. A hands on, project based learning experience is emphasized to integrate the various financial tools and to assist student in applying what they learn.

## Courses

### **ACC 03.330: Selected Topics in Accounting**

**3 s.h.**

*Prerequisites: ACC 03310*

Students will investigate new areas and developments in theory, research, and practice of accounting. Specialized topics will vary each semester. The topics will be determined by the department and the instructor teaching the course. Course activities include in-depth study of selected topics, case analysis, and research.

### **ACC 03.405: Foundations of Accounting - Fall semester only**

**3 s.h.**

This course presents an overview of accounting as an information system useful for decision making. It provides students with an understanding of the basic concepts of financial and managerial accounting from the perspective of a future user of accounting information.

### **ACC 03.410: Auditing - Spring semester only**

**3 s.h.**

*Prerequisites: ACC 03311 and STAT 02260*

This course studies the framework of an audit which includes the ethical and legal environment, working papers, internal accounting control of a manual and EDP system, audit reports and the use of statistics and the computer in the auditing process. The course also emphasizes the application of auditing principles and procedures through the use of practice sets.

### **ACC 03.416: Advanced Accounting**

**3 s.h.**

*Prerequisites: ACC 03311*

This course covers concepts and accounting for business combinations, governmental entities, and nongovernmental not-for-profit organizations. It also covers the accounting for inter-company transfers, segment reporting, and interim reporting. It provides an overall review of generally accepted accounting principles in producing consolidated financial statements for the business and non-business organization.

### **ACC 03.428: Integrative Accounting Seminar**

**3 s.h.**

*Prerequisites: ACC 03311 or ACC 02311*

This course provides an integrative experience in which students synthesize knowledge from the accounting content areas to interpret, evaluate, and analyze financial information in order to enhance planning and decision-making. The course uses case analyses to involve students in active rather than passive learning, and places emphasis on skills in analytical and critical thinking, technology, communication and teamwork. Students are strongly advised to take Concepts of Taxation (ACC03.316) prior to enrolling in this course. (Offered Spring Only)

### **ACC 03.430: Individual Taxation**

**3 s.h.**

*Prerequisites: ACC 03311*

Surveys the tax structure of the United States, emphasizing the Internal Revenue code and regulations that affect federal income tax liabilities of individuals. Basic tax research and preparation skills are a consistent theme throughout the course.

### **ACC 03.431: Taxation of Business Entities**

**3 s.h.**

*Prerequisites: ACC 03430*

An introductory course in the Federal Income Taxation of business transactions relating to corporations, partnerships, LLCs and estates and trusts. Students will explore tax policy issues, apply basic tax research to specific case problems, prepare common IRS forms and schedules, and develop skills necessary for effective tax planning and its impact on business decisions.

### **ACC 98.400: Law for Accountants - Fall semester only**

**3 s.h.**

*Prerequisites: MGT 98242*

This course includes the study of the legal aspects of sales, liability, secured transactions, commercial paper and consumer credit.

## Advertising

### **ADV 04.330: Introduction to Advertising**

**3 s.h.**

*Prerequisites: 30 hour prerequisite*

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.

## Courses

### **ADV 04.331: Print Media Copywriting**

**3 s.h.**

*Prerequisites: ADV 04330*

Students take this course as the first professional course in advertising. Students learn to write national style print copy using theory and contemporary trends. Topics include: Research tools, copy platform, objective setting, benefit-sell, idea development and headline strategies.

### **ADV 04.352: Advertising Strategies**

**3 s.h.**

*Prerequisites: ADV 04331*

This course explores the methodologies and tactics involved in planning advertising campaigns. Students examine research sources, strategic planning techniques, media placement, copywriting & testing. Students will review presentation techniques, theme-within-a-theme and other related strategic thinking.

### **ADV 04.355: Advertising Practicum**

**1 to 3 s.h.**

*Prerequisites: 75 hour prerequisite*

Advertising practicum allows students to apply their skills and knowledge by working on-campus with department faculty on a variety of technical, creative, or research-related assignments. Students can earn 1 credit for every 40 hours of work, with most practica implemented for 3 credit hours. Students keep a detailed log of working hours, prepare an extensive portfolio, write an analytical critique of the practicum, submit the work to the faculty supervisor for grading.

### **ADV 04.360: Integrated Marketing Communication**

**3 s.h.**

*Prerequisites: PR 06350 and ADV 04330*

This course explores the expanded as well as the communication portion of the organization's business and marketing plans. Emphasis is placed on how to translate marketing strategies into a well-defined and seamless communication program directed at all of the organization's publics.

### **ADV 04.430: Electronic Media Copywriting**

**3 s.h.**

*Prerequisites: ADV 04331*

Working as individuals and in groups, students learn to plan and write radio and television commercials, as well as audio-visual scripts for promotional communications purposes. At least one script is produced.

### **ADV 04.432: Media Planning**

**3 s.h.**

*Prerequisites: ADV 04330*

Students study media as social and economic forces in our society; the course examines major media with emphasis on comparative value in regards to cost, audience, production problems, time factors, product stability and cost effectiveness. Students get considerable actual practice in media planning activities. A research unit is included.

### **ADV 04.434: Advertising Campaigns - WI**

**3 s.h.**

*Prerequisites: ADV 04352 and ENGL 01112*

This course prepares students to undertake and complete an extensive, creative, effective professional advertising campaign. The course includes instruction on how to prepare the speech which is made when the campaign is pitched to the client, extensive marketing and advertising research, final polishing of copywriting skills and a well prepared final oral presentation.

## American Studies

### **AMST 13.201: Introduction to American Studies**

**3 s.h.**

This is an interdisciplinary course intended to introduce the methods and themes central to American Studies. The course describes the typical methods of text, social, historical, and cultural analyses as they apply to the study of American society and culture.

### **AMST 13.400: Independent Study in American Studies**

**3 s.h.**

Students will engage in an independent study project under the supervision of a faculty member. Topics will vary.

## Courses

### **AMST 13.402: Senior Seminar in American Studies - WI**

**3 s.h.**

*Prerequisites: AMST 13201 and ENGL 01112 or AMST 13201 and COMP 01112*

This seminar provides the opportunity for students to engage in their own research into American Studies and to significantly advance their own scholarly development in the field. Students interact with their instructor and the other students in the seminar in the development and completion of individual projects. The central theme will vary by semester. Topics may include: ethnicity, popular religion, slavery in North America, World War II at home and abroad.

## Anthropology

### **ANTH 02.201: Introduction to Physical Anthropology**

**3 s.h.**

This course surveys the variety of human biological adaptations to the environment over time and space. Anatomy of the human form is studied as it has evolved over the past 7 million years. Diversity in living human populations and their genetic and physiological variations are examined. This course also introduces the student to some of the specialized subfields of physical anthropology, such as medical anthropology, primatology, and forensic anthropology.

### **ANTH 02.202: Introduction to Cultural Anthropology**

**3 s.h.**

This course presents cultural anthropology as a coherent system of data and theory designed to explain the variety of human group behavior, giving special emphasis to the structure and function of non-western cultures.

### **ANTH 02.203: Introduction to Archeology**

**3 s.h.**

This course covers the rudiments of archeological field techniques, methods of analysis and dating methods.

### **ANTH 02.210: Natives of South America**

**3 s.h.**

The pre-history and cultures of native South Americans are examined in this course via the archeological record and ethnographic accounts. The concepts of culture, cultural evolution, and adaptation are emphasized while undertaking a comprehensive survey of the diverse native South American societies and their environments. This course is offered annually.

### **ANTH 02.215: Medical Anthropology**

**3 s.h.**

*Prerequisites: ANTH 02201 or BIOL 01100*

Medical anthropology surveys the cultural, genetic and environmental factors that influence the development of human disease, the history and distribution of illnesses and the culturally prescribed varieties of medical treatment and health-promoting behaviors. Students will gain an understanding of the important influence that social behavior and commonly-held beliefs have on the course of illness and its cure. This course is offered annually.

### **ANTH 02.250: 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 02.270: New World Archaeology**

**3 s.h.**

*Prerequisites: ANTH 02203*

This course covers the prehistoric and early historic cultural adaptations of the native peoples of the Americas. Emphases will be placed upon: current research trends and findings particularly in the last three decades; prehistoric cultural ecology; culture change and culture process; and current new and traditional controversies, from the earliest Native American hunter-gatherers to settled societies, animal and plant domestication, to the impact of colonization, and the impact of archaeological conservation. Students will research articles on discoveries and debates, prepare a research report, and apply learned archaeological methods in a simulated excavation.

### **ANTH 02.310: Indians of North America**

**3 s.h.**

This course surveys the development of the native north American cultures from early times to the present. It analyzes present-day problems of reservation life and the Indian's place in our society.

## Courses

### **ANTH 02.312: Anthropological Perspectives on Physical Growth and Development** 3 s.h.

*Prerequisites: BIOL 01110 or BIOL 10210 or ANTH 02201*

This course examines the normal course of human physical growth and development and inter-population differences in attainment of puberty and final adult height, weight and body shape. It also focuses on the effect of the environment, heredity, disease and nutrition in producing a variety of fat patterns, trunk/limb proportions and delays in growth in different human groups. Finally, students learn to assess critically different types of growth studies and methods of forecasting growth. This course is offered annually.

### **ANTH 02.315: Forensic Anthropology** 3 s.h.

*Prerequisites: ANTH 02201 or BIOL 10210*

Forensic Anthropology employs the methods of physical anthropology and archeology to identify human skeletal remains. Proper excavation technique for recovery of remains in order to fulfill the requirements of the legal system will be taught. Students will learn to determine age, sex, height, life history, cause of and time since death and population affinity from the human skeleton. A mandatory weekend morning excavation will be required. Grading is based on homework, a case report, performance on exams and a final paper. This course is offered annually.

### **ANTH 02.321: 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 is offered annually.

### **ANTH 02.322: Sex and Sex Roles in a Cross Cultural Perspective** 3 s.h.

*Prerequisites: ANTH 02202*

This course examines the impact of sexuality on the structure of human cultures, and on how sexuality and gendered behavior are expressed and employed in different cultural contexts. This course may not be offered annually.

### **ANTH 02.323: Anthropology of Magic and Religion in Primitive, Tribal, and Peasant Cultures** 3 s.h.

This course stresses a cross-cultural comparative approach to the study of tribal and peasant magic and religious systems. It studies particular cultures in depth and emphasizes seeing the magico-religious beliefs and practices in their sociocultural context. This course will be offered annually.

### **ANTH 02.326: The Maya** 3 s.h.

*Prerequisites: ANTH 02202 or ANTH 02310*

This course traces the development of Maya culture from its earliest archaeological evidence to the eve of Old World contact, focusing on its adaptation to a variety of ecological settings, its interaction with other mesoamerican cultures, the development and transformation of city states, Mayan cosmology and world view, and the development of an indigenous system of writing. This course may not be offered annually.

### **ANTH 02.350: Comparative Cultures** 3 s.h.

Students conduct a survey and comparative study of a variety of cultures around the world, analyzing both cultural forms and the methods used by anthropologists to study them. This course may not be offered annually.

### **ANTH 02.371: Anthropological Approaches to Culture Change** 3 s.h.

*Prerequisites: ANTH 02202 or SOC 08120*

Using a sociocultural approach emphasizing both the theoretical and applied aspects (i.e. the "anthropology of development"), this course promotes awareness of the complexities involved in efforts to implement "development" and "progress," especially in the Third World. Recommended for students considering careers with multinational corporations, foreign service, U.N., etc. This course may not be offered annually.

### **ANTH 02.420: Culture and Personality** 3 s.h.

This course explores how the culture into which an individual is born influences the development of that person's personality and sense of self. Course material is grounded in a cross-cultural comparative approach to understanding perception, emotion, and behavior. Child-rearing practices, psychological functions of art and religion, and various culture's responses to deviant behaviors will also be explored. This course may not be offered annually.

### **ANTH 02.491: Independent Study in Anthropology** 3 s.h.

Students have an opportunity to pursue individual specialized topics under the guidance of a staff member. This course may not be used as a substitute for a course offered by the department. This course may not be offered annually.

## Courses

### **ANTH 02.492: Undergraduate Research Seminar in Anthropology**

**3 s.h.**

Students participate in planning a research project, collecting data and preparing a report suitable for publication. Subjects of research are selected according to student interest. This course may not be offered annually.

## Art

### **ARHS 03.103: Art History Survey I**

**3 s.h.**

This course traces the history of painting, sculpture, architecture, and crafts in the West from the Old Stone Age up through the Middle Ages.

### **ARHS 03.104: Art History Survey II**

**3 s.h.**

(No prerequisites but students are urged to take Art History Survey I prior to taking Art History Survey II) This course presents the history of the visual arts in the West from the Renaissance to the early eighteenth century.

### **ARHS 03.130: Art Appreciation**

**3 s.h.**

This general art appreciation course deals specifically with outstanding examples drawn from such diverse areas as product design, architecture, interior design, drawing, painting, sculpture, printmaking and the creative crafts, taken from various time periods in the history of the human family and from different places the world over.

### **ARHS 03.205: Art History Survey III**

**3 s.h.**

This course presents the history of the visual arts in the West from the mid-eighteenth century to modern times. There are no prerequisites but students are urged to take Art History Survey I and II prior to taking Art History Survey III.

### **ARHS 03.210: History of American Art**

**3 s.h.**

This course provides students with an overview of the development of painting, sculpture and architecture in America from colonial times to the 20th century.

### **ARHS 03.220: Modern Art**

**3 s.h.**

This course introduces significant creative visual art achievements of the nineteenth and twentieth centuries. Specific areas of coverage include impressionism, post-impressionism, fauvism, expressionism, cubism, non-representational directions, surrealism, regionalism, abstraction, pop art and hyperrealism.

### **ARHS 03.252: Concepts in Art: Criticism - WI**

**3 s.h.**

This course is designed to help the students identify and employ methods of examining art works which allow them to speak and write thoughtful judgments about the art in their world.

### **ARHS 03.340: Survey of Women Artists**

**3 s.h.**

An introduction to the work of many female artists who form an important part of the history of art. In order to break down stereotypes, each artist is discussed within the context of her society and with respect to her role in the art world. Rather than canonizing a group of "great women artists," the course is intended to return female artists to their rightful place in history through the study of individuals whose accomplishments demonstrate the tremendous effect women have had on the visual arts. Since a single semester is too brief for an exhaustive study of women's contributions, this course focuses on a selection of European and American artists from the sixteenth through twenty-first centuries.

### **ARHS 03.420: Art Since 1945**

**3 s.h.**

*Prerequisites: ARHS 03220*

This course is a seminar, which deals with the social, political and aesthetic issues that are significant to the contemporary art world. For art majors and non-art majors.

### **ARHS 03.425: Special Problems in Art History**

**3 s.h.**

*Prerequisites: ARHS 03103 and ARHS 03104 and ARHS 03205*

Special Problems in Art History is an intensive investigation of a specific movement, style, medium, or major artist. Content changes each time the course is offered. Check the Schedule of Classes to determine specific area of study.

## Courses

### **ART 02.100: Representational Drawing**

**3 s.h.**

This course presents the basic representational skills and knowledge for effective drawing. It covers the elements and fundamentals of perspective, composition, anatomy, light and shade and rendering.

### **ART 02.105: Color and Design-Two Dimensional**

**3 s.h.**

An introductory lecture/studio course dealing with compositional strategies, to teach students to manipulate elements in dealing with solutions to the problems of aesthetics, function, and balance and the relationship between form and content. In the studio student's work on selected conceptual problems in both black and white and color in various materials.

### **ART 02.110: Figure Drawing**

**3 s.h.**

This course consists of experimenting, exploring and improvising with techniques suitable for drawing representation of such visual forms as figure and still-life. It also covers nonrepresentational approaches. For art majors only.

### **ART 02.125: Perspective Drawing for Artists**

**1.5 s.h.**

This course covers basic principles of perspective drawing. Fundamental theory and practice enhance students' concepts of drawing. Students develop a portfolio of drawings demonstrating the various skills and ideas learned.

### **ART 02.200: Expressive Drawing**

**3 s.h.**

*Prerequisites: ART 02100*

This course will consist of experimentation, exploring, and improvisation with techniques suitable for representation of visual forms such as still-life, landscape, and figures as well as non-representational approaches.

### **ART 02.207: Color and Design-Three Dimensional**

**3 s.h.**

Drawing on the experiences gained in the 2D design and color problems, this course teaches students to establish visual excitement in a 3D format. Students deal with relationships of organic and natural structures and mechanical and geometric forms, as well as methods for relating them to one another.

### **ART 02.211: Intermediate Drawing IV**

**3 s.h.**

*Prerequisites: ART 02200*

These studios are a continuation of fundamental drawing. They will include figure/life drawing, composition, technique, and the analysis of human form, as well as other drawing problems.

### **ART 02.220: Introduction to Painting I**

**3 s.h.**

*Prerequisites: ART 02222*

This course introduces students to basic concepts, techniques, materials and procedures of painting.

### **ART 02.222: Studio Core Portfolio Review**

**0 s.h.**

After completing the Foundation Studio Core, each student will present a portfolio of 15 works executed in design and drawing. This portfolio will include at least 8 drawings and at least 5 designs including no less than two three-dimensional projects. Students will receive an evaluation of their portfolios, which is required before progressing on to the studio specialization. Students sign up for this review the semester they are enrolling in their final studio courses of the Foundation Core.

### **ART 02.225: Intermediate Painting II**

**3 s.h.**

*Prerequisites: ART 02220 and ART 02222*

These studios continue the study of painting, emphasizing the expressive and physical qualities of media, pictorial composition and color theory.

### **ART 02.240: Introduction to Sculpture I**

**3 s.h.**

*Prerequisites: ART 02222*

This course involves studio directed projects in three-dimensional problem solving. It introduces a variety of basic sculptural techniques using traditional sculptural materials. Areas covered are casting, woodworking and modeling.

### **ART 02.245: Intermediate Figure Sculpture**

**3 s.h.**

*Prerequisites: ART 02222*

This studio emphasizes the analytical and expressive potential of the human figure in sculpture by working in a variety of techniques and methods, including modeling in clay from the live figure. Techniques of moldmaking and casting are an integral part of the course.

## Courses

### **ART 02.251: Intermediate Sculpture II**

**3 s.h.**

*Prerequisites: ART 02222*

These sculpture studios examine projects in three-dimensional form. Students work closely with the instructors on problems of their own choosing. Students may work in a variety of materials and explore major trends in contemporary sculpture.

### **ART 02.260: Introduction to Printmaking I**

**3 s.h.**

*Prerequisites: ART 02222*

The introductory course surveys techniques used in creating intaglio and relief prints. Demonstrated techniques include etching, drypoint, woodcut, lino cut and other press and hand-printing processes.

### **ART 02.261: Intermediate Printmaking II**

**3 s.h.**

*Prerequisites: ART 02260*

These studios allow students to pursue further study in relief and intaglio processes both traditional and experimental approaches. Also the possibilities of photography as it relates to printmaking in a variety of multi-block and multi-plate color processes will be investigated.

### **ART 02.300: Workshop in Art**

**3 s.h.**

This course explores various studio experiences and techniques. The area(s) to be covered will be identified prior to registration each semester. For non-art majors only.

### **ART 02.301: Intermediate Sculpture III**

**3 s.h.**

*Prerequisites: ART 02222 and ART 02251*

These sculpture studios examine projects in three-dimensional form. Students work closely with the instructors on problems of their own choosing. Students may work in a variety of materials and explore major trends in contemporary sculpture.

### **ART 02.302: Intermediate Sculpture IV**

**3 s.h.**

*Prerequisites: ART 02240 and ART 02251 and ART 02301*

These sculpture studios examine projects in three-dimensional form. Students work closely with the instructors on problems of their own choosing. Students may work in a variety of materials and explore major trends in contemporary sculpture.

### **ART 02.303: Glass-Working I**

**3 s.h.**

*Prerequisites: ART 02222*

This introductory studio course is designed to teach students to use glass as an expressive art medium. It includes studio work to develop skills and knowledge, as well as discussions and lectures to develop an understanding of both historical and contemporary approaches to the medium. Students explore both sculptural and utilitarian forms in glass. Techniques covered include slumping, fusing, kiln casting, lampworking and patte-de-verre.

### **ART 02.304: Glass-Working II**

**3 s.h.**

*Prerequisites: ART 02303*

This intermediate studio course will further explore issues and techniques learned in Glass-Working I. Students will have the opportunity to study in depth methods of forming glass that allow individual artistic expression and personal style to be developed. Projects will be assigned according to the techniques and processes in which students are interested.

### **ART 02.306: Glass-Working III**

**3 s.h.**

*Prerequisites: ART 02304*

This intermediate studio course will continue to develop the techniques of kiln casting glass and slumping and fusing glass. Students will work on projects designated by the instructor that utilize the above techniques and begin to develop self-direction, individual style and expression.

### **ART 02.307: Glass-Working IV**

**3 s.h.**

*Prerequisites: ART 02306*

This intermediate studio course will utilize the techniques of Patte-de-verre and lamp-working. Students will work on projects designated by the instructor. At the end of this course students will be experienced in glass-working techniques available at Rowan University, and will be prepared to pursue advanced glass-working.

## Courses

### **ART 02.310: Advanced Drawing V**

**3 s.h.**

*Prerequisites: ART 02211*

Students will develop and solve independent problems investigating the extent, nature, and intention of drawing as a distinct medium of expression.

### **ART 02.311: Advanced Drawing VI**

**3 s.h.**

*Prerequisites: ART 02310*

Students will develop and solve independent problems investigating the extent, nature, and intention of drawing as a distinct medium of expression.

### **ART 02.315: Intermediate Painting III**

**3 s.h.**

These studios continue the study of painting, emphasizing the expressive and physical qualities of media, pictorial composition and color theory.

### **ART 02.317: Intermediate Printmaking III**

**3 s.h.**

These studios allow students to pursue further study in relief and intaglio processes both traditional and experimental approaches. Also the possibilities of photography as it relates to printmaking in a variety of multi-block and multi-plate color processes will be investigated.

### **ART 02.320: Intermediate Painting IV**

**3 s.h.**

*Prerequisites: ART 02220 and ART 02225 and ART 02315*

These studios continue the study of painting, emphasizing the expressive and physical qualities of media, pictorial composition and color theory.

### **ART 02.321: Intermediate Printmaking IV**

**3 s.h.**

*Prerequisites: ART 02260 and ART 02261 and ART 02317*

These studios allow students to pursue further study in relief and intaglio processes both traditional and experimental approaches. Also the possibilities of photography as it relates to printmaking in a variety of multi-block and multi-plate color processes will be investigated.

### **ART 02.324: Advanced Printmaking V**

**3 s.h.**

In these studios, students continue to explore printmaking, developing problems that emphasize individual development and discovery. These studios will be individualized to meet the requirements of advanced students.

### **ART 02.325: Intermediate Figure/Life Painting and Drawing**

**3 s.h.**

*Prerequisites: ART 02220 and ART 02222*

Students paint from life and costumed figures to strengthen their understanding of figure articulation, action, proportion and anatomical construction.

### **ART 02.327: Aquarelle (Intermediate Level)**

**3 s.h.**

*Prerequisites: ART 02222*

This course explores the techniques of all water-soluble media (aquarelle). It investigates and practices such processes and media as transparent watercolor, tempera, gouache and acrylic in water.

### **ART 02.360: Advanced Printmaking VI**

**3 s.h.**

In these studios, students continue to explore printmaking, developing problems that emphasize individual development and discovery. These studios will be individualized to meet the requirements of advanced students.

### **ART 02.370: Selected Topics in Glass-Working**

**3 s.h.**

*Prerequisites: ART 02222*

Selected topics to be presented may include lamp-working, stained glass, painting and enameling, history of glass-working and, when facilities can be scheduled with Wheaton Village, glassblowing and/or glass casting.

### **ART 02.400: Independent Study**

**.5 to 9 s.h.**

Intended primarily for students working at an advanced level in one of the regular studio areas, this course allows students to complete various projects. Students must show sufficient maturity and experience to assure successful completion of the proposed project.

### **ART 02.401: Advanced Sculpture V**

**3 s.h.**

These studios explore advanced problems in sculpture. Students work in consultation with the instructor.

## Courses

### **ART 02.402: Advanced Sculpture VI**

**3 s.h.**

These studios explore advanced problems in sculpture. Students work in consultation with the instructor.

### **ART 02.403: Glass-Working V**

**3 s.h.**

*Prerequisites: ART 02307*

This advanced studio course will utilize the techniques of Patte-de-verre, slumping, fusing, kiln casting and lamp working. Students will work on projects agreed upon in a contract with the instructor. At the end of this course students will be experienced in glass-making techniques available at Rowan University, and will be prepared to pursue advanced glass working.

### **ART 02.404: Glass-Working VI**

**3 s.h.**

*Prerequisites: ART 02403*

This advanced studio course will utilize the techniques of Patte-de-verre, slumping, fusing, kiln casting and lamp working. Students will work on projects agreed upon in a contract with the instructor. By this level, students are expected to be operating at an advanced level of technique and aesthetic content.

### **ART 02.411: Advanced Sculpture VII**

**3 s.h.**

These studios explore advanced problems in sculpture. Students work in consultation with the instructor.

### **ART 02.412: Advanced Sculpture VIII**

**3 s.h.**

*Prerequisites: ART 02302 and ART 02401 and ART 02402 and ART 02411*

These studios explore advanced problems in sculpture. Students work in consultation with the instructor.

### **ART 02.414: Advanced Painting V**

**3 s.h.**

These studios provide advanced study emphasizing individual conception of the painted image, composition and design in both representational or abstract painting.

### **ART 02.416: Advanced Painting VI**

**3 s.h.**

These studios provide advanced study emphasizing individual conception of the painted image, composition and design in both representational or abstract painting.

### **ART 02.420: Advanced Painting VII**

**3 s.h.**

These studios provide advanced study emphasizing individual conception of the painted image, composition and design in both representational or abstract painting.

### **ART 02.425: Advanced Painting VIII**

**3 s.h.**

*Prerequisites: ART 02320 and ART 02414 and ART 02416 and ART 02420*

These studios provide advanced study emphasizing individual conception of the painted image, composition and design in both representational or abstract painting.

### **ART 02.430: Advanced Printmaking VII**

**3 s.h.**

In these studios, students continue to explore printmaking, developing problems that emphasize individual development and discovery. These studios will be individualized to meet the requirements of advanced students

### **ART 02.431: Advanced Printmaking VIII**

**3 s.h.**

*Prerequisites: ART 02321 and ART 02324 and ART 02360 and ART 02430*

In these studios, students continue to explore printmaking, developing problems that emphasize individual development and discovery. These studios will be individualized to meet the requirements of advanced students

### **ART 09.101: Digital Media and Techniques**

**1.5 s.h.**

This foundation workshop introduces students to digital media in solving art and design problems through demonstrations and hands-on experience. Students will explore various computer program applications related to the fine and graphic arts.

### **ART 09.110: Experiencing Art**

**3 s.h.**

This course provides art experiences as processes which, in a workshop environment, are developed by students into expressional plastic forms. This course introduces work with the tools, materials, processes and purposes of art. Materials used may include clay, paint, wood, plastics, metals and fabric. For non-art majors only.

## Courses

### **ART 09.200: 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 09.210: Introduction to Jewelry and Metalry I**

**3 s.h.**

*Prerequisites: ART 02222*

Through individual student work projects this course introduces basic concepts, techniques, materials and procedures employed in the creation of jewelry and metal work.

### **ART 09.211: Intermediate Jewelry/Metalry II**

**3 s.h.**

These studios emphasize the more complex processes and techniques of working with various silver-smithing materials and ideas as applied to forms of adornment, hollow ware and non-functional works.

### **ART 09.212: Jewelry and Metal Casting**

**3 s.h.**

*Prerequisites: ART 02222*

This course deals with various metal casting processes, using a variety of metals. The course provides an in-depth learning experience through intensive independent work.

### **ART 09.225: Introduction to Puppetry I**

**3 s.h.**

This course provides an overview of the field of puppetry, including history, construction, playwriting and performance. It includes studio work.

### **ART 09.226: Intermediate Puppetry II - Puppetry in Education**

**3 s.h.**

This course is devoted to structuring puppet experiences in the classroom and teaching with puppets.

### **ART 09.228: Introduction to Illustration I**

**3 s.h.**

*Prerequisites: ART 02222*

This course provides students with an introductory experience with illustration. Students will work with basic visual, technical and expressive problems in preparation for further study in illustration.

### **ART 09.229: Intermediate Illustration II**

**3 s.h.**

*Prerequisites: ART 02222 and DESN 09228 or ART 02222 and ART 09228*

These courses provide in-depth study emphasizing the dynamics of the image and the symbolic and expressive use of visual language. Draftsmanship, and the application of technique and materials are studied and reviewed in periodic critiques of work in progress. Students will also continue work on developing a professional portfolio.

### **ART 09.240: Introduction to Ceramics I**

**3 s.h.**

*Prerequisites: ART 02222*

An introductory studio/lecture course designed to teach students to use clay as an expressive art medium. It includes studio work to develop technical skills and knowledge along with discussions and lectures to develop an understanding of both historical and contemporary approaches. Students explore both utilitarian and sculptural forms in clay.

### **ART 09.241: Intermediate Ceramics II**

**3 s.h.**

The above sequential courses are designed to guide the students through a broad spectrum of clay projects and experiences going from simple to complex in these courses. These include a variety of construction techniques, decoration as well as glazing applications, clay and glaze calculations and kiln firing. As work progresses the students are encouraged to develop self-direction, individual style and expression.

### **ART 09.242: Intermediate Ceramics III**

**3 s.h.**

The above sequential courses are designed to guide the students through a broad spectrum of clay projects and experiences going from simple to complex in these courses. These include a variety of construction techniques, decoration as well as glazing applications, clay and glaze calculations and kiln firing. As work progresses the students are encouraged to develop self-direction, individual style and expression.

## Courses

### **ART 09.243: Intermediate Ceramics IV**

**3 s.h.**

*Prerequisites: DESN 09240 or ART 09240 and DESN 09241 or ART 09241 and DESN 09242 or ART 09242*

The above sequential courses are designed to guide the students through a broad spectrum of clay projects and experiences going from simple to complex in these courses. These include a variety of construction techniques, decoration as well as glazing applications, clay and glaze calculations and kiln firing. As work progresses the students are encouraged to develop self-direction, individual style and expression.

### **ART 09.308: Color Theory**

**3 s.h.**

Through an investigation of classification systems and theories, color theory students will construct color relationships for various applications with paint and digital media.

### **ART 09.310: Intermediate Puppetry III**

**3 s.h.**

This course is devoted to structuring puppet experiences in the classroom and teaching with puppets.

### **ART 09.311: Intermediate Jewelry/Metalry III**

**3 s.h.**

These studios emphasize the more complex processes and techniques of working with various silver-smithing materials and ideas as applied to forms of adornment, hollow ware and non-functional works.

### **ART 09.312: Intermediate Jewelry/Metalry IV**

**3 s.h.**

*Prerequisites: DESN 09210 or ART 09210 and DESN 09211 or ART 09211 and DESN 09311 or ART 09311*

These studios emphasize the more complex processes and techniques of working with various silver-smithing materials and ideas as applied to forms of adornment, hollow ware and non-functional works.

### **ART 09.313: Intermediate Puppetry IV**

**3 s.h.**

This course is devoted to structuring puppet experiences in the classroom and teaching with puppets.

### **ART 09.336: Intermediate Illustration III**

**3 s.h.**

These courses provide in-depth study emphasizing the dynamics of the image and the symbolic and expressive use of visual language. Draftsmanship, and the application of technique and materials are studied and reviewed in periodic critiques of work in progress. Students will also continue work on developing a professional portfolio.

### **ART 09.337: Intermediate Illustration IV**

**3 s.h.**

*Prerequisites: DESN 09228 or ART 09228 and DESN 09229 or ART 09229 and DESN 09336 or ART 09336*

These courses provide in-depth study emphasizing the dynamics of the image and the symbolic and expressive use of visual language. Draftsmanship, and the application of technique and materials are studied and reviewed in periodic critiques of work in progress. Students will also continue work on developing a professional portfolio.

### **ART 09.343: Introduction to Graphic Design I**

**3 s.h.**

*Prerequisites: ART 02222*

This course introduces students to visual problems in the field of advertising design. It covers the background of knowledge and basic skills needed to develop basic potential to create advertising designs.

### **ART 09.344: Intermediate Graphic Design II**

**3 s.h.**

*Prerequisites: DESN 09343 or ART 09343*

These studios explore further principles in design and layout, technique, typography, and production, emphasizing professional procedure. Students will receive regular assessment of their performance to assist them in preparing a professional portfolio.

### **ART 09.349: Intermediate Graphic Design III**

**3 s.h.**

*Prerequisites: DESN 09344 or ART 09344*

These studios explore further principles in design and layout, technique, typography, and production, emphasizing professional procedure. Students will receive regular assessment of their performance to assist them in preparing a professional portfolio.

### **ART 09.350: Intermediate Graphic Design IV**

**3 s.h.**

*Prerequisites: DESN 09349 or ART 09349*

These studios explore further principles in design and layout, technique, typography, and production, emphasizing professional procedure. Students will receive regular assessment of their performance to assist them in preparing a professional portfolio.

## Courses

### **ART 09.351: Computer Art Techniques I**

**3 s.h.**

This course introduces students to the techniques made possible by the computer with design, drawing and painting programs. The course explores the computer's ability to execute designs as well as copying, rescaling, mirroring, rotating, color permutation, tapering, shadowing filling and animating.

### **ART 09.352: Advanced Ceramics V**

**3 s.h.**

These studios provide advanced students an opportunity for intensive, self-structured, independent work. Studio work, kiln construction, advanced clay and glaze formulation is covered. There are on-going critical analyses of individual work and its relation to contemporary aesthetic issues.

### **ART 09.353: Advanced Ceramics VI**

**3 s.h.**

These studios provide advanced students an opportunity for intensive, self-structured, independent work. Studio work, kiln construction, advanced clay and glaze formulation is covered. There are on-going critical analyses of individual work and its relation to contemporary aesthetic issues.

### **ART 09.358: Web Design I**

**3 s.h.**

*Prerequisites: ART 02222 and DESN 09351 or ART 09351*

This course introduces students to design on the Internet. The focus of the course is on the fundamental skills of drawing, imaging, animation and sound as they are combined in web-based environments. An emphasis is placed on creativity and originality. Students will also learn about the theory and practice of artists working in his medium.

### **ART 09.359: Web Design II**

**3 s.h.**

*Prerequisites: DESN 09358 or ART 09358*

Web Design II is a continuation of the exploration started in Web Design I. Students will advance their knowledge by mastering professional skills in solving design problems in web-based environments. Students will also learn about the theory and practice of artists working in this medium.

### **ART 09.363: Advanced Graphic Design V**

**3 s.h.**

These studios emphasize more advanced study helping students refine their professional skills. Students will assemble portfolios, which can be presented to prospective employers.

### **ART 09.364: Advanced Graphic Design VI**

**3 s.h.**

These studios emphasize more advanced study helping students refine their professional skills. Students will assemble portfolios, which can be presented to prospective employers.

### **ART 09.365: Motion Graphics I**

**3 s.h.**

*Prerequisites: ART 02222 and DESN 09358 or ART 09358 and DESN 09351 or ART 09351*

Students go beyond the flat print to create visual work that explores spatial and temporal works that lead to animation. Animation studies are captured on disk and on tape. A new aspect of animation is the field of presentations, which is used in commercial art, business and industry but is also an option for the fine artist. Animation Works and Crystal 3D are the programs used to produce professional quality animation.

### **ART 09.375: Motion Graphics II**

**3 s.h.**

*Prerequisites: DESN 09365 or ART 09365*

This class is a continuation of previous studies and pursuits. 2D and 3D animation will be continued in this course. Students working in 3D animation need to continue mastery of Crystal 3D animation and Animation Works

### **ART 09.377: Multimedia Computer Art**

**3 s.h.**

This course combines computer skills of drawing, imaging, sound, design, and animation to create interactive and time-based presentations. Using editing and production software/hardware students will learn how to transform their ideas from a story board to a unique and finished presentation. Students will also learn about the theory and practice of artists working in this medium.

### **ART 09.380: Advanced Puppetry V**

**3 s.h.**

*Prerequisites: DESN 09225 or ART 09225 and DESN 09226 or ART 09226 and DESN 09310 or ART 09310 and DESN 09313 or ART 09313*

These courses study in-depth a specific phase of puppetry. They emphasize hand and rod puppets, shadow puppets and black theatre, marionettes and the history of puppetry.

## Courses

### **ART 09.381: Advanced Puppetry VI**

**3 s.h.**

These studio courses offer in-depth involvement with sophisticated puppetry techniques. Students will develop individual expertise, style and approaches to the art of puppetry.

### **ART 09.390: Work in Progress Review**

**0 s.h.**

A required review of work-in-progress for all B.F.A. students.

### **ART 09.401: Senior Show or Project**

**0 s.h.**

Each B.A. student will prepare and mount selected works as a senior exhibition or execute an equivalent project. Required for graduation.

### **ART 09.405: Advanced Puppetry VII**

**3 s.h.**

These studio courses offer in-depth involvement with sophisticated puppetry techniques. Students will develop individual expertise, style and approaches to the art of puppetry.

### **ART 09.406: Advanced Puppetry VIII**

**3 s.h.**

These studio courses offer in-depth involvement with sophisticated puppetry techniques. Students will develop individual expertise, style and approaches to the art of puppetry.

### **ART 09.411: Advanced Jewelry/Metalry V**

**3 s.h.**

Advanced level studios designed for the designer-craftsperson student electing to develop in-depth knowledge and skills in all aspects of jewelry and metalry as a professional field. Students will identify research, and create special works in consultation with their professor.

### **ART 09.412: Advanced Jewelry/Metalry VI**

**3 s.h.**

Advanced level studios designed for the designer-craftsperson student electing to develop in-depth knowledge and skills in all aspects of jewelry and metalry as a professional field. Students will identify research, and create special works in consultation with their professor.

### **ART 09.419: Advanced Illustration V**

**3 s.h.**

Students will pursue advanced work concentrating on further development of the illustrator's vocabulary and procedures. Assignments are developed in consultation with the instructor. Periodic critiques are held to help each student develop a complete professional portfolio.

### **ART 09.420: Advanced Illustration VI**

**3 s.h.**

Students will pursue advanced work concentrating on further development of the illustrator's vocabulary and procedures. Assignments are developed in consultation with the instructor. Periodic critiques are held to help each student develop a complete professional portfolio.

### **ART 09.439: Advanced Illustration VII**

**3 s.h.**

Students will pursue advanced work concentrating on further development of the illustrator's vocabulary and procedures. Assignments are developed in consultation with the instructor. Periodic critiques are held to help each student develop a complete professional portfolio.

### **ART 09.440: Advanced Illustration VIII**

**3 s.h.**

*Prerequisites: DESN 09337 or ART 09337 and DESN 09419 or ART 09419 and DESN 09420 or ART 09420 and DESN 09439 or ART 09439*

Students will pursue advanced work concentrating on further development of the illustrator's vocabulary and procedures. Assignments are developed in consultation with the instructor. Periodic critiques are held to help each student develop a complete professional portfolio.

### **ART 09.450: Advanced Ceramics VII**

**3 s.h.**

This advanced production course combines extensive research and scriptwriting skills with sophisticated field production techniques. Students select subjects of local interest to feature in high-quality, 20 minute documentaries involving pre-production planning, extensive field shooting, and post-production editing on Avid editing systems. Field production includes use of single and multiple camera units.

## Courses

### **ART 09.451: Advanced Ceramics VIII**

**3 s.h.**

*Prerequisites: DESN 09243 or ART 09243 and DESN 09352 or ART 09352 and DESN 09353 or ART 09353 and DESN 09450 or ART 09450*

These studios provide advanced students an opportunity for intensive, self-structured, independent work. Studio work, kiln construction, advanced clay and glaze formulation is covered. There are on-going critical analyses of individual work and its relation to contemporary aesthetic issues.

### **ART 09.452: Computer Art Techniques II**

**3 s.h.**

This course allows students to draw, paint, animate, layout and design using computers and software. Students may specialize in fine arts, illustration, drawing, crafts, interior designing, textiles, package design lettering/typography or desktop publishing. Students develop their own professional portfolios of computer art.

### **ART 09.460: Advanced Jewelry/Metalry VII**

**3 s.h.**

Advanced level studios designed for the designer-craftsperson student electing to develop in-depth knowledge and skills in all aspects of jewelry and metalry as a professional field. Students will identify research, and create special works in consultation with their professor.

### **ART 09.461: Advanced Jewelry/Metalry VIII**

**3 s.h.**

*Prerequisites: DESN 09312 or ART 09312 and DESN 09411 or ART 09411 and DESN 09412 or ART 09412 and DESN 09460 or ART 09460*

Advanced level studios designed for the designer-craftsperson student electing to develop in-depth knowledge and skills in all aspects of jewelry and metalry as a professional field. Students will identify research, and create special works in consultation with their professor.

### **ART 09.463: Advanced Graphic Design VII**

**3 s.h.**

These studios emphasize more advanced study helping students refine their professional skills. Students will assemble portfolios, which can be presented to prospective employers.

### **ART 09.464: Advanced Graphic Design VIII**

**3 s.h.**

*Prerequisites: DESN 09350 or ART 09350 and DESN 09363 or ART 09363 and DESN 09364 or ART 09364*

These studios emphasize more advanced study helping students refine their professional skills. Students will assemble portfolios, which can be presented to prospective employers.

### **ART 09.490: B.F.A. Senior Thesis Exhibition**

**0 s.h.**

This experience allows students an opportunity to enhance their portfolio skills. This exit evaluation, in the form of a solo exhibition, will give students an occasion to make note of their work development and to determine their progress as emerging professional artists.

### **ART 11.250: Introduction to Photography I**

**3 s.h.**

*Prerequisites: ART 02222*

This studio identifies and defines the principles, techniques, and history of black and white photography. Students learn the photographic process from exposing and developing film, to making a final print and photo displays. Camera and darkroom techniques in black and white still photography are used to explore and discover the visual world. This course is designed to treat photography as a medium of personal expression as well as a fine art form. Students will learn to incorporate photography into their own studio specialization. Students will provide their own camera and supplies.

### **ART 11.275: Intermediate Photography II**

**3 s.h.**

This studio emphasizes the development of a critical eye and the use of black and white photography as a form of self-expression and an artistic medium. Students are expected to have a working knowledge of the photographic process. Students advance their technical skills in photographic printmaking, and further understand photography as fine art. Students work on long term individual projects, which will develop technical, aesthetic and conceptual mastery of their medium. Major emphasis is on studio lighting, as well as using 35mm and medium format cameras. Students focus on raising the levels of artistic skill and knowledge towards professional standards. Students will provide their own cameras and supplies.

### **ART 11.375: Non-Silver Imagery**

**3 s.h.**

This studio class is an introduction to various means of relating the photographic image to other two or three-dimensional media. Experimental techniques in fine arts applications are explored within the medium of photography, including historical processes as well as new technologies. Non-silver processes such as Cyanotype, Gum Print, Liquid Light, Van Dyke Brown, and Toning are demonstrated. Students learn to incorporate bookbinding and other fine arts applications, while perfecting their knowledge of black and white photography. Students provide their own cameras and supplies.

## Courses

### **ART 11.380: Digital Photography**

**3 s.h.**

This studio class will introduce students to the medium of digital photography and its applications towards the fine arts. Its development in the realm of fine arts and communications has greatly altered our understanding of photography and the use of an image. The aesthetic potential photography embodies seems to be endless. With its ability to change the way we explore ideas and create expression, digital photography has become a valuable tool for artists. Students continue to become more involved with photography by demonstrating digital imagery with painting, printmaking, graphic design, and illustration. Students learn the use of computer programs such as Photoshop to manipulate photography. Students learn the influence of digital photography on art and society in addition to the aesthetic nature of the medium. Students advance their technical skills in photography and learn to make photographs as fine art.

### **ART 11.385: Large Format Photography**

**3 s.h.**

This studio introduces students to the operation of a 4x5 view camera. Students learn about lens selection, the use of camera swings and tilts, and process procedures for sheet film. Students also learn about the work of many photographers who continue to work with large format cameras. The influence of large format photography on art and society will be examined in addition to the study of the aesthetic nature of the medium. The department for the students to borrow will supply view cameras. The student must purchase all film, paper, and supplies.

### **ART 11.405: Advanced Photo Techniques**

**3 s.h.**

In this studio students will build aesthetic and technical expertise by studying photography as an art form as well as a commercial endeavor. Students will learn and apply advanced black and white film exposure, processing and special printing techniques. An introduction to copying art works and producing slides will be included. The comprehension of special techniques and materials along with their relationship to the printed image and visual concept is emphasized. This includes experimenting with altered negatives and prints, solarization, hand coloring and toning, working with different graded papers and different paper developer. Students develop a cohesive body of work exploring some topics of their own. Students provide their own camera and supplies.

## Astronomy

### **ASTR 11.120: Introduction to Astronomy (Lecture and Lab)**

**4 s.h.**

This course is a descriptive study of the universe that emphasizes the physical concepts that explain astronomical phenomena. The evolutionary, structural, and dynamical aspects of the solar system, stars, nebulae, galaxies, and the entire universe are discussed. The laboratory experience has both quantitative and qualitative components that include outdoor observations of night sky objects, daytime solar observations, and computer simulations. There is occasional evening viewing outside of class.

### **ASTR 11.209: Astronomy Research I**

**1 to 3 s.h.**

This course introduces and/or develops modern research techniques used in astronomy. Research is performed in collaboration with astronomy faculty. Emphasis will be placed on developing research skills, developing technical writing skills, and the development of skills needed for scientific presentations.

### **ASTR 11.212: Astronomy Research II**

**1 to 3 s.h.**

This course introduces and/or develops modern research techniques used in astronomy. Research is performed in collaboration with astronomy faculty. Emphasis will be placed on developing research skills, developing technical writing skills, and the development of skills needed for scientific presentations.

### **ASTR 11.221: Exploration of the Solar System**

**3 s.h.**

In the study of planetary science, the students will explore geology, chemistry, physics and astronomy in their applications to the composition, dynamics, atmospheres, surfaces, and magnetospheres of objects within the solar system. The search for life or conditions suitable for life in other parts of the solar system is a driving force of solar system exploration., thus biology is incorporated as well. This course will help the student develop skills necessary to discuss and write about science.

### **ASTR 11.231: Methods and Techniques in Modern Astronomy (Lecture and Lab)**

**4 s.h.**

*Prerequisites: MATH 01122 or MATH 01130*

This course surveys current methods in modern astronomy research and education. The topics include, but are not limited to, modern telescopes (optical and radio), CCD cameras, astronomical data, imaging software, solar observing, and planetarium operation. Topics during a given term may be chosen around a theme of either research or education. This course features the use of precision instruments and quantitative methods. Evening observational projects, field trips, and oral presentations are part of this course.

## Courses

### **ASTR 11.241: Astronomy and Astrophysics (Lecture and Lab)**

**4 s.h.**

*Prerequisites: MATH 01130*

This course is an overview of astrophysics, with an emphasis on the relevant physics in modern astronomy. Topics include the solar system, properties of stars, stellar structure and evolution, supernovae, white dwarfs, neutron stars, black holes, the Milky Way galaxy, star formation, interstellar medium, normal galaxies, active galaxies and quasars, and Big Bang cosmology. The relevant physics will be briefly presented in the course. This course is intended for students majoring in the natural sciences, mathematics, computer science, and engineering.

### **ASTR 11.312: Astronomy Research III**

**1 to 3 s.h.**

This course introduces and/or develops modern research techniques used in astronomy. Research is performed in collaboration with astronomy faculty. Emphasis will be placed on developing research skills, developing technical writing skills, and the development of skills needed for scientific presentations.

### **ASTR 11.412: Astronomy Research IV**

**1 to 3 s.h.**

This course introduces and/or develops modern research techniques used in astronomy. Research is performed in collaboration with astronomy faculty. Emphasis will be placed on developing research skills, developing technical writing skills, and the development of skills needed for scientific presentations.

### **ASTR 13.101: Meteorology**

**4 s.h.**

This course studies the basic principles of meteorology, acquainting students with the physical principles underlying weather phenomena. Students use weather instrumentation in weather observations and analyze weather maps and observe and record daily weather changes.

### **ASTR 17.110: Principles of Earth Science**

**3 s.h.**

This course examines the basic concepts of astronomy, meteorology, geology and the principles derived from those concepts.

## Biology

### **BIOL 01.100: 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 01.101: Biology II**

**4 s.h.**

*Prerequisites: BIOL 01100*

This course provides a brief survey of the different kinds of plants and animals; the roles of hormones and enzymes; tropisms; growth and development; plant and animal tissues and organ systems.

### **BIOL 01.104: 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.

### **BIOL 01.105: Essentials of Biology**

**4 s.h.**

*Prerequisites: CHEM 05102*

This laboratory course provides an introduction to cell and tissue structure, cellular reproduction and metabolism, and mechanisms of evolution. A brief survey of the plant and animal kingdom emphasizes how their systems have changed through evolution.

## Courses

### **BIOL 01.106: 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 01.110: Human Biology**

**3 s.h.**

This non-laboratory course acquaints students with the structure and function of man. It stresses the major organ systems of the body.

### **BIOL 01.112: General Biology: Environmental Focus**

**4 s.h.**

This one-semester laboratory course provides an introduction to the basic concepts of the biological sciences, including, but not limited to, origin of life, evolution of multicellular organisms, population and community ecology, and a survey of the modern kingdoms of living organisms. Emphasis will be placed on ecological and conservation problems. Laboratory exercises enable the student to visualize many of the concepts discussed in class. No credit toward biology major.

### **BIOL 01.113: General Biology: Human Focus**

**4 s.h.**

This one-semester laboratory course provides an introduction to the basic concepts of the biological sciences, including, but not limited to, cell biology, the body plan and organ systems of vertebrate animals, genetics and heredity, and vertebrate evolution. Emphasis will be placed on how these topics relate to the human organism. Laboratory exercises enable the student to visualize many of the concepts discussed in class. No credit toward biology major.

### **BIOL 01.115: General Biology: Plants and People**

**4 s.h.**

This laboratory course considers the diversity of uses of plants in human cultures, and the biological bases for their utility. The course is primarily concerned with the positive impact of plants, including their roles in human nutrition, medicine, clothing, fuels, building materials, and ecosystems. It also considers the negative impact of plants as weeds and health hazards. Students who complete this course will have a comprehensive understanding of the importance of plants in human societies, from a biological perspective. No credit toward biology major.

### **BIOL 01.201: Pharmacognosy**

**3 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101*

This is a lecture/demonstration course which studies the science that embraces the history, source, cultivation, collection, preparation, distribution, commercial identification, composition, purity and preservation of drugs of plant origin.

### **BIOL 01.202: 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 01.203: Biology 3: Introduction to Cell Biology**

**4 s.h.**

*Prerequisites: BIOL 01104 and 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 01.204: Biology 4: Global Ecology**

**4 s.h.**

*Prerequisites: BIOL 01104 and BIOL 01106 and BIOL 01203 or BIOL 01100 and BIOL 01101 and BIOL 01202*

This laboratory course serves as the capstone for the biology core curriculum. Students will learn integrative concepts linking topics from Biology 1, 2, and 3 together in terms of population, community, and ecosystem-level ecological processes. We will explore these concepts through case studies covering diverse topics from biodiversity patterns to anthropogenic effects on individuals to ecosystems. This course will reinforce the skills introduced in earlier core courses, and will build upon these skills with further expectations of writing, primary literature synthesis and review, and critical thinking.

## Courses

### **BIOL 01.210: Biological Systems and Applications**

**4 s.h.**

*Prerequisites: CHEM 06105*

Fundamental concepts and applications of biochemistry, cellular biology, microbial physiology, and environmental microbiology will be presented during this course. Emphasis will be placed on the theme that all biological systems (from the molecular level to the community level) are dynamic and interactive. Laboratory sessions will expose students to a variety of standard biological techniques from areas such as biotechnology, microbiology, and environmental biology. No credit toward biology major.

### **BIOL 01.300: Phycology**

**3 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101*

This laboratory course considers the algae. It studies the relationships of these organisms as they are ordered in taxonomic schemes. Proper identification of specimens will be emphasized. May not be offered annually.

### **BIOL 01.310: Evolution**

**4 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101*

This laboratory course considers organic evolution, including its conceptual basis, its historical development, the processes that produce it, and the evolutionary history of life on earth. Laboratory exercises will include simulations of evolutionary processes, demonstrations illustrating patterns of evolution in the past, and opportunities to utilize research techniques of evolutionary biology.

### **BIOL 01.320: Introduction to Virology**

**4 s.h.**

*Prerequisites: BIOL 01101 and BIOL 11330 or BIOL 01101 and BIOL 01430 or BIOL 01101 and BIOL 22335*

This laboratory course explores topics such as virus origin and evolution, their physical structure and chemical composition, taxonomy, and modes of transmission. The mechanisms involved in their control of the machinery of their host cells will be studied in detail. Particular focus will be placed on important virus-associated human and animal diseases, AIDS, and the role of viruses in cancer.

### **BIOL 01.325: Introduction to Mycology**

**4 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101*

This lecture and laboratory course provides a comprehensive treatment of the morphology, taxonomy, physiology, and ecology of fungi, and their involvement in man's everyday life. This course may not be offered annually.

### **BIOL 01.352: Ornithology**

**4 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101*

This course covers anatomy, physiology, ethology and ecological parameters of the avian community. Laboratory and field investigations form a significant part of the course. May not be offered annually.

### **BIOL 01.356: Parasitology**

**4 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101*

This course covers anatomy, physiology, ethology and ecological parameters of the avian community. Laboratory and field investigations form a significant part of the course. May not be offered annually.

### **BIOL 01.405: Conservation Biology**

**4 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101 and BIOL 20310 and BIOL 22335*

This laboratory course for upper-level students majoring in biology is designed to familiarize students with the current crisis in global biodiversity. The objectives of this course are to examine fundamental and applied aspects of genetics, population and community ecology, paleontology and systematics, agriculture and forestry, wildlife biology and zoo management, and sociology and economics. Laboratory and field exercises are designed (1) to introduce students to local, regional and global conservation issues and (2) to emphasize synthesis and creativity in addressing conservation problems.

### **BIOL 01.428: Developmental Biology**

**4 s.h.**

*Prerequisites: BIOL 01101 and BIOL 22335 or BIOL 01101 and BIOL 01430 or BIOL 01101 and BIOL 14440 or BIOL 01101 and BIOL 27401*

This course studies the development of multicellular organisms from fertilization, through embryonic and post-embryonic stages. Topics include fertilization, cellular differentiation, regulation of gene expression, pattern formation, morphogenesis, and evolution of developmental mechanisms. Experimental approaches of developmental biology will be emphasized.

### **BIOL 01.430: Cell Biology**

**4 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101*

This laboratory course deals with the structure and function of cellular parts including, but not limited to, membranes, mitochondria, Golgi bodies, plastids and the nucleus.

## Courses

### **BIOL 01.435: Cell Culture Technology**

**4 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101*

This laboratory course introduces advanced biology students to the history, theory, and techniques of maintaining live cells in long-term culture. The combination of lectures and laboratory experiences have been designed to demonstrate cell biology in both theory and practice. The course is very much geared to a "hands-on" approach in the context of real laboratory operations in neighboring work areas.

### **BIOL 01.440: Special Topics in Biological Sciences**

**2 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101*

This seminar course is a literature-driven exploration of a broad range of topics in individual areas of the biological sciences. The particular subjects discussed will examine both fundamental and cutting-edge biological processes and technologies. Students will be required to give oral presentations on the selected topics. They may be also asked to submit written reports. This course is expected to strengthen the skills of students in critical reading and evaluation of the primary scientific literature. This course is required for all Biology majors.

### **BIOL 01.445: Special Topics in Biological Sciences - WI**

**3 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101 and ENGL 01112*

This seminar course is a literature-driven exploration of a broad range of topics in individual areas of the biological sciences. The particular subjects discussed will examine both fundamental and cutting-edge biological processes and technologies. Students will be required to give oral presentations on the selected topics. They may be also asked to submit written reports. This course is expected to strengthen the skills of students in critical reading and evaluation of the primary scientific literature. This course is required for all Biology majors.

### **BIOL 01.450: Independent Study in Biological Sciences**

**3 s.h.**

Students conduct independent work on a project concerned with biological science with the supervision of a selected faculty member. This course requires development and execution of the proposed work, including preparation of an acceptable report of work completed.

### **BIOL 01.454: Herpetology**

**4 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101*

Students make an intensive study of the behavior, ecology, evolution and physiology of amphibians and reptiles. Laboratories stress identification, gross anatomy and techniques.

### **BIOL 01.458: Mammalogy**

**4 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101*

This course provides a detailed study of the mammals of the world. Its topics include: the anatomy, behavior, ecology and systematics of the class. Laboratory work emphasizes the mammals of New Jersey as well as field work.

### **BIOL 01.460: Animal Ethology**

**4 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101*

An in-depth study of animal behavior under natural conditions, this course deals with the major theories of innate behavior.

### **BIOL 01.465: Animal Histology**

**4 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101*

This upper level lecture and laboratory course provides an in-depth study of animal tissue. It includes the examination and identification of specific cells, tissues and organs. The students will develop laboratory skills in cytological and histological techniques. The relationship of histology to cell biology, physiology and pathology will be emphasized.

### **BIOL 01.470: Ichthyology**

**4 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101*

This course is a senior-level zoology course designed to introduce students to the fundamental aspects of the biology of the major groups of fishes. Topics to be discussed in class include taxonomy and systematics of the major groups of fishes, a survey of modern fishes, their basic structure and function, behavior, and ecology. Laboratory exercises are designed to introduce students to current methods, approaches, and topics; field exercises are designed to survey the diversity of fishes and their habitats in New Jersey and nearby states.

## Courses

### **BIOL 01.475: Biology Lab/Field Research**

**3 s.h.**

This course introduces and/or develops research techniques used in biological research. Research is performed in collaboration with one or more faculty in an area of specialization of the faculty. Emphasis will be placed on developing research skills, developing technical writing skills, and the development of skills needed for scientific presentations. Up to three credits from this course may be counted towards the major; additional credits may count as free electives.

### **BIOL 02.200: Introductory Botany**

**4 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101*

This laboratory course considers the biology of plants. It is a broad survey of plant nutrition, physiology, development, anatomy, morphology, reproduction, evolution and ecology. An emphasis is placed on the structure and function of plants and the relevance of plants to humanity and the global environment.

### **BIOL 02.201: Plant Diversity**

**4 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101*

This laboratory course considers the patterns of plant diversity and the processes that generate and maintain plant diversity. Several types of diversity are assessed for each of the major groups of plants, including diversity in morphology, physiology, evolution, ecology and human economy. Students who complete this course will have a better understanding of the types and sources of plant diversity, and the role of human and nonhuman factors in affecting plant diversity. Instructor's permission to enroll is required for students who have not completed Introductory Botany (BIOL 02.200)

### **BIOL 02.350: Flora of New Jersey**

**4 s.h.**

This laboratory course is an exploration of the local flora in terrestrial communities, from the shore to the Pine Barrens. The emphases of this course are plant communities and the identification of plants. It also provides an overview of plant conservation and the features of plants that determine their population dynamics. The focus of the laboratories is several all-day field trips. Offered during summer sessions.

### **BIOL 02.405: Plant Physiology**

**3 s.h.**

This course will cover the principles and factors concerned with development of plants, including nutrition, water relationships, photosynthesis, chemosynthesis, reproduction, and growth.

### **BIOL 02.410: Stream Ecology**

**4 s.h.**

This course covers topics in the area of study concerned with the physical, chemical, biological and ecosystems processes in creeks, streams and rivers (so-called lotic environments or related running waters). The course has a strong laboratory component with hands-on research in an effort to understand local stream ecology.

### **BIOL 07.200: Invertebrate Zoology**

**4 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101*

This laboratory course deals with the anatomy and physiology of invertebrate animals, the value and significance of non-chordate animals and an understanding of their life processes.

### **BIOL 07.301: Comparative Vertebrate Anatomy**

**4 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101*

This laboratory course provides an intensive comparative study of the gross and microscopic anatomy of vertebrate animals, including dissection of representative chordates.

### **BIOL 10.210: Human Anatomy and Physiology I**

**4 s.h.**

This course offers a molecular, cellular and systematic approach to the structure and function of the component units and organizational systems of humans. Emphasis is placed on membrane physiology and the skeletal, molecular, digestive and circulatory systems.

### **BIOL 10.212: Human Anatomy and Physiology II**

**4 s.h.**

This laboratory course focuses on the gross and microscopic structure of the body. The course is the second semester of a two-semester sequence that covers all of the functional systems of the human organism. In this course, the systems of the body to be studied in detail include the endocrine, cardiovascular, respiratory, excretory, digestive, and reproductive systems. Whole body metabolism and fluid balance will also be studied.

### **BIOL 10.345: Human Physiology**

**4 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101 and CHEM 07200*

This course surveys the basic physiology of the human organism, emphasizing the nervous and circulatory systems.

## Courses

### **BIOL 10.350: Work Physiology**

**3 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101*

This course studies the effect of short term and long term work stress on the human organism. This course may not be offered annually.

### **BIOL 11.330: Microbiology**

**4 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101*

This course deals with the morphology and physiology of unicellular organisms, with emphasis upon bacteria. It studies culture methods, growth parameters, isolation, identification and characterization, and metabolism of microorganisms in the laboratory.

### **BIOL 11.338: Immunology**

**4 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101*

This course studies infection and resistance and the principles and types of immunity and hypersensitivity. Laboratory applications include: antigen-antibody formation, structure and reactivities.

### **BIOL 11.405: Environmental Microbiology**

**4 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101 and BIOL 11330*

This course covers topics related to microorganisms in the environment. It deals with the actions of microbes in the terrestrial, aquatic, air and plant/animal environment and places focus on microbial control and microbial applications.

### **BIOL 14.440: Introduction to Biochemistry - Lecture Only**

**3 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101 and CHEM 07201*

This course investigates chemical compounds and chemical reactions which are of paramount importance to the functioning of biological systems. It also examines the major metabolic pathways for energy production and biosynthesis.

### **BIOL 18.360: Marine Biology**

**4 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101*

Field and laboratory oriented, this course studies the interrelationships of marine animals and plants and provides instruction and experience in collecting and identifying examples of local marine flora and fauna.

### **BIOL 18.400: Limnology**

**4 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101*

This course introduces basic and applied concepts in limnology, or the study of fresh waters. It analyzes the physical, chemical, biological and ecosystems processes in lakes (so called lentic environments). The course has a strong laboratory component with hands-on research in an effort to understand regional lake ecology.

### **BIOL 19.110: Introduction to Marine Sciences**

**4 s.h.**

(Field Trip required) This field oriented course covers the principal disciplines in the marine sciences. The course allows students to evaluate their interest in the marine science world. Offered in the summer at the New Jersey Marine Sciences Consortium facilities.

### **BIOL 19.300: Introduction to Oceanography**

**3 s.h.**

This course introduces the varied techniques of the oceanographer; it emphasizes recent developments in the field of Marine Sciences as well as physical, chemical, geological and biological aspects of the world's oceans. Field work required; a trip on a research vessel recommended. Offered only in the summer at the New Jersey Marine Sciences Consortium facilities.

### **BIOL 19.425: Coastal Marine Geology**

**4 s.h.**

This course includes a field study of the geological processes of the beach, bay, lagoon, estuary and salt marsh; it also covers erosional and depositional features and sediment analysis. Field experience is supplemented by laboratory work and individual projects. Offered in the summer at New Jersey Marine Sciences Consortium facilities.

### **BIOL 19.430: Chemical Oceanography**

**4 s.h.**

(Field work and Laboratory required) This course studies the properties and interactions of the chemical substances present in the marine environment, including their reactions at the air-sea and sea-bottom interfaces. Offered at the New Jersey Marine Sciences Consortium field station.

## Courses

### **BIOL 19.487: Marine Fossils of New Jersey Coastal Plain**

**1 s.h.**

This course seeks to interpret the marine fossil record to determine ancient environmental conditions in New Jersey's coastal plain. Offered at the New Jersey Marine Sciences Consortium field station.

### **BIOL 20.100: Introduction to Natural Resources**

**3 s.h.**

This introductory course considers natural resources and their relationship to man and society. For science and non-science majors.

### **BIOL 20.150: Human Ecology: An Evolutionary Approach**

**3 s.h.**

This course will take an evolutionary approach to understand how the environment has shaped biological and cultural changes in humans, and how humans have and are continuously impacting the environment. The emphasis of this course will be to understand the biological, cultural and environmental diversity that has emerged through human history and its impact in the intricate interactions among humans and between humans and their environment.

### **BIOL 20.310: Ecology**

**4 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101*

This course emphasizes population, communities and ecosystems. It studies aspects of energy flow, species diversity and population dynamics in a variety of ecosystems. The course requires laboratory and field work.

### **BIOL 20.311: Ecology (WI)**

**4 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101 and ENGL 01112*

This course emphasizes population, communities and ecosystems. It studies aspects of energy flow, species diversity and population dynamics in a variety of ecosystems. The course requires laboratory and field work. This course offered as writing intensive.

### **BIOL 20.321: Physiological Ecology**

**4 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101*

This course studies the physiological aspects of basic ecological principles and concepts, and the adjustments which organisms make in response to changing environmental factors. May not be offered annually.

### **BIOL 20.330: Environmental Science**

**4 s.h.**

*Prerequisites: BIOL 01101 and CHEM 06100*

This course covers topics related to general environmental issues, the flow of energy and matter through the environment, the natural resources to sustain life, their use and abuse, and the governmental laws and regulations concerning the environment. The course deals with the environmental ethics faced in today's society, the impact of pollution both to the environment and to humans, and the factors involved in urban ecology.

### **BIOL 20.401: Principles of Ecology**

**4 s.h.**

*Prerequisites: STAT 02260 and CHEM 05102 and MATH 03315 and BIOL 01100 or STAT 02260 and CHEM 05102 and MATH 03315 and BIOL 01105*

This course covers basic topics related to the ecological understanding of the environment from a point of view of population dynamics and community structure as well as individual organism's ecology. It includes case studies of applied ecology.

### **BIOL 20.425: Environmental Toxicology**

**4 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101 and BIOL 20310 and CHEM 06100 and CHEM 06101 and CHEM 07200*

This course covers topics related to the fate and impact of pollutants in the environment. This course deals with the laws and regulations of pollutant discharge, the kinds of chemical pollutants, the transport and distribution of such chemicals into the environment, and their effect in populations and communities as well as individual organisms. The acute and chronic effect of these pollutants, the principles of environmental monitoring and assessment, and special examples and case studies will be analyzed.

### **BIOL 20.474: Tidal Marsh Ecology**

**4 s.h.**

This course studies salt marsh development and physiography, community structure, energetics and interrelationships.

### **BIOL 21.401: Entomology**

**4 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101*

This course studies the insect anatomy; physiology and insect control; historical and economic significance of insects in man's society; methods of collecting, preserving, rearing and mounting of insects; insect classification. This course may not be offered annually.

## Courses

### **BIOL 22.335: Genetics**

**4 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101*

The course will provide an in-depth background in all areas of mendelian, molecular, population and evolutionary genetics. The students will learn how to use genetic tools in dissecting complex biological pathways, developmental processes and regulatory systems. Discussion of landmark genetic experiments will constitute the basis of an inquiry-based approach that will delineate the dynamic nature of modern genetics. THE laboratory exercises are designed to put special emphasis on molecular biology techniques and the use of bioinformatics.

### **BIOL 22.410: Concepts in Human Genetics**

**4 s.h.**

*Prerequisites: BIOL 22335*

The course will discuss the application of genetics principals to the human species. All major areas of genetics such as transmission genetics, cytogenetics, biochemical genetics, molecular genetics and population genetics will be covered. The emphasis will be placed on fundamental concepts and technological advances in the study of human genetics as they pertain to medical practice. The principles of human genetics applied to counseling, screening, ethics, law, and the evaluation of their social implications will also be addressed. The laboratory sessions will focus on the practical analysis of various case studies related to different human genetic disorders. Oral presentation of primary literature articles by the students is expected.

### **BIOL 22.450: Molecular Genetics**

**4 s.h.**

*Prerequisites: BIOL 01101 and BIOL 07348 or BIOL 01101 and BIOL 14440 or BIOL 01101 and BIOL 22335*

This course considers the principal concepts in biochemical genetics including gene function and regulation, DNA replication, and mutation. Laboratories focus on fundamental biotechnology concepts and techniques.

### **BIOL 27.403: Comparative Embryology**

**4 s.h.**

*Prerequisites: BIOL 01100 and BIOL 01101*

This laboratory course focuses on the morphological and physiologic processes involved in embryogenesis of animals. The course includes the development of echinoderms, amphibians, birds, and mammals. Considerable emphasis will be placed on organogenesis and the development of organ systems.

## Business

### **BUS 01.105: Business Perspectives**

**3 s.h.**

Students will explore the impact of acceleration of change and environment complexity on contemporary business organization. This course will focus on evolving (1) ethical issues, (2) the management of technology, and (3) impact of demographic diversity on organizations.

## Chemical Engineering

### **CHE 06.201: Principles of Chemical Processes I**

**2 s.h.**

*Prerequisites: MATH 01131 and PHYS 02200 and CHEM 06105*

This course presents an introduction to chemical engineering calculations; processes, process variables, and design. Material balances for chemically non-reacting and reacting systems are described. Single-phase and multi-phase systems; property tables and diagrams are reviewed. Demonstrations may be integrated throughout the course.

### **CHE 06.302: Principles of Chemical Processes II**

**2 s.h.**

*Prerequisites: CHE 06201 and CHEM 06106*

This course is a continuation of Principles of Chemical Processes I. It will describe energy concepts for chemical processes. This course presents energy balances for chemically non-reacting and reacting systems and will show students how to use property tables and diagrams. Computer-aided material and energy balance calculations will be performed. Transient material and energy balances will be introduced. Demonstrations may be integrated throughout course.

## Courses

### **CHE 06.309: Process Fluid Transport**

**2 s.h.**

*Prerequisites: ENGR 01341 and CHE 06302*

The course will introduce students to topics in fluid and momentum transport related to chemical processes. Students will investigate the fundamental and design topics of momentum and fluid transport beyond those covered in Fluid Mechanics I. The topics area will be applied to various chemical processing applications. Topics will include Newtonian and non-Newtonian fluid behavior, two-phase flow, flow through beds of solids, pumping of liquids and gases, and mixing.

### **CHE 06.310: Chemical Engineering Thermodynamics I**

**3 s.h.**

*Prerequisites: CHE 06302*

This course provides a foundation in engineering thermodynamic principles. The course includes an overview of basic thermodynamic principles, heat effects, the Second Law of Thermodynamics., and thermodynamic properties of fluids and flow processes. The course will also include solution thermodynamics theory and application, phase equilibria, chemical reaction equilibria, power and refrigeration cycles, liquefaction and thermodynamic analysis of processes. The course will focus on the synthesis and solution of complex problems in a team project-oriented environment.

### **CHE 06.311: Heat Transfer Processes**

**2 s.h.**

*Prerequisites: MATH 01235 and ENGR 01341*

This course describes modes of heat transfer: conduction, convection (forced and natural) and radiation. It presents steady and unsteady state analysis of heat transfer, types of heat exchangers and heat exchanger design. Demonstrations and laboratories will be integrated throughout the course.

### **CHE 06.312: Separation Processes I**

**2 s.h.**

*Prerequisites: ENGR 01341 and CHE 06302 and MATH 01131*

This course describes modes of diffusion of mass and chemical composition. This course includes mass transfer analysis; molecular diffusion in gases, liquids, and solids and convective mass transfer. It will have an introduction to equilibrium-staged mass transfer operations such as: absorption/stripping, extraction/leaching operations. Demonstrations, laboratories and computer simulations may be integrated throughout this course.

### **CHE 06.314: Separation Processes II**

**4 s.h.**

*Prerequisites: CHE 06309 and CHE 06312*

This course is the second course of a two semester sequence in mass transfer and separation processes. The course presents several separation processes and their relevant theory, design and applications for gas, liquid and solid separation in both traditional and emerging industries. These processes include distillation; adsorption and chromatography; membrane separations, reverse osmosis and gas permeation; and solid liquid separations; centrifugation, particle filtration, crystallization. Demonstrations, laboratories and computer simulations may be integrated throughout this course.

### **CHE 06.315: Chemical Engineering Thermodynamics II**

**3 s.h.**

This course is a direct continuation of Chemical Engineering Thermodynamics I. This course includes an in-depth view of multicomponent systems, phase equilibria such as liquid-liquid and solid-liquid equilibria, simultaneous chemical reactions equilibria, and electrolyte equilibria. The course will also cover chemical engineering thermodynamics applications in emerging technologies such as the biochemical and biomedical fields.

### **CHE 06.316: Chemical Reaction Engineering**

**4 s.h.**

*Prerequisites: CHE 06309 and CHE 06311 and CHE 06312 and CHEM 07200*

This course describes various topics related to homogeneous and heterogeneous reaction kinetics, idealized reactor models for batch and flow systems, corrections for non-ideal residence times, and heat and mass transfer effects. An introduction will be made to homogeneous and heterogeneous catalytic processes and industrial catalytic reactors. Demonstrations and laboratory exercises will be integrated into the course.

### **CHE 06.401: Chemical Process Component Design**

**4 s.h.**

*Prerequisites: CHE 06310 and CHE 06314 and CHE 06316*

This course addresses the problems in economic design of chemical process components used in the synthesis of overall chemical processes. Economic aspects of engineering, including evaluating alternative course of action, cost factors, and process optimization are presented. Safety and environmental considerations in process selection will be discussed.

## Courses

### **CHE 06.402: Transport Phenomena**

**3 s.h.**

*Prerequisites: CHE 06314 and CHE 06316*

This course describes analogies among heat, mass, and momentum transfer. Governing differential equations are presented and their uses in steady-state and unsteady-state systems. This course reviews applications to mass transfer coupled with heat transfer and/or chemical reaction. Numerical methods and computer applications are included.

### **CHE 06.403: Unit Operations Experimental Design and Analysis**

**2 s.h.**

*Prerequisites: CHE 06310 and CHE 06314 and CHE 06316*

This course addresses the fundamental operation and applications of chemical engineering unit processes, generally referred to as unit operations. Students will learn and develop experimental designs and engage in the data analysis required to characterize the operations and relate theory to industrial practice. Students will engage in pilot-scale process experimentation based on appropriate experimental designs and analysis. Typical processes covered include process filtration, tubular flow reactors, liquid-liquid extraction, fluidized beds, continuous crystallization, leaching, reverse osmosis, gas permeation, absorption and stripping, and bioprocesses.

### **CHE 06.404: Unit Operations Laboratory II**

**2 s.h.**

This course is a direct continuation of Unit Operations Laboratory I, examining a different series of unit operations but with similar goals and expectations. Students will again engage in pilot-scale process experimentation on various systems and relate theory and phenomenological principles to performance of a realistic industrial operation.

### **CHE 06.405: Process Dynamics and Control**

**3 s.h.**

*Prerequisites: CHE 06401 and CHE 06402*

This course provides an introduction to the dynamics, modeling and control of process systems. Topics studied will include: modeling analysis and application to control systems, dynamic behavior of processes, control objectives and benefits. Various aspects of feedback control will be emphasized: feedback loop, PID algorithm, tuning, performance, and applications. Enhancements to single-loop PID control; cascade control, and feed-forward control will be discussed along with special topics. Process control design case studies will be included.

### **CHE 06.406: Chemical Plant Design**

**3 s.h.**

*Prerequisites: CHE 06401 and CHE 06402*

This course will focus in design strategy for process synthesis and analysis and economic decision making in the process design. The course explores the development of reactors, compressors, separators and heat exchangers. Cost diagrams and quick screening of process alternatives are utilized. The course will use computer-aided process design software for industrial cases.

### **CHE 06.441: Process Safety**

**3 s.h.**

*Prerequisites: ENGR 01341 and CHE 06310 and CHEM 06100 or ENGR 01341 and CHE 06310 and CHEM 06105*

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 06.442: Fluid Flow in Processing and Manufacturing**

**3 s.h.**

This course surveys fluid flow applications in the processing and manufacturing industries. It presents advanced flow concepts; multiphase flow, complex flow, and turbulence. Gas-solid fluidized bed technology and design. This course will analyze liquid-liquid and liquid-solid mixing systems.

### **CHE 06.462: Bioprocess Engineering**

**3 s.h.**

*Prerequisites: CHEM 06100 and MATH 01130 or CHEM 06105 and MATH 01130*

This course reviews the fundamentals and engineering of bioprocess engineering with emphasis on applying biotechnology to industrial processes. Essential aspects of biochemistry, microbiology and kinetics are presented. This course discusses bioreactor engineering, and recovery and purification processes. Processing applications of engineering kinetics and enzyme technology are included. Laboratory experiments and demonstrations will be integrated throughout the course.

### **CHE 06.463: Green Engineering of Chemical Processes**

**3 s.h.**

*Prerequisites: CHE 06314 and CHE 06316*

This course evaluates process design techniques to minimize waste and by-products in the processing and manufacturing industries. Topics include: mass and heat recycling processes; technologies for process stream renovation, material reuse and recycling methods. Case studies of industrial applications are utilized.

## Courses

### **CHE 06.464: Advanced Separation Technology**

**3 s.h.**

This course describes advanced separation processes not previously covered in Transfer Processes II and Separation Processes courses. Topics include: crystallization and precipitation; adsorption, chromatography and ion exchange; reverse osmosis, ultrafiltration, gas permeation and prevaporation. Commercial system design parameters and laboratory demonstrations will be included. An overview of other novel separation processes will be done.

### **CHE 06.465: Advanced Design of Reactors**

**3 s.h.**

This course presents an overview of chemical reaction types and ideal reactors. Topics presented include: catalysis and catalytic reactors; analogies for real reactors; fluid flow and heat and mass transfer effects on chemical reactions and reactor design; numerical analyses and simulation of reacting systems; applications in the chemical industry.

### **CHE 06.466: Polymer Processing**

**3 s.h.**

*Prerequisites: ENGR 01281 and CHE 06310*

The course provides an introduction to the various aspects of polymer engineering starting with basic polymer properties, structure and function. The major topics covered are the formation of polymer systems and manufacturing techniques. Fabrication processes topics include coating, extrusion, and foams. The production of thin-films and membranes will focus on stretching, phase inversion, and hollow fiber spinning. Students will study application of polymeric materials engineering to various industries.

### **CHE 06.468: Principles of Electrochemical Engineering**

**3 s.h.**

*Prerequisites: CHEM 06100 or CHEM 06105*

This course will focus on the fundamental principles of process electrochemistry. Basic principles of thermodynamics, kinetics and mass transfer as applied to electrochemical systems will be presented. Modeling of electrochemical systems and application of electrochemical principles to corroding systems will be conducted by the students. Engineering case studies of commercial applications in energy conversion and storage and electrolytic processes will be presented.

### **CHE 06.470: Principles of Air Pollution Control**

**3 s.h.**

*Prerequisites: CHEM 06100 or CHEM 06105*

This course introduces students to air pollution control theory. Students design air pollution control processes and specify equipment related to the control of particulate, gaseous and toxic air emissions. The chemistry required for pollution control process design is presented. The environmental impacts due both to controlling and not controlling emissions are considered. Students design control equipment, specify and troubleshoot control systems and predict the impacts for each major type of control system.

### **CHE 06.472: Principles of Biomedical Processes**

**3 s.h.**

*Prerequisites: CHEM 06100 or CHEM 06105*

This course introduces students to chemical engineering fundamentals applied to biomedical systems. Students analyze and design biomedical processes. The basic biochemistry and physiology required for understanding of biomedical systems is presented. Basic principles of mass transfer, heat transfer, fluid flow, and chemical reaction are used to analyze or design drug delivery systems, pharmacokinetic models, the circulatory system, transport across cell membranes, and human and artificial organs. Laboratory experiments and demonstrations will be integrated throughout the course.

### **CHE 06.474: Fundamentals of Particle Technology**

**3 s.h.**

*Prerequisites: CHEM 06100 or CHEM 06105*

This course introduces students to the chemical engineering functions of particle technology. Students analyze and design chemical industry processes involving particles. The basic chemistry of particle synthesis and manufacturing is presented. Principles of mass and heat transfer, fluid flow and chemical reaction kinetics are used to analyze a wide range of industrial processes involving particles. Processes involving fluidization, pneumatic conveying, multi-phase mixing and catalysis will be discussed. Laboratory experiments and demonstrations will be integrated throughout the course.

### **CHE 06.476: Principles of Bioseparation Processes**

**3 s.h.**

This course will focus on the fundamental principles of bioseparation processes. The characteristics of bioseparations will be presented as applied to downstream processing in the pharmaceutical/biotechnology and related industries. Theory and design of filtration, microfiltration, centrifugation, cell disruption, extraction, adsorption, chromatography, precipitation, ultrafiltration, crystallization, and drying will be presented as applied to biosystems. Commercial design considerations, such as sanitary design/sterilization, water quality, solvent recovery, waste disposal and biosafety will be reviewed.

## Courses

### **CHE 06.477: Fundamentals of Engineering Process Analysis and Experimental Design 3 s.h.**

This course exposes students to advanced engineering applications of process analysis and experimental design. The course includes a multidisciplinary approach with theoretical background to support the course applications. Students will use advanced statistical and optimization techniques for process analysis and experimental design, process monitoring and quality control presently used in industry. The analysis and experimental design techniques presented in this course serve to optimize complex industrially relevant processes and make engineering design and calculations more effective. Applications from a wide range of industries will be presented including pharmaceutical, food, bulk and specialty chemicals, and petroleum industry applications.

### **CHE 06.479: Industrial Process Pathways 3 s.h.**

*Prerequisites: CHE 06316*

This course will study chemical reaction mechanisms that play crucial roles in the chemical industry. Fundamentals of reaction thermochemistry and reaction kinetics will be discussed. Students will learn to construct mechanistic models of complex, multi-reaction systems, and to apply these models to the solution of practical problems such as yield optimization.

### **CHE 06.480: Project Optimization in Engineering 3 s.h.**

This course will overview strategies for planning and directing long-term engineering projects. Topics will include project organization, project scheduling, allocation of resources, project optimization and financial analyses.

### **CHE 06.481: 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 06.482: Principles of Food Engineering 3 s.h.**

*Prerequisites: MATH 01131 and CHEM 06100 or MATH 01131 and CHEM 06105*

This course introduces students to chemical engineering fundamentals applied to food processing systems. Students analyze and design food engineering processes. The basic chemistry required for understanding of food systems is presented. Basic principles of mass transfer, heat transfer, fluid flow, chemical reaction, process control, and mixing are used to analyze or design food production systems. Computer simulations will be used for the design of food processing systems. Laboratory experiments and demonstrations will be integrated throughout the course.

### **CHE 06.483: Principles of Engineering Exercise Physiology 4 s.h.**

*Prerequisites: MATH 01236 and CHEM 06100*

This course introduces students to chemical engineering fundamentals applied to physiologic systems, primarily during exercise. The basic biochemistry and physiology required for understanding these systems is presented. Basic principles of mass transfer, heat transfer, fluid flow, thermodynamics, and chemical reaction are used to analyze the human metabolic system, respiratory system, cardiovascular system, and thermal system. The interrelationships of these systems will be investigated, and their dynamic response to exercise will be studied. Laboratory experiments will be conducted throughout the course. This course is jointly taught with the Department of Health and Exercise Science.

### **CHE 06.484: Fundamentals of Controlled Release 3 s.h.**

Controlled release systems are designed to provide delivery of an agent at a pre-determined rate for an extended period of time. Controlled release offers several advantages over traditional methods of formulation and administration: maintenance of effective concentrations for a sustained period, less total agent required, cost effectiveness, convenience and compliance. This course introduces students to chemical engineering fundamentals applied to controlled release systems. Basic principles of materials, mass transfer, heat transfer, fluid flow and chemical reactions are used to analyze and design controlled release systems. Applications to pharmaceutical, agricultural, and food industries will be explored. Laboratory experiments and demonstrations will be integrated throughout the course.

### **CHE 06.485: Fundamentals of Engineering Quality Control 3 s.h.**

*Prerequisites: MATH 01235 and MATH 01236*

This course will expose students to the fundamental principles of engineering quality control and process controller design. Students will learn basic control charting techniques and process capability assessment. The course will include process monitoring and control techniques routinely used in industry and expose students to the relevance of these techniques in the design and development of processes and process safety and risk assessment. The course will include numerous examples from a wide range of engineering applications and industries.

## Courses

### **CHE 06.486: Membrane Processes**

**3 s.h.**

*Prerequisites: CHEM 06105 and MATH 01131 or CHEM 06100 and MATH 01131*

Principles of membrane processes: reverse osmosis, ultrafiltration, microfiltration, electro dialysis, prevaporation, gas permeation, and their application to traditional and emerging fields. Membrane materials and structure. Mass transfer and design aspects for both liquid and gas separation systems.

### **CHE 06.490: Special Topics in Chemical Engineering: Topic**

**3 s.h.**

*Prerequisites: MATH 01131 and CHEM 06100 or MATH 01131 and CHEM 06105*

This course presents chemical engineering topics related to recent developments in industrial practice or research. May be repeated.

## Chemistry

### **CHEM 05.100: Preparatory College Chemistry**

**2 s.h.**

This course familiarizes students with elementary concepts of chemistry and relevant math skills. The students will learn fundamental chemical principles which will enable them to succeed in Chemistry I, a first course in college chemistry. Selected topics of this course include: Standards and Measurement, Classification and Properties of Matter, Nomenclature of Inorganic Compounds, Quantitative Composition of Compounds, Chemical Equations, Atomic Theory and Periodic Classification of Elements. There are no prerequisites for this course. This course will be offered during the second quarter of the semester.

### **CHEM 05.102: Chemistry of Everyday Life (Lecture and Lab)**

**4 s.h.**

A one-semester course for the non-science major presenting an overview of General, Organic and Biochemistry. Emphasis is upon the application of chemical principles to industrial processes, environmental concerns and biologically interesting reactions. This course cannot be applied for credit toward a science major nor used as prerequisite for CHEM06.101

### **CHEM 05.301: Chemistry in the Environment**

**3 s.h.**

*Prerequisites: MATH 03305*

This course presents the fundamentals of chemistry and shows how they can be applied to the environment. This course is offered once a year and is intended for Liberal Studies Math/Science majors.

### **CHEM 05.350: Forensic Chemistry (Lecture and Lab)**

**4 s.h.**

This course considers the application of physical and chemical methods to the identification and analysis of the physical evidence associated with a crime. The course emphasizes those areas of chemistry and to a lesser extent physics, biology and geology useful for determining the evidential value of crime scene and related evidence. The laboratory experience emphasizes the application of physical and chemical analytical procedures to the examination of materials that would likely be considered evidence in a crime.

### **CHEM 05.430: Advanced Topics in Chemistry**

**3 s.h.**

This course covers special topics in individual areas of chemistry. Specific prerequisites are determined by the nature of the course when it is announced.

### **CHEM 05.435: Cooperataive Experience in Chemistry**

**3 s.h.**

The goal of this course is to provide the student with the opportunity to participate in a research/development experience in a non-academic setting. The course may be taken as an advanced elective by students with Junior or Senior status for a maximum of 3 s.h. credit. It may be elected to fulfill the research requirement of the BS in Chemistry major, It can be taken more than once.

### **CHEM 05.440: Research I**

**3 s.h.**

This course provides individual laboratory investigation of a topic outside the scope of existing courses; laboratory and conferences are required. The results of investigation will be presented in a written and oral report.

### **CHEM 05.441: Research II**

**3 s.h.**

*Prerequisites: CHEM 05440*

This course is a continuation of CHEM05.440.

### **CHEM 05.450: Seminar I**

**1 s.h.**

In this course students give oral reports on topics chosen from the current chemical literature. Students must attend local professional meetings.

## Courses

### **CHEM 06.100: 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 06.101: 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 06.105: Advanced College Chemistry I**

**4 s.h.**

This course is designed for the engineering student and other well-prepared science majors. The course will deal with the macroscopic world, covering such topics as states of matter, solutions, thermodynamics, gas phase equilibria and solution equilibria of weak acids, bases and buffers.

### **CHEM 06.106: Advanced College Chemistry II**

**4 s.h.**

*Prerequisites: CHEM 06105*

This course is designed for the engineering student and other well-prepared science majors. The course deals with the submicroscopic world, emphasizing atomic structure and molecular structure and bonding and crystal structure. Included also is work in material science, electrochemistry, kinetics, descriptive chemistry and selected industrial applications.

### **CHEM 06.300: Advanced Inorganic Chemistry**

**4 s.h.**

*Prerequisites: PHYS 08400*

This course studies concepts and models of inorganic chemistry. It explains molecular geometries and other physical and chemical properties on the basis of the several chemical bonding theories and with reference to the periodic table. Students study both main group and transition element chemistries. The laboratory component emphasizes the synthesis and characterization of inorganic compounds.

### **CHEM 07.200: 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 07.201: 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 07.202: Industrial Organic Chemistry**

**3 s.h.**

Industrial Organic Chemistry will cover common topics as found typically in Organic Chemistry II (CHEM 07.201) but will focus on the utility of this chemistry in an industrial setting. Highlights include: polymer synthesis, mineral sources of chemicals, renewable sources of chemicals, green chemistry, aromatic materials and coal, organic color chemistry, detergents, food and pharmaceutical chemistry and others

### **CHEM 07.348: Biochemistry (Lecture and Lab)**

**4 s.h.**

This course deals with chemical compounds and reactions important to the functioning of biological systems and includes a discussion of the metabolic pathways for energy production and biosynthesis.

### **CHEM 07.405: Introduction to Polymer Chemistry**

**3 s.h.**

*Prerequisites: CHEM 07200*

This course presents an introduction to the topic of polymer chemistry. The subject matter, by its nature, crosses all the lines of specialization within chemistry. The structure, properties and synthesis of polymeric materials are covered in accordance with the recommendations of the joint polymer education committee of the American Chemical Society.

## Courses

### **CHEM 07.408: Advanced Biochemistry**

**4 s.h.**

*Prerequisites: BIOL 14348 or CHEM 07348*

This course provides an in-depth study of the principles involved in biological processes. It emphasizes the significance of biochemical reactions and regulations as well as mechanisms. A thorough elucidation of the structure, function and mechanism will be presented. The overall strategy of living systems will be illustrated. The laboratory experiments will provide exposure to representative procedures and some important modern techniques.

### **CHEM 07.410: Medicinal Chemistry**

**3 s.h.**

*Prerequisites: CHEM 07201*

A study of the biochemical principles and metabolic pathways with particular emphasis on pharmaceutical applications and biotechnology. This course will focus on the molecular mechanisms of drug action and chemical basis of drug therapy. Current methods used to study medicinal chemistry including recombinant DNA, combinatorial chemistry and bioinformatics will be reviewed. A 3-D molecular modeling of drug targets and drug design will be integrated throughout the course. Clinical trials of drug case study are included.

### **CHEM 07.431: Advanced Topics in Biochemistry**

**3 s.h.**

This course covers special topics in individual areas of biochemistry. Specific prerequisites are determined by the nature of the course when it is announced.

### **CHEM 07.464: Advanced Organic Chemistry I (Lecture) - WI**

**3 s.h.**

*Prerequisites: ENGL 01112 and CHEM 07201 and PHYS 08400*

This course provides an advanced presentation of the major classes of organic chemistry reactions, giving major emphasis to the detailed mechanisms of such reactions. Modern organic theory is included. This course is generally offered in fall every other year. A writing intensive course.

### **CHEM 07.466: Advanced Organic Chemistry II (Lecture)**

**3 s.h.**

This is a continuation of CHEM07.464. It examines classes of compounds and reactions not presented in CHEM07.464. This course is not offered annually.

### **CHEM 07.470: Organic Spectroscopic Analysis (Lecture and Lab)**

**3 s.h.**

*Prerequisites: CHEM 07201 and CHEM 09250*

This is a laboratory course with class discussion on the separation and identification of organic compounds. It uses both classical and instrumental techniques in compound structure determination. Lectures emphasize interpreting IR, NMR and mass spectra. This course is not offered annually.

### **CHEM 07.475: Polymer Synthesis**

**4 s.h.**

*Prerequisites: CHEM 07201 and PHYS 08400*

This course provides an in-depth study of the procedures, techniques and theoretical aspects of polymer synthesis. Reaction mechanisms including kinetic and thermodynamic considerations will be studied. The topic of polymer synthesis will be examined from raw material sources through product usage. The laboratory experiments will provide exposure to representative procedures and techniques.

### **CHEM 07.478: Polymer Characterization**

**4 s.h.**

*Prerequisites: CHEM 07201 and PHYS 08400*

This course provides an in-depth study of the procedures, techniques and theoretical aspects of polymer characterization. Major topics include molecular weight determinations, polymer solutions, viscoelasticity and bulk properties. The laboratory experiments will provide exposure to representative procedures and techniques with emphasis on molecular weight determination and thermal methods.

### **CHEM 08.400: Physical Chemistry I (Lecture)**

**3 s.h.**

*Prerequisites: MATH 01131 and PHYS 02201 or MATH 01131 and PHYS 02203 or MATH 01131 and 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 08.401: Physical Chemistry II (Lecture)**

**3 s.h.**

*Prerequisites: PHYS 08400 or CHEM 08400*

This is a continuation of CHEM08.400

## Courses

### **CHEM 08.402: Physical Chemistry Laboratory I**

**2 s.h.**

*Prerequisites: CHEM 09250 and CHEM 08400*

Laboratory work in this course is designed to illustrate the principles of physical chemistry.

### **CHEM 08.403: Physical Chemistry Laboratory II**

**2 s.h.**

*Prerequisites: CHEM 08401*

This course is a continuation of CHEM08.402

### **CHEM 09.250: 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 09.410: Instrumental Methods (Lecture and Lab)**

**4 s.h.**

*Prerequisites: PHYS 08401 and CHEM 09250*

This course covers the use of instrumental methods in the solution of chemical problems. It stresses both the theoretical and practical aspects of obtaining and interpreting data. Among the instruments considered are visible, UV, IR, NMR, AA, ICP, Raman and Mass Spectrometers as well as electrical and chromatographic techniques.

## Civil Engineering

### **CEE 08.203: Surveying and Engineering Graphics**

**4 s.h.**

The course deals with the measurement of existing and man-made land profiles (surveying), and the creation and interpretation of engineering drawings, maps and plans (engineering graphics). The tasks performed include the measurements of drainage areas, distances, angles, and elevations; closing traverses; topographic surveys; and highway alignments. Additional tasks include creation and interpretation of engineering plans, drawings, and maps using appropriate engineering software programs.

### **CEE 08.301: Civil Engineering Materials**

**2 to 3 s.h.**

*Prerequisites: ENGR 01272*

This course deals with asphalt pavement, concrete pavement, and structural concrete including: the testing and analysis of aggregates, asphalt binders, cement and admixtures; the design of asphalt pavement, concrete pavement, and structural concrete; and the testing and analysis of asphalt pavement specimens, concrete pavement specimens, and structural concrete specimens. The course includes appropriate laboratory experiments.

### **CEE 08.305: Civil Engineering Systems**

**2 s.h.**

*Prerequisites: STAT 02260*

The course deals with the theories and principles of civil engineering systems as applied to real-world analysis and design problems. The course covers four important areas of civil engineering systems: linear programming, project scheduling, probability and statistics, and engineering economics. The course includes appropriate computer applications.

### **CEE 08.311: Environmental Engineering I**

**3 s.h.**

*Prerequisites: CHEM 06105 and ENGR 01341*

Topics in principles of environmental engineering, including ecosystems, water and wastewater treatment and design, and sludge/residuals management.

### **CEE 08.312: Environmental Engineering II**

**3 s.h.**

Topics in solid and hazardous waste and air pollution engineering, including regulations, fundamentals, evaluation, management, prevention, treatment and disposal.

### **CEE 08.342: Water Resources Engineering**

**3 s.h.**

*Prerequisites: ENGR 01341*

This course deals with the analysis and design of basic water flow structures using the principles of hydraulics and hydrology. The topics covered in hydrology include the analysis of rainfall, runoff, groundwater flow, and stream flow. The topics covered in hydraulics include the analysis and design of hydraulic structures such as weirs, open channels, culverts, and storm sewers. The course includes appropriate laboratory experiments and computer applications.

## Courses

### **CEE 08.351: Geotechnical Engineering**

**3 s.h.**

*Prerequisites: ENGR 01272 and ENGR 01341 and CEE 08301*

The course deals with the basic principles of geo-technical engineering including soil properties and soil mechanics. The study of soil properties includes soil gradation, void ratio, porosity, water content, degree of saturation, specific gravity, soil consistency, soil classification. The study of soil mechanics includes permeability, capillarity, seepage and stresses in soils. The course includes appropriate laboratory experiments.

### **CEE 08.361: Transportation Engineering**

**3 s.h.**

*Prerequisites: CEE 08203*

The course deals with the analysis, design, construction, operation, maintenance, rehabilitation, and efficiency of transportation systems and mass transit systems. The course includes a study of the impact on transportation systems caused by sociological, geographical, economic and environmental factors. The course also includes appropriate field measurements and computer applications.

### **CEE 08.382: Structural Engineering**

**3 s.h.**

*Prerequisites: ENGR 01271 and ENGR 01272*

This course deals with the analysis of simply-supported and continuous structures using slope-deflection, conjugate-beam, and virtual work. The design of axially loaded steel members is integrated with the analysis topics. The force method of analysis is applied to truss structures.

### **CEE 08.383: Analysis and Design of Steel Frames**

**3 s.h.**

*Prerequisites: CEE 08382*

This course deals with the analysis and design of structural frames. Analysis using the stiffness method is emphasized. The design of frame members includes the design of steel beams and beam-columns, connections for steel frames, bracing and composite steel/concrete members. Steel joists and decking are also introduced. The course includes appropriate computer applications.

### **CEE 08.404: Engineering Estimating for Seniors**

**3 s.h.**

*Prerequisites: ECON 04102*

The course deals with the development of engineering estimates for civil engineering projects and project components including labor, materials, and equipment. Total project costs including direct and indirect costs, field and home-office costs, and contingency are covered. Also covered are the various types of civil engineering estimates including piles and 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 08.412: Environmental Treatment Process Principles**

**3 s.h.**

Topics in Fundamentals of Physiochemical Processes in Environmental Engineering such as Absorption, Coagulation/Flocculation, Filtration, Sedimentation, Disinfection, Ion Exchange, Chemical Oxidation, Corrosion and Membranes.

### **CEE 08.422: Site Remediation Engineering Principles**

**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 08.431: Solid and Hazardous Waste Management**

**3 s.h.**

*Prerequisites: CHEM 07200*

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 08.432: Pollutant Fate and Transport Principles**

**3 s.h.**

Topics include Characteristics and Properties of Organic Pollutants, Aquatic Chemistry, Transport Mechanisms for Pollutants (Absorption, Retardation, Attenuation, Volatilization, Biodegradation), Groundwater (Properties, Flow Equations, Transport in Porous Media) and Mathematical Modeling.

### **CEE 08.433: Principles of Integrated Solid Waste Management**

**3 s.h.**

The course deals with the theories and principles of integrated solid waste management as applied to real-world analysis and design problems. The course covers the design of facilities and programs, such as landfills, composting facilities, transfer stations, collection programs, and drop-off centers, and planning of integrated systems for municipalities and counties. Computer applications are included.

## Courses

### **CEE 08.443: Advanced Water Resources Engineering for Seniors**

**3 s.h.**

*Prerequisites: CEE 08342*

The fundamental theme of the course is the study of advanced topics in water resources engineering including the analysis and design of advanced hydraulic structures, hydraulic similitude and modeling, wave action, and advanced hydrology. The course includes appropriate laboratory experiments and computer applications.

### **CEE 08.444: Principles of Hydraulic Design**

**3 s.h.**

The fundamental theme of the course is the design and analysis of structures for controlling and conveying water in both the built and natural environment. Topics covered vary from year to year based upon instructor and student interests. Past topics have included open channel flow design, dams and spillways sanitary and storm sewers, culverts, pumping stations, turbomachinery, and hydraulic similitude and modeling.

### **CEE 08.445: Principles of Environmental Fluid Mechanics**

**3 s.h.**

The fundamental theme of the course is the engineering study of fluid flow in the environment. Advanced topics in water resources engineering are explored, with content varying based upon instructor and student interests. Past topics have included open channel flow, hydrology, fish passage at hydraulic structures, sediment transport, mixing in natural water bodies, and water quality modeling. The course includes appropriate laboratory and/or field experiments and computer applications.

### **CEE 08.452: Foundation Engineering for Seniors**

**3 s.h.**

*Prerequisites: CEE 08351*

The fundamental theme of the course is the analysis and design of structural building and bridge foundations based on advanced principles of soil mechanics. These advanced principles of soil mechanics include compressibility, shear strength, and bearing capacity. The types of foundations analyzed and designed include spread footings and pile foundations. The course includes appropriate laboratory experiments and computer applications.

### **CEE 08.453: Earth Retaining Systems for Seniors**

**3 s.h.**

*Prerequisites: CEE 08351*

The fundamental theme of the course is earth retaining systems including advanced principles of soil mechanics and analysis and design of earth retaining systems. The advanced principles of soil mechanics covered include lateral soil pressure and slope stability. The analysis and design of earth retaining systems includes slopes, embankments, retaining walls, and other systems. The course includes appropriate laboratory experiments and computer applications.

### **CEE 08.463: Transportation Planning, Demand, and Data Analysis**

**3 s.h.**

This course introduces students to the general field of transportation planning including travel demand analysis and data collection methods. Statistical data collection and analysis methods are discussed. Examples using the traditional four-step planning process illustrate common planning procedures. Computer applications are included.

### **CEE 08.464: Elements of Transportation Engineering of Seniors**

**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 08.465: Pavement Analysis and Evaluation**

**3 s.h.**

The fundamental theme of the course is the engineering study of pavement response.

### **CEE 08.473: Advanced Structural Analysis for Seniors**

**3 s.h.**

*Prerequisites: CEE 08382*

The course deals with the matrix method of structural analysis. The topics covered include structural members, member joints, member end conditions, local and global structural matrices, condensation of global structural matrices, static structural analysis, and dynamic structural analysis. The course will include appropriate computer applications.

### **CEE 08.481: Reinforced Concrete Design**

**3 s.h.**

*Prerequisites: ENGR 01271 and ENGR 01272*

The course deals with the topic of reinforced concrete analysis and design. The analysis and design of reinforced concrete structural members includes types of concrete and steel, fundamentals of reinforced concrete behavior, analysis and design of rectangular and T-beams and slabs including flexural and shear behavior, development of reinforcement, deflections and crack control. Analysis and design of short reinforced concrete columns is also included. The course includes appropriate computer applications.

## Courses

### **CEE 08.484: Prestressed Concrete for Seniors**

**3 s.h.**

*Prerequisites: CEE 08481*

The fundamental theme of this course is the analysis and design of prestressed concrete members for highway bridges, parking structures, office buildings, and industrial buildings. Topics covered include prestressed construction applications and materials, flexural analysis of pretensioned and post-tensioning beams, bending and shear design, loss of prestress, deflection, and composite beams. The course includes appropriate computer applications.

### **CEE 08.485: Advanced Reinforced Concrete for Seniors**

**3 s.h.**

*Prerequisites: CEE 08481*

The fundamental theme of the course is the design and analysis of advanced reinforced concrete structures and structural components including two-way slabs, footings, retaining walls, shear walls, and slender columns.

### **CEE 08.486: Bridge Engineering for Seniors**

**3 s.h.**

*Prerequisites: CEE 08382 and CEE 08383*

The fundamental theme of the course is the analysis and design of modern steel highway bridges utilizing the bridge code of the American Association of State Highway and Transportation Officials. The topics covered include bridge loads, load combinations, design methods, reinforced concrete deck slabs, steel wide-flange stringer bridges, steel composite wide-flange stringer bridges, continuous bridge spans, steel composite plate-girder bridges, elastomeric bearing connections, steel fixed bridge connections, and steel roller bridge connections. The course includes appropriate computer applications.

### **CEE 08.487: Design of Masonry and Wood Structures**

**3 s.h.**

*Prerequisites: ENGR 01272 and CEE 08382*

This course provides the fundamentals of structural design using masonry and wood. Topics include materials properties, flexure, axial loading, and lateral load resisting systems. This course builds upon previously acquired fundamental concepts of structural analysis and design.

### **CEE 08.490: Civil Engineering Practice**

**1 s.h.**

*Prerequisites: CEE 08305*

This sequence of seminars and workshops is designed to give civil engineering students meaningful exposure to several critical topics related to the real-world practice of civil engineering. Topics covered will include bid specifications and documents, contracts and performance bonds, engineering estimates and cost engineering, engineering management and project scheduling, and professional ethics and responsibilities.

### **CEE 08.491: Civil Engineering Design Project I**

**2 s.h.**

*Prerequisites: CEE 08305*

This is the first course in a sequence of two courses that will provide a meaningful design experience for teams of undergraduate civil engineering students under the direction of two or more faculty advisers. The sequence will include a thorough literature search and review, the development of a clear and concise problem statement, consultations with other faculty and industry experts, and the derivation of publishable results. The project will culminate in a final written report and oral presentation.

### **CEE 08.492: Civil Engineering Design Project II**

**2 s.h.**

*Prerequisites: CEE 08491*

This is the second course in a sequence of two courses that will provide a meaningful design experience for teams of undergraduate civil engineering students under the direction of two or more faculty advisers. The sequence will include a thorough literature search and review, the development of a clear and concise problem statement, consultations with other faculty and industry experts, and the derivation of publishable results. The project will culminate in a final written report and oral presentation.

## Communication Studies

### **CMS 01.203: Mass Media and Their Influences**

**3 s.h.**

*Prerequisites: ENGL 01112 or HONR 05105*

This course studies the impact on our daily lives of television, radio, films, magazines and newspapers. Students examine how the media influence politics, purchases, entertainment, and how they 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.

## Courses

### **CMS 01.205: Mass Media and Their Influences-WI**

**3 s.h.**

*Prerequisites: ENGL 01112*

This is a writing intensive course that studies the impact on our daily lives of television, radio, films, magazines, and newspapers. Students examine how the media influence politics, purchases, entertainment, and how they 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 01.207: Fiction to Film**

**3 s.h.**

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 01.220: Introduction to Communication Studies**

**3 s.h.**

Introduction to Communication Studies introduces students to the field of Communication Studies by examining the various disciplines within the field. Such disciplines include interpersonal communication, communication ethics, health communication, family communication, organizational communication, intercultural communication, rhetorical studies, media studies, and others. The course also looks at the similarities and differences among the disciplines.

### **CMS 01.221: Organization Communication Theory and Research**

**3 s.h.**

*Prerequisites: ENGL 01112*

Organizational Communication theory and research introduces students to the basics of organizational communication. The class will focus on how scholars and researchers study and understand the communication patterns and relationships that go on in organizations. Students will be asked to consider a variety of perspectives and theories of organizational communication while comparing them to each other and to their own experiences as organizational actors.

### **CMS 01.222: Rhetorical Theory**

**3 s.h.**

*Prerequisites: ENGL 01112*

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 01.300: Communication Theory**

**3 s.h.**

*Prerequisites: ENGL 01112 or COMP 01112*

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 01.318: Communicating Gender**

**3 s.h.**

*Prerequisites: ENGL 01112*

Communicating Gender will consider the theory, research, and experience of the intersection between gender and communication. Focus will be given to the ways in which gender, as a concept and set of expectations, is created through communication. Students will also consider their own individual experiences as gendered communicators while studying the varying perspectives of communication studies scholars with regard to this phenomenon.

### **CMS 01.319: Intercultural Communication**

**3 s.h.**

*Prerequisites: ENGL 01112*

Intercultural Communication will consider the theory, research, and experience of intercultural communication. The nature of culture and its relationship to communication will be discussed. Students will be asked to consider their own experiences as intercultural communicators while studying the vary perspectives of communication studies scholars with regards to this phenomenon.

### **CMS 01.320: Ethical Issues in Human Communication**

**3 s.h.**

*Prerequisites: 60 hour prerequisite*

Ethical Issues in Human Communication will address numerous ethical conundrums in our communicative activities. Specific ethical systems provide the groundwork for application to interpersonal, organizational, intercultural, political and rhetorical communication contexts. Case studies and class discussions will be used to encourage students to develop their own ethical frameworks for communication contexts.

## Courses

### **CMS 01.321: Health Communication**

**3 s.h.**

Health communication will address the topic of health as it is enacted and defined in communication. Specific topics to be discussed are doctor-patient interaction, social and cultural issues of health, mass media representations of health and healthy behaviors, along with communication within health organizations.

### **CMS 01.322: Family Communications**

**3 s.h.**

*Prerequisites: ENGL 01112 AND 60 hour prerequisite*

This course focuses on how scholars and researchers study and understand the communication patterns and relationships in families. Family types, roles, and ongoing communication processes are discussed. Students are asked to consider a variety of perspectives and theories of family communication while comparing them to each other and to their own experiences as family members.

### **CMS 01.323: Images of Gender in Popular Culture**

**3 s.h.**

*Prerequisites: ENGL 01112 or COMP 01112*

This course examines the concept of gender as it is rhetorically constructed in contemporary popular culture. Students will analyze how various cultural texts (such as advertisements, popular songs, television shows, or video games) communicate what it means to be masculine and feminine in U.S. culture. The course will examine how these images have changed historically and how depictions of race, class, and sexual identity also contribute to our understandings of gender in popular culture.

### **CMS 01.350: Research Practicum in Communication Studies**

**1 to 3 s.h.**

*Prerequisites: 75 hour prerequisite*

Research Practicum in Communication Studies allows students to apply the theories and methodology learned in Communication Studies courses to a research partnership with a member of the department faculty. Students earn 1 credit for every 40 hours of work, with most practica implemented for 3 credit hours. Students keep a detailed log of working hours, prepare a portfolio representative of their practicum experience, write an analytical critique of the practicum, and are evaluated by their faculty partner as well as the practicum supervisor. In order to receive approval for this course, students must have a minimum 2.5 grade point average.

### **CMS 01.405: Independent Study (Communication Studies)**

**1 to 6 s.h.**

This course provides students with an opportunity to work independently on specialized communication topics under the guidance of a faculty member. Generally, this course may not be substituted for any course offered by a department in the College of Communication. In addition to departmental permission, approval by the dean is also required.

### **CMS 01.406: Seminar in Communication Studies-WI**

**1 to 3 s.h.**

This course provides a seminar experience in areas of communication that are not part of the regular course offerings. Recent topics have included Rhetorical Theory, Nazi Propaganda, and Presidential Election Campaigns.

### **CMS 05.280: Semantics**

**3 s.h.**

*Prerequisites: 30 hour prerequisite*

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 05.281: Semantics-WI**

**3 s.h.**

*Prerequisites: CMS05281 AND COMP 01112 and Required Credits: 30.000*

This is a writing intensive course that makes students aware of the relationship between language and human behavior and of the use and abuse of verbal and non-verbal language. It emphasizes meaning, the classification and abstraction processes and the application of semantic principles to the language of literature, politics, advertising and prejudice.

### **CMS 05.330: International Media Communication**

**3 s.h.**

This course examines systems of communication from a global perspective, analyzing the historical, cultural, and philosophical influences that have shaped those systems. The course enables students to analyze the systemic effects of globalization, new technologies, regulation, efforts of various groups to control development of communication structures, inequities in communication infrastructure, so-called cultural imperialism, and the linkage between international media and diplomacy, economics, and politics.

### **CMS 05.380: Linguistics**

**3 s.h.**

Students study the nature of human language by examining four major components: phonology, semantics, syntax, morphology. Linguistics principally emphasizes linguistic universals, characteristics which all human languages share. Students also discuss dialect formation, first-language acquisition in children, animal communication systems, and they compare modern linguistic theories.

## Courses

### **CMS 06.202: Public Speaking**

**3 s.h.**

*Prerequisites: ENGL 01112 or COMP 01112*

This course trains students in the fundamentals of public speaking, including study and practice of speech preparation and speech delivery. The goal is to enable the student to participate effectively in oral communication, as a student, professionally and as a citizen.

### **CMS 06.205: Persuasion and Social Influence**

**3 s.h.**

This course surveys theories and theorists dealing with the area of persuasion, beginning with the Classical Age and extending through present day empirical research. It emphasizes applying the theories to practical situations and goals.

### **CMS 06.206: Interpersonal Communication**

**3 s.h.**

Students explore the basic theories and concepts of interpersonal communication research. Some areas to be covered include perception & social cognition, the relationship of culture to interpersonal communication, self-perception and communication, interpersonal systems, sex/gender and interpersonal communication, and interpersonal communication contexts (i.e. family, friendship, romance).

### **CMS 06.245: Small Group Communication**

**3 s.h.**

This course focuses on the principles and theories of communication as they relate to the small group process. It deals with the barriers to effective group discussion and leadership with corresponding remedial measures, as well as an application of small group research as it pertains to hypothetical and actual small group situations.

### **CMS 06.246: Small Group Communication-WI**

**3 s.h.**

*Prerequisites: ENGL 01112 or COMP 01112*

This is a writing intensive course that focuses on the principles and theories of communication as they relate to the small group process. It deals with the barriers to effective small group discussion and leadership with corresponding remedial measures as well as an application of small group research as it pertains to hypothetical and actual small group situations.

### **CMS 06.300: Advanced Public Speaking**

**3 s.h.**

*Prerequisites: CMS 06202*

Students analyze the special problems of advanced speech composition and delivery through discussion and platform appearance. In addition to strengthening students' command of the fundamentals of public speaking, this course gives attention to rhetorical style and specialized types of speaking situations. This course may not be offered annually.

### **CMS 06.330: Communication Studies Research Methods**

**3 s.h.**

*Prerequisites: CMS 01300 and CMS 01220*

This course introduces the student to quantitative and qualitative research methods used in communication studies. Students will learn about research procedures, identification and definition of variables, sampling methods, and basic statistical methods such as discourse analysis, correlational analysis, parametric and non-parametric tests, and descriptive techniques. Students will become familiar with current communication studies research and will design and complete a research project.

### **CMS 06.340: Argumentation and Debate**

**3 s.h.**

*Prerequisites: CMS 06202*

This course focuses on the principles and techniques of argumentative speaking and formal debating. Students study types and tests of evidence and reasoning, and develop skills in logical persuasion, cross examination, intensive research, case preparation, and critical listening. This course may not be offered annually.

### **CMS 06.406: Seminar in Communication Studies**

**3 s.h.**

*Prerequisites: CMS 06330*

Required of all Communication Studies majors, this course provides a seminar experience in areas of communication that are not part of the regular course offerings. Recent topics have included Family Communication, Gender Roles in the Media, and Rhetoric of Social Movements.

### **CMS 06.441: Rhetorical Criticism**

**3 s.h.**

*Prerequisites: CMS 06202*

This course surveys ancient to modern theories of speech criticism in order to develop defensible criteria for evaluating speeches, social movements, and "non-oratorical" events. Students study and evaluate past and present public speeches by applying various rhetorical standards. This course may not be offered annually.

## Courses

### **CMS 99.361: Introduction to Survey Research**

**3 s.h.**

*Prerequisites: 60 hour prerequisite*

This course provides students with an understanding of research in general and survey research in particular. Theory is applied through emphasis on survey design, sampling, interviewing, tabulating and analysis of data. Students learn the "whys" and "hows" of public opinion polling by doing an actual survey.

### **CMS 99.363: Field Experience In Communication I**

**3 s.h.**

*Prerequisites: 75 hour prerequisite*

Under professional supervision in the field, students practice theories and skills learned in the classroom. No part is a prerequisite for another; order is not a factor in selecting this course.

### **CMS 99.364: Field Experience In Communication II**

**3 s.h.**

*Prerequisites: 75 hour prerequisite*

Under professional supervision in the field, students practice theories and skills learned in the classroom. No part is a prerequisite for another; order is not a factor in selecting this course.

### **CMS 99.365: Field Experience In Communication III**

**6 s.h.**

*Prerequisites: 75 hour prerequisite*

Under professional supervision in the field, students practice theories and skills learned in the classroom. No part is a prerequisite for another; order is not a factor in selecting this course.

## Computer Science

### **CS 01.102: 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 Intermediate Algebra (MATH01.121) is expected for this course.

### **CS 01.104: 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 Intermediate Algebra (CS01.121) is expected.

### **CS 01.200: Computing Environments**

**3 s.h.**

*Prerequisites: CS 01100 or CS 01050 Minimum Grade of P or Computer Competency Exam 70*

Students will be exposed to a variety of computing environments. The course will include extensive hands-of a variety of software applications. Topics covered will include user tools, user programming techniques, application packages, and networking communications. Students will gain an understanding of the principles of computing which will enable them to adapt to future technological developments. A solid and fundamental understanding of computers and current operating systems, word processing and spreadsheet software are essential to this course.

### **CS 01.205: Computer Laboratory Techniques**

**3 s.h.**

*Prerequisites: CS 04113 or CS 04103*

A practical introduction to the hardware, software and networks used by the Computer Science Department. A foundation in programming using the language or languages required for intermediate and advanced computer science courses will be included.

### **CS 01.210: Introduction to Computer Networks and Data Communications**

**3 s.h.**

*Prerequisites: CS 01200*

This is an introductory computer networks course for students that are not majoring or minoring in computer science. This course will examine the basics of data communication and computer networks and will cover such topics as history and evolution of data communications, layered network architectures, physical and data link layers, introduction to internetworking, the Internet, IP protocols, basics of TCP and UDP transmission protocols, standard network applications and basics of network security, network utility software, and configuring local area networks in a popular operating system.

### **CS 01.395: 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.

## Courses

### **CS 04.103: 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 04.110: An Introduction to Programming Using Robots**

**3 s.h.**

*Prerequisites: CS 01100 or CS 01050 Minimum Grade of P or Computer Competency Exam 70*

This course teaches fundamental programming skills centered in the context of robot programming. Students will program small robots to perform a variety of tasks. In addition to learning a sophisticated programming language, students will gain skills in design techniques and experience working in teams to build complex systems.

### **CS 04.112: Java for Object Oriented Programmers**

**1 s.h.**

*Prerequisites: CS 04103*

This course is designed for students who have substantial programming experience in an object-oriented language, such as C++, but who need to learn Java as prerequisite knowledge for other courses in the curriculum. Students will study the syntax and semantics of Java, specifically, classes and objects, abstraction, encapsulation, data types, calling methods and passing parameters, decisions, loops, arrays and collections, documentation, testing and debugging, exceptions, design issues, inheritance, and polymorphic variable.

### **CS 04.113: Introduction to Object Oriented Programming**

**4 s.h.**

*Prerequisites: MATH 01121 or MATH 01122 or MATH 01125 or MATH 01130 or MATH 01131*

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 04.114: 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 04.115: C++ for Java Programmers**

**1 s.h.**

*Prerequisites: CS 04113*

This course is designed for students who have substantial programming experience in an object-oriented language such as Java, but who wish to learn C++, a language that is still commonly used in research and industry. Students will study the syntax and semantics of C++, pointers, classes (inheritance, encapsulation, polymorphism, methods, etc.), control structures, file processing, and GUI programming.

### **CS 04.140: Enterprise Computing I**

**4 s.h.**

*Prerequisites: CS 01100 or CS 01050 and MATH 01123 or MATH 03125*

This course will acquaint students with data representation, data organization and data storage utilizing basic data structures. Students will perform basic file manipulation by reading data from files, writing data to files and data file formatting. Students will also understand basic logic, basic object oriented design and programming and the concepts of software engineering.

### **CS 04.222: Data Structures and Algorithms**

**4 s.h.**

*Prerequisites: CS 04114 and MATH 03160 or CS 04114 and CS 04112 Minimum Grade of A- and CS 04103 Minimum Grade of A-*

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 04.225: Data Structures for Engineers**

**3 s.h.**

*Prerequisites: CS 04103 and MATH 01236*

The course features programs of realistic complexity. The programs utilize data structures (strings, lists, graphs, stacks) and algorithms (searching, sorting, etc.) for manipulating these data structures. The course emphasizes interactive design and includes the use of microcomputer systems and direct access data files.

## Courses

### **CS 04.233: Structured Design and Programming Using COBOL**

**3 s.h.**

*Prerequisites: CS 01102 or CS 04113 or CS 04103*

In this course students learn to write structured programs in COBOL. It includes a description of the language and a comparison with other languages. It emphasizes structured modular programming and documentation such as hierarchy charts (HIPO) and flow charts. Prior programming experience in any programming language is expected for this course.

### **CS 04.234: Advanced Structured Design and Programming Using COBOL**

**3 s.h.**

*Prerequisites: CS 04233*

This course prepares students for professional proficiency in the COBOL programming language, and includes structured and modular programming, top-down design, hierarchy charts and flow diagrams, table handling, sorting, searching, report preparation, character manipulation, sequential and ISAM files, programming standards and the transaction-master update problem.

### **CS 04.305: Web Programming**

**3 s.h.**

*Prerequisites: CS 01205 and CS 04222*

This course introduces the student to some of the underlying software components of the World Wide Web as it currently exists. Topics include markup languages, scripting languages, programming languages such as Java, and other software components of the Web.

### **CS 04.315: Programming Languages**

**3 s.h.**

*Prerequisites: CS 04222 and CS 06205*

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 04.325: Programming in Ada**

**3 s.h.**

*Prerequisites: CS 04222*

Students will gain an understanding of the major concepts of the programming language Ada. They will learn how the constructs of the Ada language can be used to produce software which is portable, readily maintained and modified, and efficiently designed. Students will do several programming projects in Ada, and will be exposed to problems in the design of real-time systems and concurrent programming.

### **CS 04.327: Power Java**

**3 s.h.**

*Prerequisites: CS 04222*

This advanced programming course explores the power of the Java programming language. It looks at the advanced features provided in Java: reflection and proxies, interfaces and inner classes, graphics programming, the event listener model, event handling, Swing user interface components, graphical user interface design, object serialization, multithreading, network programming, remote objects and remote method invocation, collection classes, database connectivity, and JavaBeans.

### **CS 04.380: Object Oriented Design**

**3 s.h.**

*Prerequisites: CS 07340*

This course will introduce important concepts, such as inheritance and polymorphism, which are crucial tools needed for crafting object-oriented solutions to real-world problems. Design patterns that commonly occur in design situations will be covered. A formal notation for describing and evaluating object-oriented designs such as the Unified Modeling Language (UML) will be taught. Students will apply the concepts to design and implement object-oriented solutions to one or more reasonably sized real-world problems.

### **CS 04.390: 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 04.391: Concurrent Programming**

**3 s.h.**

*Prerequisites: CS 04390*

Introduces the motivation for and fundamental concepts of concurrent programming. Topics include processes, threads, context switching, atomic instructions/actions, shared data, race conditions, critical sections, mutual exclusion, synchronization, locks, barriers, semaphores, monitors, shared-memory, multiprocessors, and an overview of distributed programming (distributed-memory multicomputers, interprocess communication, message passing, remote procedure call, rendezvous). The course includes developing concurrent programming skills by using a language that supports the multithreaded program.

## Courses

### **CS 04.392: System Programming and Operating System Internals**

**3 s.h.**

*Prerequisites: CS 04390 and CS 01205*

This course examines the system kernel of a modern operating system including the file structure and implementation, the process structure and process scheduling, memory management policies, and the I/O subsystem. This course also covers the system call interface to the system kernel and various inter-process communication schemes.

### **CS 04.394: Distributed Systems**

**3 s.h.**

*Prerequisites: CS 06205 and CS 04222 or ECE 09242 and CS 04225*

This course will introduce students to the Distributed System ?a network of (possibly autonomous) computers that cooperatively solve single problems or facilitate parallel execution of related tasks. Key topics of study include Distributed Systems Architecture, Distributed Resource Management, and Accessing Distributed Resources. Students will participate in algorithm, process and system design for distributed systems.

### **CS 04.400: 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 04.401: Compiler Design**

**3 s.h.**

*Prerequisites: CS 04315 and CS 07210*

This course presents theory of compiler design, syntax-directed translation, and code generation. Students design a compiler for a subset of a high-level programming language.

### **CS 04.430: Database Systems: Theory and Programming**

**3 s.h.**

*Prerequisites: CS 07340*

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 06.205: 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 06.310: 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 06.311: 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 06.410: Data Communications and Networking**

**3 s.h.**

*Prerequisites: CS 07340 and STAT 02360*

Students in this upper-division course will study the principles of data communications and important network architectures and protocols. Its topics include: the advantages of networking, major network architectures, protocol reference models and stacks, the Data Link Layer, the Network Layer, the Transport Layer, and the Internet. Additional topics may include: local, metropolitan and wide area networks; wireless, telephone and cellular networks; network security; and network programming. Students complete a networking team project.

## Courses

### **CS 06.412: Advanced Computer Architecture**

**3 s.h.**

*Prerequisites: CS 06310*

This is an advanced course in computer architecture designed to expand the knowledge gained by students in the Principles of Digital Computers course. The topics include various performance enhancement techniques such as DMA, I/O processor, cache memory, multiport memories, RISC, pipelining, and various advanced architectures such as high-level language architecture, data-flow architecture, and multiprocessor and multi-computer architectures. This course also allows detailed examination of one or two contemporary computers.

### **CS 06.415: Wireless Networks, Protocols and Applications**

**3 s.h.**

*Prerequisites: CS 06410*

This course prepares students to understand wireless networks systems, and the underlying communications technologies that make them possible. The course covers descriptive material on wireless communications technologies, and important deployed and proposed wireless networks and systems. Wireless system performance and Quality of Service capabilities are addressed. Students will prepare and deliver technical presentations on state-of-the-art topics in wireless networks and systems.

### **CS 06.416: TCP/IP and Internet Protocols and Technologies**

**3 s.h.**

*Prerequisites: CS 06410*

This is an advanced computer networking course that will expand students knowledge received in the Data Communications and Networking course. This course will examine operation of the TCP/IP protocol as well as design and architecture of the Internet. This course will cover such topics as: Medium access protocols, address resolution protocols, Internet Protocol (IP), Quality of Service, Transport Protocol, and congestion control mechanisms. This course will also include selected topics on network security and network management. Students will prepare and deliver technical presentations on state-of-the-art research topics in the Internet.

### **CS 07.210: Foundations of Computer Science**

**3 s.h.**

*Prerequisites: MATH 01122 and MATH 03160 and CS 04222 or MATH 01130 and MATH 03160 and CS 04222*

This course provides an introduction to the theoretical foundations of computer science, including finite automata, context-free grammars, Turing machines, and formal logic.

### **CS 07.310: Robotics**

**3 s.h.**

*Prerequisites: CS 04113 and CS 04222 or CS 04113 and ENGR 01202 or MATH 01210 or MATH 01236*

This course provides an introduction to the fundamentals of robotics. Students will study robot manipulators and mobile robots, robot sensors, and robot cognition. Students will also gain experience programming in small groups, and programming in a domain where noisy and imprecise data is commonplace.

### **CS 07.321: Software Engineering I**

**3 s.h.**

*Prerequisites: CS 04222 and CMS 06202 and STAT 02360 or ECE 09242 and CMS 06202 and STAT 02360*

An introduction to the discipline of Software Engineering. Students will explore the major phases of the Software Lifecycle, including analysis, specification, design, and 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 07.322: Software Engineering II**

**3 s.h.**

*Prerequisites: CS 07321*

Students will apply their knowledge from Software Engineering to develop an advanced software system, working in teams. The project will be taken through each of the major software development phases and student teams will create appropriate deliverables for each phase. Advanced modern software engineering topics such as critical systems, real-time systems, formal specification and validation, and project management will be covered.

### **CS 07.340: 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 07.350: Computer Cryptography**

**3 s.h.**

*Prerequisites: CS 07210*

This course introduces students to the principles and practices which are required for secure communication: cryptography, cryptanalysis, authentication, integrity, and digital certificates. Mathematical tools and algorithms are used to build and analyze secure cryptographic systems with computers. Social, political, and ethical aspects of cryptography are also covered.

## Courses

### **CS 07.360: Introduction to Computer Graphics**

**3 s.h.**

*Prerequisites: CS 04315 and MATH 01210*

This junior/senior level course covers such topics as fundamentals of graphics devices; use of graphics language/packages; windowing and clipping; geometrical transformation in 2- and 3-D; raster display algorithms; hidden line and surface elimination; animation.

### **CS 07.370: Introduction to Information Visualization**

**3 s.h.**

*Prerequisites: MATH 01210 or MATH 01236*

This is a junior/senior level course that introduces basic elements of 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, and focus+content 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 implement and document a large software project related to information visualization.

### **CS 07.380: Introduction to Computer Animation**

**3 s.h.**

*Prerequisites: MATH 01210 or MATH 01236 and PHYS 02200*

This is a junior/senior level course that takes a look at Computer Animation from a programmers perspective. It will investigate the theory, algorithms, and techniques for describing and programming motion for virtual 3D worlds. Approaches that will be explored include keyframing systems, kinematics, motion of articulated figures, and procedural and behavioral systems. This course includes the implementation of techniques presented in lecture. Students are encouraged to devise new techniques, implement them, and determine their effectiveness. Students will be required to implement and document a large software project related to computer animation.

### **CS 07.422: 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 07.450: Artificial Intelligence (AI)**

**3 s.h.**

*Prerequisites: MATH 03160 and CS 04222 and CS 07210*

AI studies methods for programming "intelligent" behavior in computers. Students study the data representation methods and algorithms used in AI, and survey research areas such as puzzle solving, game-playing, natural language processing, expert systems, and learning. In addition to readings, discussion, and problem solving in AI, students will be expected to program in one of the languages commonly used in AI, such as LISP or Prolog.

### **CS 07.460: Computer Vision**

**3 s.h.**

*Prerequisites: CS 04103 and MATH 01210 and STAT 02360*

This course examines the fundamental issues in computer vision and major approaches that address them. The topics include image formation, image filtering and transforms, image features, mathematical morphology, segmentation, camera calibration, stereopsis, dynamic vision, object recognition and computer architectures for vision.

### **CS 07.470: Theory and Applications of Pattern Recognition**

**3 s.h.**

This class will introduce a broad spectrum of pattern recognition algorithms along with various statistical data analysis and optimization procedures that are commonly used in such algorithms, with particular emphasis to engineering applications. Although mathematically intensive, pattern recognition is nevertheless a very application driven field. This class will therefore cover both theoretical and practical aspects of pattern recognition, Bayes decision theory for optimum classifiers, density estimation techniques, discriminant analysis, basic optimization techniques, introduction to basic neural network structures, unsupervised clustering techniques and more state of the art algorithm independent techniques.

### **CS 99.300: Computer Field Experience**

**3 to 9 s.h.**

Students are assigned projects in a professional environment.

## Courses

## Early Childhood Education

### **ECED 23.220: Inquires into Teaching and Learning in Early Childhood Education and Early Childhood Special Education** 3 s.h.

This course is a broad overview of the field of early childhood education and the issues that affect it. Students are introduced to the impact of historical, political, social and economic issues on the classroom. Standards, philosophies, theories, and teaching and learning principles that underpin early childhood education are revealed to enable students to begin developing a personal philosophy of how children learn. The course has four themes: Learners and Learning, Knowledge and Knowing, Teachers and Teaching, Schools and Schooling. Each theme is examined through autobiography, diversity, collaboration, and reflection. This course includes field visits in multiple settings. Offered in the Fall.

### **ECED 23.221: Family, Community and School Relationships** 3 s.h.

*Prerequisites: ECED 23220*

This course is designed to heighten students' awareness of the roles family and community have on a child's success in school. Students will develop the understanding that all children must be seen in the context of their community environment, including their families, schools, communities, and the wider society. Students will be challenged to grasp the complex web of relationships and influences that comprise the child's worldview and to develop skills in working effectively with all elements of that web in order to provide positive educational outcomes for the child. This course will include frequent field visits. Course offered in the Spring.

### **ECED 23.320: Growth and Learning: The PreSchool Age Child, Birth - 5** 3 s.h.

*Corequisites: READ 30320 Prerequisites: PSY 09209 and ECED 23221*

This course will build upon General Education coursework (Child Development, Educational Psychology, and Introduction to Psychology). Students will use practical applications that stem from these foundational courses to understand how young school age children grow and learn from Birth through age 5. Students will be able to apply theories of typical and atypical child development in early childhood preschool and care settings with direct implications for teaching, learning and care. Students will be able to use developmentally appropriate practice as a foundation for planning and decisions. Students will recognize that children are best understood in the contexts of family, culture, and society and be able to articulate teaching and learning strategies that affirm and respect all children. Field visits will be required. Course offered in the Fall.

### **ECED 23.321: Planning, Integrating, and Adapting Curriculum - Math and Science** 3 s.h.

*Prerequisites: ECED 23320 and ECED 23322*

This course will start from the perspective of the pre-service early childhood teacher educator and explore their experiences learning science and mathematics. Students will reflect on their own prior experiences with math and science and discover the impact of those experiences on their feelings of efficacy. Students will experience teaching strategies and processes that they are expected to master and use in teaching math and science to young children. Within an integrated framework, students will develop the conceptual knowledge base that they need in order to design a coherent science and mathematics program with developmentally appropriate activities and expectations. This course involves field trip visits.

### **ECED 23.322: Growth and Learning: The Primary Grade Child K-3** 3 s.h.

*Prerequisites: READ 30320 and ECED 23321*

This course will continue to build upon General Education coursework (Child Development, Educational Psychology, and Introduction to Psychology). Students will use practical applications that stem from these foundational courses to understand how young school age children grow and learn from Kindergarten through third grade. Students will be able to apply theories of typical and atypical child development in the classroom with direct implications for teaching and learning. Students will be able to use developmentally appropriate practice as a foundation for planning and decisions. Students will recognize that children are best understood in the contexts of family, culture, and society and be able to articulate teaching and learning strategies that affirms and respects all children. Field visits will be required.

### **ECED 23.430: Observation, Assessment, and Evaluation of Diverse Learners** 3 s.h.

*Corequisites: ECED 23431 Prerequisites: ECED 23322*

In this course students learn how to identify, select, implement, evaluate, interpret, and integrate appropriate informal and formal assessment strategies. Students will plan and individualize curriculum and teaching practices in the major areas of assessment, including cognitive, social-emotional, communication, motor, adaptive, and aesthetic development. Further, the student will learn how to communicate and integrate assessment results from others as an active part in the development and implementation of IEP and IFSP goals for children with special developmental learning needs. This course includes field visits.

## Courses

### **ECED 23.431: Planning, Integrating and Adapting Curriculum across Content Areas** 3 s.h.

*Corequisites: ECED 23430 Prerequisites: ECED 23322*

This curriculum course considers the areas of Social Studies, Music, Movement, Art, and Drama as disciplines with a major focus on, the integration of curriculum in a rich learning environment. Students will understand the interdisciplinary nature of curriculum for young children, design classroom communities that enhance learning by creating environments that reflect the standards. Further, students will learn and practice the art of facilitating classroom learning centers and classroom activities. Finally, students will be able to identify, select, and plan developmentally appropriate activities and expectations. Students will demonstrate effective teaching strategies and the ability to plan units, themes, and lessons using behavioral objectives and a systematic thought process for planning. Field experiences will take place on alternate weeks for knowledge and skill application and understanding.

## Economics

### **ECON 04.100: American Economic Systems** 3 s.h.

Focuses on the fundamental ideology, mechanics, development, and contemporary state of American economic system with reference to the global economy. Course is recommended for all students who want only a one semester course in economics.

### **ECON 04.101: An Introduction to Economics-A Macroeconomic Perspective** 3 s.h.

This course analyzes the overall level of economic activity in the United States and examines its major determinants, public stabilization policies, economic growth and international trade.

### **ECON 04.102: An Introduction to Economics-A Microeconomic Perspective** 3 s.h.

This course analyzes resource allocation among alternative uses. It studies consumer demand, product and factor price determination, general equilibrium and optimal income distribution.

### **ECON 04.200: History of Economic Ideas** 3 s.h.

*Prerequisites: ECON 04101*

This course investigates the development of economic thought. It analyzes the significant contribution of philosophers and economists from the works of Plato to those of Keynes.

### **ECON 04.205: American Economic History** 3 s.h.

*Prerequisites: ECON 04101*

This course surveys the process of U.S. economic development to the present day. It analyzes the factors behind the growth of the U.S. economy and the prospects for the future. This course may not be offered annually.

### **ECON 04.210: Environmental Economics** 3 s.h.

*Prerequisites: ECON 04102*

This course analyzes the economic causes and consequences of environmental deterioration and examines the relevant public policies. This course may not be offered annually.

### **ECON 04.215: Current Economic Problems and Policies** 3 s.h.

*Prerequisites: ECON 04101 and ECON 04102*

This course explores current significant problems confronting the United States' economy. This course may not be offered annually.

### **ECON 04.225: Women in the Economy** 3 s.h.

This course analyzes the economic roles of women in society and studies recent movements, policies and their implementation. This course may not be offered annually.

### **ECON 04.269: Selected Topics in Economics** 3 to 6 s.h.

*Prerequisites: ECON 04101 or ECON 04102*

This course focuses on a detailed study of a selected topic in economics. Students should consult the instructor regarding the course topic, methodology, and objectives. Any particular selected topic(s) may be offered once within a period of three years.

## Courses

### **ECON 04.282: Economic Statistics**

**3 s.h.**

*Prerequisites: ECON 04101 and ECON 04102 and STAT 02100 or STAT 02260*

This course studies statistical decision-making, linear regression, correlation and the construction and use of index numbers and time series through the explicit use of economic examples, illustrations and applications.

### **ECON 04.301: Intermediate Macroeconomics**

**3 s.h.**

*Prerequisites: ECON 04101*

This course analyzes in depth the factors determining the level of national income, employment, price levels and interest rates.

### **ECON 04.302: Intermediate Microeconomics**

**3 s.h.**

*Prerequisites: ECON 04102*

This course analyzes factor price determination, general equilibrium, capital theory and optimal income distribution.

### **ECON 04.303: Principles of Economics: Global Perspective**

**3 s.h.**

This course analyzes the market system and alternative mechanisms for determining prices and allocating resources. Pure competition, monopolistic competition, oligopoly and monopoly are examined. Additionally, the determinants of aggregate employment and national income, money, banking, monetary policy, international trade and finance are analyzed. This course is not available to economics majors.

### **ECON 04.305: Money and Banking**

**3 s.h.**

*Prerequisites: ECON 04101*

This course studies the operation of the money and banking system in the U.S. It stresses Federal Reserve control of money supply and credit conditions to combat inflation and unemployment. It considers monetary arrangements and problems among nations. This course may not be offered annually.

### **ECON 04.307: Economic Development M/G**

**3 s.h.**

*Prerequisites: ECON 04101 and ECON 04102*

This course studies the process of economic growth, the sources of increasing economic productivity, the resources for investment and the proper allocation of resources. This course may not be offered annually.

### **ECON 04.310: Global Economics**

**3 s.h.**

*Prerequisites: ECON 04101 and ECON 04102*

This course studies the economic aspects of globalization taking place amongst countries through linkages of international trade and commerce, foreign direct investment, short term capital flows, institutional lending, immigration, emigration, knowledge, and technology. Emphasis will be placed on the economic processes and ramifications of globalization. This course may not be offered annually.

### **ECON 04.315: Public Finance**

**3 s.h.**

*Prerequisites: ECON 04101 and ECON 04102*

This course investigates taxes and debts of government, its budgets and intergovernmental fiscal relationships and public expenditure theory (cost-benefit analysis). This course may not be offered annually.

### **ECON 04.320: Contemporary Economic Systems M/G**

**3 s.h.**

*Prerequisites: ECON 04101 and ECON 04102*

This course analyzes theories, policies and practices of selected countries and methods of solving macroeconomic and microeconomic problems. This course may not be offered annually.

### **ECON 04.345: Labor Economics**

**3 s.h.**

*Prerequisites: ECON 04102*

This course studies the development of the American trade union movement and its impact on wage levels and income distribution. It examines the impact of trade unions on individual employers in the private and public sectors with the help of simulation of contract negotiation. This course may not be offered annually.

### **ECON 04.351: Health Economics**

**3 s.h.**

*Prerequisites: ECON 04101 and ECON 04102*

An economic analysis of the health care industry and the roles of markets and government are examined. Topics to include access to care, cost containment, the role of insurance, and the impact of information and technology.

## Courses

### **ECON 04.360: Urban Economics**

**3 s.h.**

*Prerequisites: ECON 04102*

This course analyzes the economic problems that are related to the urban crisis in America and examines the implications of existing public policies for the resolution of the problems. Urban poverty and discrimination, housing and transportation receive comprehensive treatment. This course may not be offered annually.

### **ECON 04.390: Risk and Insurance**

**3 s.h.**

*Prerequisites: ECON 04101 and ECON 04102*

This course introduces students to an economic approach to the nature of risk, the methods of risk treatment, the insurance mechanism, personal risks, business risks, social risks, the functional aspects of insurance, as well as the regulation of the insurance industry.

### **ECON 04.395: The Economics of Personal Financial Planning**

**3 s.h.**

*Prerequisites: ECON 04101 and ECON 04102*

This course examines the process of developing and implementing long-range plans to achieve financial objectives. Studies personal and family resources, how people spend, save, protect and invest their money, concepts of budgeting, cash management, borrowing, tax management, risk management, investments, retirement planning, and estate planning receive particular attention.

### **ECON 04.410: Internship in Economics**

**3 s.h.**

This course provides practical experience for the economics major. The student is placed in supervised settings in business, government or other organizations. Interns will develop their skills in applying various economic theories, principles and/or concepts to assigned real world problems. The faculty in the Economics Department will closely supervise, monitor, and evaluate the learning experience.

### **ECON 04.492: Seminar in Economics WI**

**3 s.h.**

*Prerequisites: ENGL 01112 or COMP 01112*

This course develops the interrelationships of various theoretical and applied areas within the study of economics through the techniques of research design.

## Education

### **EDPA 02.320: Public Administration**

**3 s.h.**

Students consider public administration principles and organizations, internal governmental administrative structures, the interactions between organizations and their environments, personnel and policy procedures, administrative communication methods, and other management techniques. This course may not be offered annually.

### **EDPA 02.410: Public Policy**

**3 s.h.**

Students analyze U.S. public policy using a variety of conceptual models including cost-benefit analysis. Case studies are emphasized. This course may not be offered annually.

### **EDPA 02.412: Administrative Law and the Regulatory Process**

**3 s.h.**

A study of the federal regulatory process and the politics of regulatory agencies in the U.S. Emphasis is upon the political economy of regulation. This course may not be offered annually.

### **EDPA 02.490: Public Service Internship**

**3 to 12 s.h.**

*Prerequisites: EDPA 02320 or POSC 07300 or POSC 07303*

Students are provided with an opportunity to get first-hand experience in government administration and related political processes through work in a variety of public settings (government agencies, public officials' offices, law firms, etc.).

### **EDSU 28.100: Leadership Theory**

**3 s.h.**

This course is an introduction into the academic study of leadership from a theoretical perspective that broadly examines the historical, social, and political context of leadership as a concept and process.

## Courses

### **EDSU 28.205: Leadership Seminar I**

**2 s.h.**

*Prerequisites: EDSU 28100*

This seminar joins leadership theory and practice by requiring students to explore leadership issues in an active, hands-on way. The course will provide students with a more in-depth understanding of leadership as it relates to various settings, including their major discipline, and will require students to write persuasively in a leadership way.

### **EDSU 28.305: Leadership Seminar II (capstone)**

**3 s.h.**

*Prerequisites: EDSU 28100 and EDSU 28205*

This seminar provides students with a greater understanding of and appreciation for leadership as a change process along with various factors influencing that process. Focuses on the development of skills needed to manage change in organizations.

### **EDUC 01.102: Learning Communities**

**2 s.h.**

This course provides an introduction to the Co-Teach program and learning communities. Through it, students will develop an understanding of how a learning community operates and what is required to be a successful participant. Students will also learn and practice the skills of collaboration through classroom and clinical experiences. This course, and its companion--Foundations of Education--form the foundation on which the rest of the program is built.

### **EDUC 01.103: Foundations of Education**

**2 s.h.**

*Prerequisites: EDUC 01102*

In this course, students will continue their study of learning communities begun in the Learning Communities course by addressing potential problems and examining learning communities in operation with careful consideration of how pedagogy, curriculum, and classroom management interact to make them effective. Students will also receive an introduction to the historical, philosophical, political, economic, legal, and sociological foundations of education with an emphasis on the issues of diversity and equity.

### **EDUC 01.104: Teaching: An Introduction to the Profession**

**3 s.h.**

This case-based introductory course is designed for students considering a career in teaching. It guides students through the profession, its foundations, realities, challenges, and rewards. Students will evaluate classroom practices using case studies, video methodology, and online resources. They will participate in ten (10) hours of field-based observations.

### **EDUC 01.200: Literacy, Learning and Curriculum**

**6 s.h.**

*Prerequisites: EDUC 01102 and EDUC 01103*

This course is a continuation of the sequence of courses in the Co-Teach program. This course builds knowledge about literacy and literacy development as it pertains to regular and special education. The focus of the course is to integrate the major concepts of curriculum development and literacy. The emphasis will be on the interface between literacy development and social studies through appropriate curricular planning. An observational field experience will be required.

### **EDUC 01.300: Instructional Planning and Collaboration**

**3 s.h.**

*Prerequisites: EDUC 01200*

This course focuses on developing a thematic unit plan in the area of literacy. Students learn about various instructional approaches and how to select the best approach for a specific student. Students identify new developments in the field of technology and their applications in teaching all children. Students participate in a literacy clinic in which they will work with children experiencing difficulty in some aspect of literacy, related to their field placement.

### **EDUC 01.301: Instructional Implementation and Collaboration**

**3 s.h.**

*Prerequisites: EDUC 01102 and EDUC 01103*

During the spring semester, the focus is on instructional implementation and collaboration. Students learn about collaborative problem-solving models and participate in a problem-solving activity. Students learn how to design, structure and manage daily classroom routines. They also learn about the principles of action research and develop an action research project.

### **EDUC 01.400: Teaching in Inclusive Classrooms**

**4 s.h.**

*Prerequisites: EDUC 01300 and EDUC 01301*

This course is designed to enable students in the Collaborative Education major to develop and implement methods for teaching, managing, and evaluating children with special needs. Students will learn about the impact of specific disabilities on learning and behavior, the rationale for inclusive education, and academic adaptations for children with special needs. Students will be responsible for developing and implementing instructional and/or behavior management adaptations in their field placements and reporting on these to the class.

## Courses

### **EDUC 01.401: Developing and Adapting Instruction in Elementary Classrooms** 4 s.h.

*Prerequisites: EDUC 01300 and EDUC 01301*

This course is designed to prepare teacher candidates to use a variety of teaching models and strategies to make mathematics and science instruction accessible to all students. Instructional standards developed by NCTM and NSTA will be reviewed. A technology component addressing the use of technology as a tool for teachers and learners will be incorporated. Issues of equity, curriculum integration, collaboration, and reflection will be emphasized in both course and field assignments. The course includes a field assignment in an inclusion classroom.

### **EDUC 01.402: Developing and Adapting Assessment for all Learners** 3 s.h.

*Prerequisites: EDUC 01300 and EDUC 01301 and EDUC 01401*

The course emphasizes the link between assessment and instructional decisions for learners at a variety of academic and functional levels. Prospective classroom teachers will learn how to routinely use curriculum-based and authentic assessment techniques. Although the emphasis of this course is on informal assessment, an introduction to standardized tests and statistical factors in testing is included. Teacher candidates will develop informal assessment measures in conjunction with their field placement responsibilities.

### **FNDS 21.150: 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 21.230: 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 21.300: Intercultural Studies in Foundations of Education** 3 s.h.

Students examine the ways and areas in which ethnic groups in schools are experiencing success, controversy and crisis. Themes of this course focus on both large city and small city schools. Other central themes relate to cultural conflicts in the school resulting from the imposition of value and behavior patterns on another group. (May not be taken in lieu of Educational Policy II)

### **FNDS 21.308: Group Theory and Behavior in Instruction** 3 s.h.

Students study the interactive process in group instruction. They use social and psychological theories related to group process to help them gain understanding and skills in teaching effectively in group situations including the total classroom group.

### **FNDS 21.320: Urban Educational Trends** 3 s.h.

Students examine the many ways urban education is in a state of crisis. Course themes examine how city schools are being condemned, assessed and analyzed as never before and how city schools accommodate vast numbers of students but fail to provide satisfactory programs for at least one-third of these students.

### **FNDS 21.380: Educational Sociology** 3 s.h.

Students explore the application of sociological and anthropological data to the institution, processes, structure and function of formal education in a complex industrialized society.

### **SMED 31.350: Elementary Art Methods: Teaching and Learning Art A** 3 s.h.

*Prerequisites: EDUC 01270 and EDUC 01282*

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.

## Courses

### **SMED 31.360: 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 31.450: 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 31.451: 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 a priori that will enable the integration of applied art classroom experiences during the subsequent weeks of student teaching and; creates a forum for students to process new experiences in the elementary, middle and secondary schools with art professionals who share an understanding of the context in the art classroom. Interviewing skills and a professional portfolio will be developed during this course.

### **SMED 32.218: Vocal Pedagogy**

**3 s.h.**

*Prerequisites: MUS 04130 and MUS 04131*

An analysis is made of the various methods used in the teaching of voice.

### **SMED 32.219: Piano Pedagogy**

**1 s.h.**

Method books for beginners and elementary students are examined and compared. The pedagogy of piano technique and interpretation is emphasized. Must be preceded by freshman and sophomore piano class or waiver of these requirements. This course may not be offered annually.

### **SMED 32.329: Teaching/Learning Music A: Elementary General Music**

**3 s.h.**

*Prerequisites: MUS 04130 and MUS 04131 and MUS 04132 and MUS 04133 and MUS 04240 and MUS 04241 and MUS 04242 and MUS 04243*

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 32.330: 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 32.331: 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 32.411: 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.

## Courses

### **SMED 32.412: 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 32.440: Marching Band Techniques**

**3 s.h.**

Fundamentals of precision marching and marching maneuvers along with new materials and techniques for the half-time show

### **SMED 33.201: Computers for Teachers**

**3 s.h.**

This course surveys the history of computers, how they work and the range of present applications. The course explores the economic, psychological and social significance of computers in education. Students will study the types of computer related learning which are in use or under development. Students will use, analyze and see software, hardware and multimedia systems demonstrated.

### **SMED 33.330: Teaching/Learning A: Mathematics**

**3 s.h.**

*Corequisites: SECD 03330 and SPED 08316*

This first in a sequence of two three-credit courses is designed for students majoring in mathematics and planning careers as K-12 mathematics teachers. Teacher candidates will learn to organize instructional materials into standards-based mathematics units and daily lessons focused on scaffolding learning experiences in number sense, operations, and algebraic thinking. In conjunction with a co-requisite practicum, this course includes both community- and public school-based experiences dealing with a range of topics necessary to building a functioning learning community, including mathematics pedagogy and praxis, learner diversity, lesson and unit planning, and national and state standards for mathematics.

### **SMED 33.331: Teaching/Learning B: Mathematics**

**3 s.h.**

*Corequisites: SECD 03332 Prerequisites: SMED 33330*

This second in a sequence of two three-credit courses is designed for students majoring in mathematics and planning careers as K-12 mathematics teachers. Teacher candidates will learn to organize instructional materials into standards-based mathematics units and daily lessons focused on scaffolding learning experiences in geometry, measurement, probability, statistics, and discrete mathematics. In conjunction with a co-requisite practicum, this course includes both community- and public school-based experiences dealing with a range of topics necessary to building a functioning learning community, including mathematics pedagogy and praxis, learner diversity, lesson and unit planning, and national and state standards for mathematics.

### **SMED 33.420: 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 N-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 33.451: Pedagogy III: Practicum in Secondary Mathematics Teaching**

**5 s.h.**

*Prerequisites: SECD 03201 and REED 30319 or SECD 03201 and REED 30310*

(Check with department for semester offered) The five-credit, junior-level course is designed for students majoring in mathematics and planning a career as a secondary school mathematics teacher. It includes both campus and public school experience dealing with a wide variety of topics including mathematics pedagogy, short and long range planning, classroom management, and the development of instructional and evaluative techniques specific to teaching mathematics. This course introduces students to the nature and operation of the modern secondary school, including the responsibilities of the secondary teacher, the guidance counselor, school administrators and other professional specialists. Students learn to organize instructional materials into meaningful units and daily lessons in their areas of specialization.

### **SMED 34.330: Teaching/Learning A: Science**

**3 s.h.**

*Prerequisites: SPED 08316 or SECD 03330*

This second in a sequence of two three-credit courses, in conjunction with the matching field experience/practicum, will spiral through the course content areas using the AAAS theme of science for all Americans as the guiding goal for K-12 science and the National and New Jersey Science Standards as the means to reach specific objectives for our prospective teachers and their future students. This course concentrates on content and process defined by New Jersey Science Standards for grades K-8.

## Courses

### **SMED 34.331: Teaching/Learning B: Science**

**3 s.h.**

*Prerequisites: SMED 34330 and SECD 03330 Minimum Grade of C and SECD 03332*

This second in a sequence of two three-credit courses, in conjunction with the matching field experience/practicum, will spiral through the course content areas using the AAAS theme of science for all Americans as the guiding goal for K-12 science and the National and New Jersey Science Standards as the means to reach specific objectives for our prospective teachers and their future students. This course concentrates on content and process defined by New Jersey Science Standards for grades 9-12.

### **SMED 38.330: Teaching/Learning A: Business**

**3 s.h.**

*Prerequisites: SECD 03330 or SPED 08316*

This first in a sequence of two three-credit courses is designed for students majoring in business and planning careers as K-12 business teacher. Teacher candidates will learn to organize instructional materials into standards-based business units and daily lessons focused on scaffolding learning experiences in career development, communication, computation, personal finance and information technology. In conjunction with a co-requisite practicum, this course includes both community- and public school-based experiences dealing with a range of topics necessary to building a functioning learning community, including business pedagogy and praxis, learner diversity, lesson and unit planning, and national and state standards for business education.

### **SMED 38.331: Teaching/Learning B: Business**

**3 s.h.**

*Prerequisites: SMED 38330 and SECD 03330 Minimum Grade of C and SECD 03332*

This second in a sequence of two three-credit courses is designed for students majoring in business and planning careers as K-12 business teachers. Teacher candidates will learn to organize instructional materials into standards-based units and daily lessons focused on scaffolding learning experiences in accounting, business law, economics, entrepreneurship, international business, management, and marketing. In conjunction with a co-requisite practicum, this course includes both community- and public school-based experiences dealing with a range of topics necessary to building a functioning learning community, including business pedagogy and praxis, learner diversity, lesson and unit planning, and national and state standards for business education.

### **SMED 50.330: Teaching/Learning A: English Language Arts**

**3 s.h.**

*Prerequisites: SECD 03330 or SPED 08316*

This first of two content-specific pedagogy courses, this one with a middle school emphasis, is designed for teacher candidates majoring in English and planning careers as K-12 English language arts teachers. In conjunction with a co-requisite practicum, the course includes building a functioning learning community, including English language arts pedagogy, national and New Jersey standards for English language arts, lesson and unit planning, classroom management, and attention to learning among the diverse populations who attend New Jersey schools.

### **SMED 50.331: Teaching/Learning B: English Language Arts**

**3 s.h.**

*Corequisites: SECD 03332 Prerequisites: SMED 50330*

This second of two content-specific pedagogy courses, this one with high school emphasis, is designed for teacher candidates majoring in English and planning careers as K-12 English language arts teachers. In conjunction with a co-requisite practicum, the course includes both campus and public school-based experiences dealing with a range of topics necessary to building a functioning learning community, including English language arts pedagogy, national and New Jersey standards for English language arts, lesson and unit planning, classroom management, and attention to learning among the diverse populations who attend New Jersey schools.

### **SMED 51.330: Teaching/Learning A: Foreign Languages**

**3 s.h.**

This course is the first of two sequential junior level courses designed for the teacher candidate preparing to teach foreign languages K-12. The focus of this course is the instruction of students at the novice level of proficiency at any grade level. The course treats a variety of topics essential to development of the knowledge, skills, and dispositions of the professional foreign language teacher, including second language acquisition, content selection and organization, and contemporary instructional strategies. The course includes public school based experiences in both elementary and secondary school levels.

### **SMED 51.331: Teaching/Learning B: Foreign Language**

**3 s.h.**

*Corequisites: SECD 03332 Prerequisites: SMED 51330 Minimum Grade of C*

This course is the second of two sequential junior level courses designed for the teacher candidate preparing to teach foreign languages K-12. The focus of this course is the instruction of students at the intermediate level of proficiency. The course treats a variety of topics essential to development of the knowledge, skills, and dispositions of the professional foreign language teacher, including second language acquisition, content selection and organization, and contemporary instructional strategies. The course includes public school based experiences in the secondary school.

## Courses

### **SMED 52.330: Teaching/Learning A: Social Studies**

**3 s.h.**

*Prerequisites: SECD 03330 or SPED 08316*

This first in a sequence of two three-courses is designed for students majoring in one of the social studies disciplines and planning careers as K-12 social studies teachers. Teacher candidates will learn to organize instructional materials into standards-based social studies units and daily lessons appropriate for the elementary and middle school grades. In conjunction with a co-requisite practicum, this course includes both community- and public school-based experiences dealing with a range of topics necessary to building a functioning learning community in social studies classrooms, including an introduction to theories of social studies education, standards-based lesson and unit planning, social studies pedagogy, classroom management, and learner diversity.

### **SMED 52.331: Teaching/Learning B: Social Studies**

**3 s.h.**

*Corequisites: SECD 03332 Prerequisites: SMED 52330 Minimum Grade of C*

This second in a sequence of two three-credit courses is designed for teacher candidates majoring in one of the social studies disciplines and planning careers as K-12 social studies teachers. Building upon understandings of elementary and middle-grade content and instructional planning as developed in Teaching and Learning A, teacher candidates will learn to create standards-based social studies units and daily lessons for the middle and/or high school grades. In conjunction with a co-requisite practicum, this course includes both community- and public school-based experiences dealing with a range of topics necessary to building a functioning learning community in social studies classrooms, including standards-based lesson and unit planning, social studies pedagogy, classroom management, learner diversity, and ongoing professional development.

## Electrical and Computer Engineering

### **ECE 09.201: Network I**

**2 s.h.**

*Prerequisites: CS 04103 and MATH 01131 and PHYS 02200 and MATH 01235*

Covers basic network principles, network laws and analysis methods, including steady-state and transient responses of passive networks, with independent and dependent sources. Op amps are covered as examples of active electronic networks. Computer-aided analysis and simulation tools are presented as methods to augment network analysis and design.

### **ECE 09.202: Network II**

**2 s.h.**

*Prerequisites: ECE 09201*

Extends network analysis principles including ac sources, transformers, and polyphase networks. The Laplace transform is developed as a method for obtaining the transient and steady-state response of a network. The frequency response of a transfer function is analyzed using Bode plots. The Fourier transform technique is used to determine the response of networks to periodic inputs. Computer-aided analysis and simulation tools are presented as methods to augment network analysis and design.

### **ECE 09.241: Digital I**

**3 s.h.**

*Prerequisites: CS 04103 and ECE 09201*

The first course in digital systems covering boolean algebra, switching theory, minimization, asynchronous and synchronous network design, hardware design using state equations in a simulation and development environment. The course also treats applications of digital system design.

### **ECE 09.242: Digital II: Microprocessors**

**3 s.h.**

*Prerequisites: ECE 09241 Minimum Grade of C*

The second course in digital systems covering principles of computer systems design including hardware and software. The course also treats applications of computer design.

### **ECE 09.301: Engineering Electromagnetics I**

**2 s.h.**

*Prerequisites: ECE 09202 Minimum Grade of C and PHYS 02200 and MATH 01236*

The first course in engineering electromagnetics covering applications of electrostatics, magnetostatics and quasi-statics in contemporary electrical engineering practice. The course also covers numerical modeling of electromagnetic systems using appropriate software.

### **ECE 09.302: Engineering Electromagnetics II**

**2 s.h.**

*Prerequisites: ECE 09202 Minimum Grade of C and MATH 01236 and ECE 09301*

The second course in engineering electromagnetics covering applications of electromagnetic wave propagation in contemporary electrical engineering practice. The course also covers numerical modeling of electromagnetic systems using appropriate software.

## Courses

### **ECE 09.311: Electronics I**

**2 s.h.**

*Prerequisites: ECE 09201 Minimum Grade of C*

The first course in electronic devices and circuit design covers the fundamentals of circuits involving diodes, bipolar junction transistors and field effect transistors in a simulation and laboratory environment. The basics of circuit operation and modeling are covered along with applications to multistage amplifier design. The SPICE software is used as a simulation tool.

### **ECE 09.312: Electronics II**

**3 s.h.**

*Prerequisites: ECE 09311 Minimum Grade of C*

This is an advanced course in the operation of the components that constitute the building blocks of electronic devices: diodes, transistors, and operational amplifiers. This course will expand upon the applications in which these devices are used and introduce Very Large Scale Integration (VLSI) circuit design and layout with a focus on Complementary Metal Oxide Semiconductor (CMOS) technology. Experiments in the laboratory and simulation of circuits, systems and testing strategies will complement and supplement the theory taught in class.

### **ECE 09.321: Systems and Control I**

**3 s.h.**

*Prerequisites: ECE 09202 Minimum Grade of C and MATH 01236*

The first course in control systems introduces the fundamental concepts of linearity, time-invariance, stability and the transfer function. Mathematical and circuit equivalence of different systems (electrical, mechanical, fluidic, and thermal) are established. A thorough treatment of stability through the Routh-Hurwitz, root locus and Nyquist criterion is given. Frequency response analysis by means of the Bode plot is also covered. Software simulation primarily with MATLAB and laboratory experiments will complement and supplement the theory.

### **ECE 09.322: Systems and Controls II**

**3 s.h.**

*Prerequisites: ECE 09321*

This course is a continuation of Systems and Controls I with the focus on multi-input, multi-output systems. The fundamental concepts of linearity and time-invariance are introduced. The state-space description and the concept of a matrix transfer function are studied in depth, especially with respect to stability. The concepts of controllability, observability, and realizations are covered. Numerical techniques are continuously emphasized. Optimal control and nonlinear systems are also discussed. Software simulation, primarily with MATLAB and laboratory experiments, will complement and supplement the theory.

### **ECE 09.331: Electrical Communication Systems**

**4 s.h.**

*Prerequisites: ECE 09202 Minimum Grade of C and MATH 01235*

This is a junior level undergraduate course that covers the fundamentals of analog and digital communication systems. Analog and digital modulation techniques are covered along with optimal receivers, concept of a matched filter, error rate and intersymbol interference. Appropriate mathematical background in Fourier transforms, probability and random variables are taught. The student is exposed to software and hardware designs.

### **ECE 09.351: Digital Signal Processing**

**3 s.h.**

*Prerequisites: ECE 09321*

This is a junior level undergraduate 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 issues of frequency response, conversion between analog and digital signals and sampling are covered. The z-transform is introduced. Design methods and structures of digital filters are discussed. Complex variables are covered. The student is exposed to software and hardware designs.

### **ECE 09.400: Electrical Engineering Clinic Consultant**

**1 s.h.**

*Prerequisites: ENGR 01202*

This course provides an opportunity for consulting work in support of a multidisciplinary clinic project. Work will be managed by the discipline manager.

### **ECE 09.401: High Speed Interconnects**

**3 s.h.**

High speed interconnects are pervasive in electronic systems. From the smallest integrated circuits to the largest worldwide networks, the ability to interconnect components, subsystems and systems is of critical importance. This course will provide a fundamental understanding of the various techniques used to achieve high-speed interconnects. Topics to be covered include: transmission lines, metal waveguides, dielectric waveguides, antennas, and electromagnetic compatibility.

### **ECE 09.402: Topics in Electrical & Computer Engineering**

**1 to 3 s.h.**

This course covers special topics in individual areas of Electrical and Computer Engineering. Specific prerequisites are determined by the nature of the course when it is announced.

## Courses

### **ECE 09.403: Sustainable Design in Engineering**

**3 s.h.**

This is a senior level undergraduate elective course that covers the fundamentals of sustainable design in engineering with an emphasis on electricity and energy. Topics include energy fundamentals (forms, fuels, conversion technologies), energy use and its impacts on a globalizing economy, life cycle assessment tools and environmental management techniques, ISO14001 implementation in industry (US vs. European experience), application of sustainable engineering practice via an eco-design software tool. The student is exposed to sustainable designs in product manufacturing and energy/electricity production.

### **ECE 09.404: Principles of Biomedical Systems and Devices**

**3 s.h.**

As a survey of biomedical engineering, this class will introduce various systems of the human physiology from an engineering perspective. In particular, students will be introduced to signals of biological origin obtained from these systems; biosensors, transducers and bioelectrodes used to acquire such signals, along with medical quality amplifiers for measuring biopotentials. Electrical safety of medical devices; measurements of the blood pressure, blood flow, and respiratory system will also be discussed. Along with a carefully designed set of experiments, this course will provide the fundamental principles of biomedical engineering from an electrical and mechanical engineering perspective.

### **ECE 09.405: Product Engineering**

**3 s.h.**

This course treats product engineering from a variety of perspectives including engineering and non-engineering viewpoints to explore important elements for modern design. Techniques and tools of rapid prototyping, including virtual reality, are treated. Important course concepts are reinforced through product design experiences.

### **ECE 09.406: Forensic Engineering and Product Liability**

**3 s.h.**

This course examines engineering failure from both the forensics and liability perspectives. Forensic engineering seeks to discover the reason for product or system failure. Product liability seeks to assign and quantify blame for that failure. Methods of forensic engineering are presented. The implications of product liability on the design process are considered from several perspectives. The course is complemented with practical applications.

### **ECE 09.407: Interaction Design**

**3 s.h.**

*Prerequisites: ENGR 01302*

This course examines interaction design from several perspectives. The role of ergonomics is treated along with techniques of input and output interfacing. Methods and tools for virtual implementation are presented. The course is complemented with practical applications.

### **ECE 09.408: Power System Engineering**

**3 s.h.**

*Prerequisites: ECE 09202 and ECE 09302*

This is an upper level elective course that covers the fundamentals of power system engineering with an emphasis on the modern electricity grid and new energy technologies. Topics include: History and Key inventions in the development of the electric power industry, mechanical and electromagnetic fundamentals, three-phase circuits and transformers, AC machinery, synchronous machines and induction motors, DC machines, transmission lines, power flow, system reliability, advanced generation technologies, utility industry deregulation, and options for a sustainable electric power system in the future.

### **ECE 09.411: Modern Solid State Devices**

**3 s.h.**

This is an introductory course in the fundamentals of solid state electronic devices. The course will cover the physical structure of silicon and compound semiconductor materials and the conduction processes in these materials. The p-n junction and its applications will be studied along with the principles of transistor devices. The course will address analog and switching applications and introduce basic laser operations.

### **ECE 09.412: Electronic Packaging**

**3 s.h.**

*Prerequisites: ECE 09201 and ECE 09311 and PHYS 02200*

This is an introductory course in the fundamentals of electronic packaging. It focuses on the complex interaction of materials science, mechanics of materials, and electrical signal processing. The course will progress from the basic materials used in chip packaging and board construction, through mechanical design and testing, to the electrical modeling of the interconnect structure, and finally to reliability assessment. The laboratory exercises will mirror this four-part organization by providing opportunities for laboratory experience in each of the four areas.

## Courses

### **ECE 09.413: Principles of Nondestructive Evaluation**

**3 s.h.**

*Prerequisites: ENGR 01401 or ENGR 01402*

Principles of nondestructive evaluation provides an introduction to contemporary and emergent methods for the non-invasive inspection of infrastructure composed of modern engineering materials. The course covers system design and the processing and analysis of nondestructive evaluation signals. Case studies on engineering design for testing are provided.

### **ECE 09.431: Optical Fiber Communications**

**3 s.h.**

*Prerequisites: ECE 09301 and ECE 09302 and ECE 09311*

Optical communications is an integral part of the world-wide telecommunications system. This course will consider the numerous technologies that comprise such systems as well as the techniques to design, analyze, simulate, and test such systems. Topics include: theory of optical waveguiding, waveguide structures, materials, dispersion, signal degradation in fibers, laser diodes, optical amplifiers, optical coupling, photodetectors, noise, receiver operation, and numerical and analytical techniques for performance calculations and system evaluation.

### **ECE 09.432: Wireless Communications**

**3 s.h.**

*Prerequisites: ECE 09301 and ECE 09302 and ECE 09311 and ECE 09331*

This course will cover the fundamentals of cellular systems, the technologies that are used to implement such systems, radio propagation effects, modulation techniques and the analysis and systems performance evaluation of wireless links.

### **ECE 09.443: Computer Architecture I: Introduction**

**2 s.h.**

*Prerequisites: ECE 09242 and ECE 09444*

The first course in computer architecture covers principles of computer systems design focusing on hardware elements in bused architectures. It also introduces techniques of large-scale digital system design.

### **ECE 09.444: Computer Architecture II: Specialized Systems**

**2 s.h.**

*Prerequisites: ECE 09443*

The second course in computer architecture treats architecture elements of special-purpose digital systems. Use of macro functions is stressed.

### **ECE 09.451: Architectures for Digital Signal Processing**

**3 s.h.**

*Prerequisites: ECE 09351*

This is a senior level undergraduate elective course that covers the fundamentals of the implementation of digital signal processing algorithms using special purpose hardware. Topics include fixed and floating point arithmetic, assembly language programming, sampling, digital filter implementation, finite wordlength effects, quantization noise and fast Fourier transform implementation. The student is exposed to application designs in communications, speech and image processing.

### **ECE 09.452: Introduction to Digital Image Processing**

**3 s.h.**

*Prerequisites: ECE 09351*

Introduction to Digital Image Processing covers the analysis and contemporaneous applications of the enhancement, restoration, compression and recognition of monochromatic images. Both classical and state-of-the-art algorithms will be employed in conjunction with appropriate software for analyzing real-world images.

### **ECE 09.453: Adaptive Filters**

**3 s.h.**

*Prerequisites: ECE 09351*

This is a senior-level undergraduate elective course that covers the fundamentals and implementation of adaptive filtering algorithms using software and special purpose hardware. Topics include random signals, least-mean squares method, recursive least squares method, filter structures and finite wordlength effects. The student is exposed to applications in communications, signal separation, radar, noise cancellation and seismic signal processing.

### **ECE 09.454: Introduction to Artificial Neural Networks**

**3 s.h.**

*Prerequisites: MATH 01210 or MATH 01236*

This course covers the design of a variety of popular neural network architectures and their contemporary engineering applications. Neural network architectures that will be studied in detail include the multilayer perceptron, radial basis function and the Hopfield networks. State-of-the-art software will be used for network design. VLSI implementations of neural networks will be discussed.

## Courses

### **ECE 09.455: Theory and Applications of Pattern Recognition**

**3 s.h.**

This class will introduce a broad spectrum of pattern recognition algorithms along with various statistical data analysis and optimization procedures that are commonly used in such algorithms, with particular emphasis to engineering applications. Although mathematically intensive, pattern recognition is nevertheless a very application driven field. This class will therefore cover both theoretical and practical aspects of pattern recognition, Bayes decision theory for optimum classifiers, density estimation techniques, discriminant analysis, basic optimization techniques, introduction to basic neural network structures, unsupervised clustering techniques and more state of the art algorithm independent techniques.

### **ECE 09.456: Introduction to Embedded System Design**

**3 s.h.**

*Prerequisites: ECE 09242 and ECE 09443 or CS 06412 and CS 04390*

This course provides a comprehensive treatment of embedded system design, verification, analysis, and optimization. Topics include embedded system architecture, interfacing, computational models, real-time scheduling and communications, and resource management in real-time systems, etc.

### **ECE 09.471: Instrumentation**

**3 s.h.**

*Prerequisites: ECE 09201 and ECE 09311*

Elements of instrumentation systems are treated including transducers, signal conditioning, and signal processing. Elements of modern instrumentation systems including standards (IEEE-488, SCPI) and smart sensors are considered. Course is complemented with an instrumentation application.

### **ECE 09.481: Backplane Design**

**3 s.h.**

This course provides an overview of backplane design for a variety of digital systems. It surveys current technologies with treatment of emerging and updated standards. Methods of analysis, synthesis, and verification of backplane systems are presented. The course is complemented with project work for typical applications.

### **ECE 09.483: Digital Design w/VHDL**

**3 s.h.**

The course uses VHDL to model and simulate digital systems. Specialized features of the language are presented to allow getting optimum results from simulations. Example VHDL applications are explored and a project is used to complement the course.

### **ECE 09.484: Mixed Signal Technology**

**3 s.h.**

This course will extend the student's background in circuit design to include the devices and technologies used in mixed analog-digital VLSI chips for high volume applications such as hard-disk drives, cordless telephones and TVs. The course will begin with device models, fabrication technology and layout as applied to mixed analog-digital circuits. Device modeling requirements for analog work will be covered as well as models used in most modern circuit simulators. Fabrication technologies will be examined that have been developed specifically for mixed signal VLSI chips. The techniques for layout of mixed signal circuits that emphasize a high degree of analog device matching and minimum digital-to-analog interference will be covered.

### **ECE 09.498: Seminar: Engineering Frontiers**

**1 s.h.**

*Prerequisites: ENGR 01402 and ENGL 01112 or ENGR 01402 and ENGR 01202*

The Seminar in Engineering Frontiers will provide students with a glimpse into contemporaneous cutting edge technology and research in electrical and computer engineering. Course content and topics will change with each offering to maintain currency with the frontiers of engineering technology.

## Elementary Education

### **ELEM 02.098: Contemporary Early Childhood Education: Special Topics**

**1 to 6 s.h.**

Considers the principles and practices of special topics in early childhood education. This course provides in-depth development of special topics in early childhood education. Topics may change each semester.

### **ELEM 02.099: Contemporary Elementary Education: Special Topics**

**1 to 6 s.h.**

This course covers principles and practices of special topics in elementary education, and provides an in-depth development of special topics in elementary education. Topics may change each semester.

### **ELEM 02.290: Educational Studies I: Curriculum Planning and Decision Making**

**3 s.h.**

This course focuses on the teacher as planner/decision maker for the roles of curriculum designer, organizer, and instructor through study of the social studies curriculum. Teacher candidates explore influences on the curriculum and learn to plan a unit and lesson plans. A field component provides opportunities to observe in classrooms and to study schools, learners, teaching, and curriculum organization. Students micro-teach peers.

## Courses

### **ELEM 02.317: Inquiry and Discovery in the Elementary Classroom**

**3 s.h.**

*Corequisites: ELEM 02318 and SPED 08316*

This course examines the use of established elementary education standards in science, social studies, health, and the arts and how interdisciplinary, thematic units of inquiry facilitate meeting those standards. Candidates apply current research on the way children learn and effective teaching in science, social studies, health, and the arts, as well as instructional knowledge and skills they are developing related to inquiry-based instruction, assessment, and differentiating that instruction for elementary students. An interdisciplinary unit of inquiry is developed. A field component is required.

### **ELEM 02.318: Practicum: Assessment in Elementary Classrooms**

**1 s.h.**

*Corequisites: ELEM 02317 and SPED 08316 Prerequisite: EDUC 01272*

This field-based course provides an opportunity for candidates to apply instructional knowledge and skills related to inquiry-based instruction, assessment, and differentiation in elementary school field placements. Building on school district materials and mandates, candidates design appropriate assessments for interdisciplinary units of inquiry and review, administer, and reflect on results of varied assessments of student learning. This course provides a required field component.

### **ELEM 02.336: Mathematics Pedagogy for Elementary Teachers**

**2 s.h.**

*Corequisites: ELEM 02338 and READ 30351 Prerequisites: ELEM 02317 and ELEM 02318 and SPED 08316*

This course in mathematics pedagogy for the elementary education candidate focuses on the knowledge and skills essential for teaching mathematics. Utilizing current research findings about how students develop mathematical concepts and processes, candidates will develop an understanding of teaching and learning mathematics at the elementary level. Teacher candidates will develop a repertoire of instructional strategies and will develop and analyze effective mathematics lessons. A field component is required.

### **ELEM 02.338: Practicum in Mathematics and Literacy**

**1 s.h.**

*Corequisites: ELEM 02336 and READ 30351 Prerequisites: ELEM 02317 and ELEM 02318*

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 02.350: Educational Studies II: Problems of Practice**

**3 s.h.**

Three current problems of practice are considered: (1) the purposes of schooling and classroom culture (in learning community classrooms); (2) assessment and evaluation of learning (including standardized tests, teacher-made tests, informal assessments); and (3) equity considerations in relationship to evaluation and teaching.

### **ELEM 02.370: Educational Studies III: Subject Specific Pedagogy**

**3 s.h.**

*Prerequisites: ELEM 02290 and ELEM 02350 and MATH 01201 and ELEM 02390*

This course in pedagogy for elementary school teacher candidates utilizes mathematics and science as the vehicle for developing an understanding of teaching and learning. Utilizing current research findings about the ways children learn and about effective teaching of mathematics and science, teacher candidates develop effective lesson plans and units. They also apply and extend their knowledge as they participate in a field experience.

### **ELEM 02.390: Educational Studies IV: Organizing and Managing Instruction**

**3 s.h.**

*Prerequisites: ELEM 02350 and MATH 01201 and ELEM 02370*

This course focuses on positive strategies for instructional organization and classroom management as means for preventing disruptive behavior. A management plan (for a learning community classroom) will be developed. This course includes a field application/practice component of 8 weeks (part-time) in the same classroom placement used for Educational Studies III in addition to the regular class meetings.

### **ELEM 02.445: Elementary Education Clinical Seminar**

**1 s.h.**

This capstone senior seminar provides elementary education candidates with a supportive atmosphere in which to synthesize the pre-service components of their academic preparation with actual experience, emerging issues in the field of education, and their transition into the profession. Candidates develop a philosophy of teaching; gather and present evidence of their comprehensive knowledge, skills, and dispositions expected in this profession; and demonstrate knowledge of current critical and contemporary issues facing educators and those who hold stake in education. Interviewing skills and a professional portfolio will be developed. An associated field component (Clinical Practice) is required as a co-requisite.

## Courses

### **ELEM 02.448: Clinical Practice in Elementary Education**

**10 s.h.**

The clinical practice experience is a supervised, full-time activity conducted in a public elementary classroom. In this course, candidates must demonstrate mastery of subject area content, lesson planning, and use of multiple instructional strategies; ability to assess learner progress, manage all aspects of classroom activity, work collaboratively with all colleagues, administrators, families, and community, and to document evidence of doing all of the above. This is a full-time field-based course taken in the senior year.

### **ELEM 02.480: Student Teaching**

**12 s.h.**

This senior level field experience provides students with the opportunity to practice applying the knowledge and skills needed to teach. It is a full semester experience that ends with the students teaching full-time. The student teaching experience is closely supervised.

### **ELEM 02.481: Student Teaching Seminar**

**1 s.h.**

This seminar is a capstone course for students majoring in Elementary Education. The course synthesizes the pre-service components of the teacher education program so that graduates develop a holistic conceptualization of their approach/philosophy of teaching.

## Engineering

### **ENGR 01.101: Freshman Engineering Clinic I**

**2 s.h.**

*Prerequisites: MATH 01130*

Introduction to the practice of engineering through application problems drawn from engineering disciplines chosen to amplify work drawn from supporting courses. Survey of technical communication formats, analytic tools, computer-based tools, and other topics. Introduction to design; engineering ethics; teamwork.

### **ENGR 01.102: Freshman Engineering Clinic II**

**2 s.h.**

*Prerequisites: ENGR 01101*

This course, a continuation of Freshman Engineering Clinic I, provides expanded treatment of the practice of engineering through applications drawn from engineering disciplines. Project work includes a variety of technical communication topics, analytic and computer-based tools, including the design process, engineering ethics, safety, and team work.

### **ENGR 01.201: Sophomore Engineering Clinic I**

**4 s.h.**

*Prerequisites: ENGR 01102*

This course, a continuation of the Engineering Clinic series, provides expanded treatment of the practice of engineering through applications drawn from various engineering disciplines and industry. Project work includes a variety of technical communication topics, analytic and computer-based tools, including the design process, engineering ethics, safety and teamwork. The composition component presents critical thinking, reading, writing, research and argumentation.

### **ENGR 01.202: Sophomore Engineering Clinic II**

**4 s.h.**

*Prerequisites: ENGR 01201*

This course is a continuation of the Engineering Clinic sequence that provides design and design support experiences. The clinic also integrates information from supporting courses. The goal of the public speaking component is to enable students to participate effectively in oral communication, especially as related to technical presentations.

### **ENGR 01.271: Statics**

**2 s.h.**

*Prerequisites: MATH 01131 and PHYS 02200*

The course deals with the study of engineering statics which includes the statics of structural systems. The study of structural systems includes equilibrium, structural analysis, and geometric properties of structural members.

### **ENGR 01.272: Solid Mechanics**

**2 s.h.**

*Prerequisites: ENGR 01271*

The course deals with the study of solid mechanics including stress and strain, mechanical properties of materials, and beam and bar analysis. The study of beam and bars includes axial forces, torsion, bending, shear, combined loading, buckling, and design.

## Courses

### **ENGR 01.281: Material Science**

**2 s.h.**

*Prerequisites: PHYS 02200 and CHEM 06105*

This course develops the material structure and property relations. Atomic bonding, lattice structures, crystalline and polymeric structures and properties, imperfections, dislocations, phase diagrams, and quantitative analysis are presented. Properties of metals and alloys, ceramics, polymers, composites, and electrical materials are discussed.

### **ENGR 01.282: Manufacturing Processes**

**2 s.h.**

*Prerequisites: ENGR 01281*

This course develops the fabrication processes for engineering materials. Discussion of heat treatment of metals will be followed by manufacturing methods for metals and alloys. Casting, powder metallurgy, hot and cold forming, welding and joining, and material removal techniques for metals will be followed by fabrication techniques for non-metals, ceramics, and composites.

### **ENGR 01.291: Dynamics**

**2 s.h.**

*Prerequisites: PHYS 02200 and ENGR 01271*

Study of kinematics and kinetics of a particle, including work-energy and impulse-momentum methods. Systems of particles are considered. Kinematics and kinetics of plane motion of rigid bodies are introduced with respect to absolute and relative motions in various reference frames. Concept of mass moment of inertia is introduced.

### **ENGR 01.301: Junior Engineering Clinic I**

**2 s.h.**

*Prerequisites: ENGR 01202*

This is one course in a sequence of courses that will provide a meaningful research and design experience for a team of undergraduate students under the direction of an engineering faculty advisor. The research topic will be chosen by mutual agreement of the undergraduate students and their advisor. The sequence will include a thorough literature search and review, the development of a clear and concise problem statement, consultations with other faculty and professional experts, and the derivation of publishable results. The research will culminate in a final written report and oral presentation.

### **ENGR 01.302: Junior Engineering Clinic II**

**2 s.h.**

*Prerequisites: ENGR 01301*

This is one course in a sequence of courses that will provide a meaningful research and design experience for a team of undergraduate students under the direction of an engineering faculty advisor. The research topic will be chosen by mutual agreement of the undergraduate students and their advisor. The sequence will include a thorough literature search and review, the development of a clear and concise problem statement, consultations with other faculty and professional experts, and the derivation of publishable results. The research will culminate in a final written report and oral presentation.

### **ENGR 01.341: Fluid Mechanics I**

**2 s.h.**

*Prerequisites: MATH 01236 and PHYS 02200*

The course deals with general fluid flow and with fluid flow in pipe systems. Topics covered in the area of general fluid flow include hydrostatics, laws of fluid motion, kinematics, dynamics, energy balance, and dimensionless groups. Topics covered in the area of pipe flow include incompressible flow, compressibility, pumps, viscosity, boundary layers, turbulence, and losses. The course includes appropriate laboratory experiments and computer applications.

### **ENGR 01.391: Independent Study in Engineering**

**1 to 3 s.h.**

This course is designed for engineering students. They will conduct work under the supervision of an appropriate faculty member on engineering projects. The execution of the proposed project, including the preparation and presentation of an acceptable report of work, will be required.

### **ENGR 01.401: Senior Engineering Clinic I**

**2 s.h.**

*Prerequisites: ENGR 01302*

This course provides a culminating experience to the Engineering Clinic sequence. The goal of this sequence of courses is to give teams of undergraduate engineering students a meaningful, leading-edge, team-based, multidisciplinary project experience. The sequence will include a thorough literature search and review, the development of a clear and concise problem statement, consultations with other faculty and professional experts, and delivery of a final written report and oral presentation.

## Courses

### **ENGR 01.402: Senior Engineering Clinic II - WI**

**2 s.h.**

*Prerequisites: ENGR 01401*

This course provides a culminating experience to the Engineering Clinic sequence. The goal of this sequence of courses is to give teams of undergraduate engineering students a meaningful, leading-edge, team-based, multidisciplinary engineering project experience. The sequence will include a thorough literature search and review, the development of a clear and concise problem statement, consultations with other faculty and professional experts, and delivery of a final written report and oral presentation.

### **ENGR 01.410: Introduction to Finite Element Analysis**

**3 s.h.**

*Prerequisites: ENGR 01272 and MATH 01236*

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 01.411: Introduction to Engineering Optimization**

**3 s.h.**

*Prerequisites: MATH 01236*

Objective function for minimization and setting up the constraints are presented for engineering problems. Solution techniques using gradient based methods, zero order methods, and penalty techniques are discussed. Formulation and solution of linear programming, non-linear programming, integer and discrete programming problems in engineering are covered. Algorithms are implemented in computer programs for problem solution.

### **ENGR 01.453: Introduction to Analytic Dynamics**

**3 s.h.**

*Prerequisites: ENGR 01291 and ME 10201 and MATH 01236*

Newton/Euler and Lagrangian formulations for three-dimensional motion of particles and rigid bodies. Modern analytical rigid body dynamics equation formulation and computational solution techniques applied to mechanical multibody systems. Kinematics of motion generalized coordinates and speeds, analytical and computational determination of inertia properties, generalized forces, Lagrange's equations, holonomic and nonholonomic constraints, constraint processing, computational simulation.

## English

### **ENGL 02.101: Literary Studies for English Majors**

**3 s.h.**

This course serves as an introduction to upper-level courses in the English Department and is required for freshman English majors. Using readings from all three genres, students will develop the skills and practice necessary for an analytical reading of literature and for writing critical essays about literature, using both primary and secondary sources.

### **ENGL 02.105: Masterpieces of Western Literature I**

**3 s.h.**

Masterpieces of Western Literature I This course gives the student some knowledge of and sensitivity to the literary sources of Western civilization. The course includes a limited number of works carefully selected from the beginnings of Western literature to the Reformation. Among them are selected books of The Old Testament, The Odyssey, Oedipus the King, The Aeneid, The New Testament, and The Inferno. This course may not be offered annually.

### **ENGL 02.107: Masterpieces of Western Literature II**

**3 s.h.**

This course covers selected works from the Reformation through the nineteenth century, such as The Prince, Don Quixote, King Lear, Candide, Faust, Billy Budd, and Crime and Punishment. It emphasizes those works of great literary merit that exhibit perceptions, ideas, and values that have made essential and formative contributions to the development of Western civilization. This course may not be offered annually.

### **ENGL 02.110: Readings in British Literature**

**3 s.h.**

Designed to give the student some idea of the scope and depth of English literature, this course deals with a limited number of writers from the earliest periods of English literature through the twentieth century. Such writers as Chaucer, Shakespeare, Milton, Swift, Wordsworth, Austen, Bronte, Dickens, Lawrence, Shaw, and Woolf are read and discussed.

## Courses

### **ENGL 02.113: Readings in U.S. Literature**

**3 s.h.**

This broad review of American literature concentrates on some of the most important writings of the nineteenth and twentieth centuries, emphasizing the diversity of the American experience and including a focus on the issues of race, class, and gender. This introductory course includes works by authors such as Emerson, Thoreau, Douglass, Poe, Hawthorne, Melville, Whitman, Dickinson, Chopin, Wharton, Fitzgerald, Hemingway, Hurston, Hughes, Ellison, Wright, Morrison, and more recent writers.

### **ENGL 02.116: 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 02.123: Experiencing Literature**

**3 s.h.**

This course increases students' understanding and enjoyment of literature. By studying the major forms of literature--drama, novel, poetry, and short story--students will understand some of the distinguishing characteristics of each form, the special demands each form imposes upon the thoughtful reader, and some of the most useful ways to respond to these demands.

### **ENGL 02.130: Mythology**

**3 s.h.**

This course provides an overview of world mythologies, especially those of ancient Mediterranean culture, which have informed and inspired subsequent literature and literary themes. This course may not be offered annually.

### **ENGL 02.200: Women in Literature**

**3 s.h.**

This course examines the aesthetic, historical, and social implications of a wide range of diverse texts written by women from medieval times to the present, examining the accomplishments of such significant women writers as Pizan, Murasaki, Wollstonecraft, Eliot, Jacobs, Wharton, Chopin, Woolf, Stein, Plath, Rich, Morrison, Lessing, and other more recent writers.

### **ENGL 02.205: Adolescent Literature**

**3 s.h.**

This course, a 200-level elective, examines contemporary understandings of adolescence as a developmental state betwixt and between childhood and adulthood through literature that is about adolescents and their concerns. The class will explore texts adults believe suitable for adolescents-that may or may not have been written with them in mind-but that are regularly taught or given to young adults, as well as literature written especially for them (Y.A. Literature). No prerequisites.

### **ENGL 02.210: British Literature to Romanticism**

**3 s.h.**

Beginning with Beowulf and ending after Dr. Johnson, this intensive course traces the wealth and variety of a thousand years of poetry, drama, and prose beginning with the Anglo-Saxon epic, through the Middle ages, the Renaissance, the Restoration, and on to the close of the Neoclassic period.

### **ENGL 02.211: British Literature Since Romanticism**

**3 s.h.**

Beginning with Wordsworth and ending in the present, this course surveys the major writers-and also some minor one-of the Romantic, Victorian, and Modern periods, including poets, novelists, dramatists, and prose essayists. It closely studies the relationship between literature and the specific social, political, and economic concerns it reflects.

### **ENGL 02.213: US Literature to Realism**

**3 s.h.**

This course surveys literature in the colonial, revolutionary, and early national periods and the first half of the nineteenth century. It emphasizes such writers as Edwards, Bradstreet, Franklin, Emerson, Thoreau, Poe, Douglass, Melville, Hawthorne, Dickinson, and Whitman.

### **ENGL 02.215: US Literature Since Realism**

**3 s.h.**

This survey highlights subjects such as the rise of realism and naturalism, the modernist revolution, and post-modernism. Twain, Howells, James, Chopin, Wharton, Hurston, Crane, Dreiser, and Frost are among the writers included. This course also investigates and defines the major themes and the developing forms of American Fiction, drama, and poetry in a survey of such authors as O'Neill, Hemingway, Faulkner, Eliot, Stevens, Williams, Stein, Lowell, Barthelme, Barth and Morrison.

## Courses

### **ENGL 02.216: African American Literature Through Harlem Renaissance** 3 s.h.

This course examines African American literature from its beginnings in the Colonial Period through the Harlem Renaissance. We will engage in close readings of seminal vernacular, autobiographical, poetic, creative, and critical texts, exploring the relationship between literary expression and the highly charged American social, cultural, and political histories that form its context. We will study African and African American writers, including Phillis Wheatley, Olaudah Equiano, Harriet Jacobs, Frederick Douglass, William Wells Brown, Frances Harper, W.E.B. DuBois, Booker T. Washington, Charles Chesnutt, Paul Laurence Dunbar, Zora Neale Hurston, Langston Hughes, and Jean Toomer.

### **ENGL 02.217: U.S. Literature of Latino/a and Hispanic Peoples** 3 s.h.

*Prerequisites: ENGL 01111 or ENGL 01105 or COMP 01111 or COMP 01105*

This course surveys the development of contemporary U.S. literature written in English by Latino/a and Hispanic writers. Reading selections include poems, personal essays, short fiction, novels, and drama. This course may not be offered annually.

### **ENGL 02.228: The Modern Short Story** 3 s.h.

This course traces the development of the modern short story as a distinct form of literature. Students read and analyze stories by writers of various nationalities, and explore a wide range of themes and fictional techniques.

### **ENGL 02.250: Shakespeare I** 3 s.h.

An introduction to Shakespearean drama, this course covers such early and middle plays as Richard III, The Merchant of Venice, Henry IV, As You Like It, and one major later tragedy-Othello. This course emphasizes such concerns as character, theme, style, language development, and the Elizabethan background.

### **ENGL 02.301: Literary Study Off-Campus** 3 s.h.

This course permits students to study literature at important literary sites in the United States and abroad under the supervision of a faculty leader. Study includes preparatory reading, attendance at theatrical productions, tours of literary locales, theatres, writers' homes, and visits to the area's other important historical and cultural sites. Travel and program costs are borne by the students.

### **ENGL 02.316: African American Literature Since Harlem Renaissance** 3 s.h.

This course examines themes and issues commonly found in African American literature published since the Harlem Renaissance. We will analyze such theories of racial consciousness as invisibility, Black Power, and the Black Aesthetic, bearing in mind how certain historical, political, social, and cultural factors influenced the literature. While understanding the complex notions of race will be our focus, we will also consider how (or if) racial identity blends with other key components of the self such as gender, class, and nationality. We will read a variety of texts- from novels and plays to poetry and song lyrics- by authors Richard Wright, Gwendolyn Brooks, Ralph Ellison, Lorraine Hansberry, Malcolm X, August Wilson, Toni Morrison, Edwidge Danticat, Percival Everett and others.

### **ENGL 02.322: Literature of the American Renaissance** 3 s.h.

This course focuses on the literature of the American Renaissance (1830-1860). This study of works by writers like Cooper, Bryant, Irving, Poe, Emerson, Douglass, Thoreau, Hawthorne, Melville, Longfellow, Whitman, Stowe, Jacobs, and Dickinson will cover the three major characteristics of the period: the movement from classicism to romanticism in the early writers; the development of literary nationalism, and an increasing interest in exploring what it means to be an American; and, finally, the beginnings of literary realism with the approach of the Civil War. This course may not be offered annually.

### **ENGL 02.327: Modern American Poetry** 3 s.h.

This course studies poets as varied as Eliot, Williams, Crane, Stevens, Frost, Rich, Moore, Plath, Brooks, Bly, and Ginsberg. Among our concerns are subject, form, and critical reactions. ENGL02.330 3 s.h.

### **ENGL 02.330: Classical Literature in Translation** 3 s.h.

This course covers works by Homer, Aeschylus, Sophocles, Euripides, Plato, Thucydides, Lucretius, Virgil, Horace, Ovid, and Catullus. Students learn why these figures are truly classic: they provide the indispensable foundation for much of Western intellectual history. This course may not be offered annually.

### **ENGL 02.338: Selected Topics in Non-Western Literature** 3 s.h.

This course focuses on significant literary works generally omitted from the Western canon. In this course students will gain an in-depth understanding and appreciation of the literature and cultures outside of North America and Europe. The changing topic and texts will be chosen by faculty and may cover the literature of Africa, Asia, Latin America, and/or the Caribbean. This course may not be offered annually.

## Courses

### **ENGL 02.350: Shakespeare II**

**3 s.h.**

This course studies the more complex plays written after 1600, among them Hamlet, Lear, Measure for Measure, Antony & Cleopatra, and The Tempest. As in Shakespeare I though perhaps on a more intensive level-the course emphasizes such elements as character, theme, and text.

### **ENGL 02.392: Independent Study (English)**

**3 to 6 s.h.**

The course gives students an opportunity to study independently in order to strengthen their background in a particular area of literary studies.

### **ENGL 02.393: English Seminar I - Writing Intensive**

**3 s.h.**

*Prerequisites: ENGL 02101*

This course is required of all English majors in the junior year. Each seminar deals with a particular writer, theme, or problem in literature or language and is designed to develop the students' ability to write clearly, logically, and cogently.

### **ENGL 02.394: English Seminar II - Writing Intensive**

**3 s.h.**

*Prerequisites: ENGL 01112 and ENGL 02393 or COMP 01112 and ENGL 02393*

This capstone course is required of all English majors in their senior year. Each seminar enables a small group of students to investigate intensively an area of literature under a professor competent in the field. While subjects vary annually, all seminars emphasize individual guidance, class discussion, oral and written reports, and require a long research paper.

### **ENGL 02.410: Internship in English**

**3 s.h.**

This course provides the opportunity for students majoring in English to apply the skills they have developed in the course of their studies in a supervised work situation. Students will create a portfolio, keep journals, and meet with the faculty internship coordinator regularly. This course may be utilized within the 24-hour free elective distribution only.

### **ENGL 02.421: The English Novel**

**3 s.h.**

This course studies the English novel from its inception to the present. It analyzes style, structure, characterization, and theme; it stresses the novel as a relevant social document. Richardson, Fielding, Austen, Bronte, Thackeray, Dickens, Hardy, Lawrence, and Joyce are among those novelists taught. This course may not be offered annually.

### **ENGL 02.423: The American Novel**

**3 s.h.**

This course investigates the development of American novelists' contributions to this art form by focusing on the themes and techniques of major American works. It focuses on writers such as Hawthorne, Melville, Twain, Howells, James, Wharton, Dreiser, Cather, Hemingway, Fitzgerald, Faulkner, and Wright.

### **ENGL 02.424: American Dramatists**

**3 s.h.**

Among the significant dramatists this course considers are such older figures as O'Neill, Odets, Hellman, Williams, Miller, and Albee; and such newer figures as Mamet, Guare, Shepard, Lanford Wilson, August Wilson, and Hansberry. This course may not be offered annually.

### **ENGL 02.425: Contemporary Literature**

**3 s.h.**

This course, an upper-level elective, explores literature written within the students' lifetimes, enabling students to gain fluency in different ways of reading and different kinds of writing. Students will explore the social relevance of texts and of the act of reading as they examine the recent developments in the literary tradition, especially as they may relate to issues of race, class, gender, sexuality, political hegemonies, and current literary theory. This course may not be offered annually.

### **ENGL 02.430: Anglo-Saxon and Medieval Literature**

**3 s.h.**

*Prerequisites: ENGL 02101*

This course studies the foundations of English language and literature from its beginnings through the fifteenth century, proceeding from the relatively limited selection of Anglo-Saxon poetry and prose to the profusion of literary genres extant in the Middle Ages. Although almost all texts will be read in translation, some attention will be devoted to understanding the major characteristics of the Anglo-Saxon language and Middle English. Selections from continental writers of the period may also be included. This course may not be offered annually.

### **ENGL 02.440: Chaucer**

**3 s.h.**

This course serves as an introduction to the poetry of Chaucer, to the language which he used, and to the times in which he lived. Typically, readings are taken from The Canterbury Tales and Troilus and Criseyde. This course may not be offered annually.

## Courses

### **ENGL 02.441: English Renaissance Literature**

**3 s.h.**

The content of this course may vary from year to year according to the needs and interests of the students. Studies may be made of the epic, the lyric, drama (non-Shakespearean), fiction, or other literary types, always against a background of Renaissance ideas. This course may not be offered annually.

### **ENGL 02.460: Restoration and 18th Century British Literature**

**3 s.h.**

This course studies poetry, non-fiction prose, and drama from 1660 to 1798. This course may not be offered annually.

### **ENGL 02.471: English Romanticism**

**3 s.h.**

This course studies the major figures of the English Romantic period. It pays particular attention to the poetry of Blake, Wordsworth, Coleridge, Byron, Shelley, and Keats, in an effort to define, analyze, and understand this important literary and social movement. This course may not be offered annually.

### **ENGL 02.472: Victorian Literature**

**3 s.h.**

This course concentrates upon the major works of English poetry and non-fictional prose from 1830 to 1900. Readings center upon such major figures as Tennyson, Browning, Arnold, Carlyle, Ruskin, Mill, and Newman. Lectures and discussions clarify the readings and indicate the relation of the literature to the most important intellectual movements of the century. This course may not be offered annually.

### **ENGL 02.473: Twentieth Century British Literature**

**3 s.h.**

This course studies and discusses the works of leading poets, playwrights, and novelists-such figures as Woolf, Shaw, Lawrence, Yeats, Joyce, Stoppard, Hughes, Heaney, and Friel. It places some emphasis on the relationship between this literature and the historical, economic, and social background of the period. This course may not be offered annually.

### **ENGL 02.482: Modern European Literature**

**3 s.h.**

This course emphasizes the relation between literature and contemporary life--political, social, and philosophic. It studies movements such as realism, expressionism, relativism, and existentialism, examining such authors as Ibsen, Strindberg, Pirandello, Zola, Camus, Kafka, Beckett, Ionesco, and Weiss. This course may not be offered annually.

### **ENGL 05.301: 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.

## Environmental Studies

### **ENST 94.101: Environmental Studies: Physical Perspectives**

**3 s.h.**

This is a multidisciplinary course that examines the basic principles of biology, chemistry, geology and physics as they relate to environmental studies. Many environmental problems will be discussed. The reasons for these problems, as well as possible solutions will be explored during the course. Environmental concerns in New Jersey will provide the backbone for specific examples. Students will consider the implications and challenges of environmental problems, as well as think in a multidisciplinary way about resolving some of these pressing our endangered earth today.

### **ENST 94.102: Environmental Studies: Social Perspectives**

**3 s.h.**

This introductory course examines the relationship between the physical environment, social policy and human populations from a social science perspective. A human ecology approach will be used to study this relationship and analyze a variety of environmental issues. The first part of the course introduces the anthropology and the philosophy of the human ecological perspective. During the second part of the course, the physical, social, psychological and political aspects of environmental issues will be examined.

### **ENST 94.121: Field Methods and Research Design in Environmental Studies**

**3 s.h.**

This course fosters an environment where students become familiar with the theories and processes involved in implementing field studies. The general approach aspect reflects the practice of applied methods needed to conduct field assessments, administer instruments to conduct preliminary data collection from various populations, analyze data, and report data. A considerable amount of time will be spent on understanding research studies and assimilating data.

## Courses

### **ENST 94.301: Environmental Ethics**

**3 s.h.**

This is a multidisciplinary course that addresses ethical issues and concerns regarding the environment; the relationships between individual, society and the natural environment; the importance of common attitudes and prevailing world-views for understanding and responding to environmental challenges; and the need to for changes in those attitudes and world-views. Students will be encouraged to think about the profound ethical, political, economic, religious, scientific, and technological implications of these environmental challenges.

### **ENST 94.401: Seminar in Environmental Studies I**

**3 s.h.**

Students participate in planning a research project, collecting data, and preparing a report suitable for publication. Research topics are selected according to student interests.

### **ENST 94.402: Seminar in Environmental Studies II**

**3 s.h.**

Students participate in planning a research project, collecting data, and preparing a report suitable for publication. Research topics are selected according to student interests.

## Finance

### **FIN 04.300: Principles of Finance**

**3 s.h.**

*Prerequisites: ACC 03211 and STAT 02260 and MATH 03125 or MATH 01130 and ECON 04101 and ECON 04102*

This course includes the following topics: financial goals; depreciation, taxation and cashflows; financing the firm via short-term, intermediate and long-term debt, and preferred and common stock; capital budgeting and leasing; dividend policy; business growth and contraction.

### **FIN 04.327: Selected Topics in Finance**

**3 s.h.**

*Prerequisites: FIN 04327 Required Credits: 57*

Students will investigate new areas and developments in theory, research, and practice in finance. Specialized topics will vary each semester. The topics will be determined by the department and the instructor teaching the course. Course activities include in-depth study of selected topics, case analysis, and research.

### **FIN 04.422: Financial Management I - Fall semester only**

**3 s.h.**

*Prerequisites: FIN 04300*

An in-depth study of the selected financial management topics by using a case and problem-solving approach. The emphasis is on corporate asset management and investment decisions. Topics include risk and return analysis, cost of capital, capital budgeting decision methods, leasing, financial analysis and forecasting, and working capital management.

### **FIN 04.423: Financial Management II - Spring semester only**

**3 s.h.**

*Prerequisites: FIN 04422*

An in-depth study of selected financial management topics by using a case and problem-solving approach. The emphasis is on corporate financing decisions. Topics include capital structure decisions, dividend policy, long-term financing, bankruptcy, reorganization, liquidation, mergers, LBOs, divestitures, holding companies, and pension plan management.

### **FIN 04.424: Seminar in Finance - Spring semester only**

**3 s.h.**

*Prerequisites: FIN 04300 and STAT 02261*

Having learned financial markets, financial management, and investment/portfolio analysis in previous finance courses, in this course, students will undertake integrative research on these subjects. This course will teach students the skills required to undertake independent research. They will select a topic, conduct a literature review, and collect and analyze data.

### **FIN 04.425: Risk Management - Spring semester only**

**3 s.h.**

*Prerequisites: FIN 04300 and STAT 02261*

A comprehensive survey of the various financial instruments available in the financial markets followed by an in-depth study of practical use of the financial instruments in hedging financial risk. Hedging will be performed from the perspectives of a financial manager and an investor or an investor consultant. Topics include options, futures, forwards, swaps, and other hybrid securities and how these securities are used to hedge the risk in a firm or a specific financial transaction.

## Courses

### **FIN 04.430: Supervised Internship in Finance - Spring and Summer semesters only** 3 s.h.

*Prerequisites: FIN 04300*

This course concerns field experience in the finance discipline which includes commercial banking, investment banking, brokerage houses, corporations, government, and not-for-profit organizations. Trainees are given assignments that prepare them for productive employment upon graduation. The learning process is monitored by a Finance faculty member.

### **FIN 04.431: Investment/Portfolio Analysis - Fall semester only** 3 s.h.

*Prerequisites: FIN 04300 and STAT 02261*

The basic decision-making processes for investment decisions are outlined in this course in terms of investors' needs and market opportunities, security market operations, security valuation, investment time, government and corporate securities company analysis and portfolio management.

### **FIN 04.433: Financial Institutions and Markets** 3 s.h.

*Prerequisites: FIN 04300*

This course provides an overview of financial markets and institutions in the U.S. economy. It intends to equip students with a balanced introduction to the operations, mechanics, and structure of the U.S. financial system, emphasizing its institutions, markets, regulators and financial instruments. Another focus of the course is to analyze the major risks faced by financial institutions and the strategies for controlling and managing these risks.

### **FIN 04.435: International Financial Management - Spring semester only** 3 s.h.

*Prerequisites: FIN 04300*

This course studies financial management in the international environment. Topics include foreign exchange risk management, multinational working capital management, international portfolio investment, foreign direct investment, capital budgeting for the multinational corporation, political risk, international financing and international financial markets.

## Foreign Languages

### **AFRI 16.101: Zulu I** 3 s.h.

This beginning course is open to students who have not previously studied Zulu. It covers the mechanics of the language, including intensive practice in listening, comprehension, speaking, reading and writing.

### **AFRI 16.102: Zulu II** 3 s.h.

*Prerequisites: AFRI 16101*

This beginning course is open to students who have had some limited contact with the Zulu language. It offers expanded practice in listening, comprehension, speaking, reading and writing.

### **ARAB 12.101: Elementary Arabic I** 3 s.h.

This is a comprehensive foundation course for beginning students of Modern Standard Arabic. It offers an essential grounding for developing successful communication strategies by practicing listening comprehension and speaking skills with the sounds and characteristics of Arabic. It will also provide students with opportunities to read and write simple Arabic prose to meet their communication needs. It introduces students to the culture and history of the Arabic speaking world.

### **CHIN 07.101: Elementary Chinese I** 3 s.h.

This is a beginning course in Chinese (Mandarin) for students who have not previously studied the language. It covers the mechanics of the Chinese language, including intensive practice in listening comprehension and speaking. It will also introduce students to basic Chinese reading and writing skills.

### **CHIN 07.102: Elementary Chinese II** 3 s.h.

This is a beginning course in Chinese (Mandarin) for students who have taken Elementary Chinese I. It covers the mechanics of the Chinese language including intensive practice in listening comprehension and speaking. It will also offer exercises for students to develop skills in reading and writing the language.

## Courses

### **CHIN 07.201: Intermediate Chinese I**

**3 s.h.**

*Prerequisites: CHIN 07101 and CHIN 07102*

This intermediate level Chinese language course provides students the opportunity to develop further their listening comprehension and competence in spoken Chinese, their ability to engage in more substantial conversations in a variety of learning, work, and social settings. It will also help students build and utilize their knowledge of the Chinese way of life culture in conjunction with learning the notions and functions of the language. The course also focuses on students' ability to read and write simple Chinese prose for their communication needs.

### **CHIN 07.211: Intermediate Chinese II**

**3 s.h.**

*Prerequisites: CHIN 07101 and CHIN 07102 and CHIN 07201*

Intermediate Chinese II continues to provide students the opportunity to develop further their competence in listening comprehension and in spoken Chinese, their ability to engage in more substantial conversations in additional learning, work and social settings. It will advance and enrich their knowledge of Chinese culture enabling them to understand how to function in a culturally appropriate manner and to develop and appreciate more subtlety in language use. The course continues to help students improve their ability to read and write simple Chinese prose for their communication needs.

### **FREN 02.101: Elementary French I**

**3 s.h.**

This is a beginning course in French for students who have not previously studied French. This course covers the mechanics of the French language including intensive practice in listening comprehension, speaking, reading and writing.

### **FREN 02.102: Elementary French II**

**3 s.h.**

This is a beginning course in French for students who have not previously studied French. This course covers the mechanics of the French language including intensive practice in listening comprehension, speaking, reading and writing.

### **FREN 02.201: Intermediate French I**

**3 s.h.**

*Prerequisites: FREN 02102*

This course is open to students who have had some limited contact with the French language. It offers expanded practice in listening comprehension, speaking, reading and writing.

### **FREN 02.205: Oral French**

**3 s.h.**

*Prerequisites: FREN 02211*

An intermediate level conversation course which develops a broad range of active vocabulary as well as verbal patterns leading to greater facility in manipulating the spoken language.

### **FREN 02.211: Intermediate French II**

**3 s.h.**

*Prerequisites: FREN 02201*

This course is open to students who have had some limited contact with the French language. It offers expanded practice in listening comprehension, speaking, reading and writing.

### **FREN 02.212: French Reading and Composition**

**3 s.h.**

*Prerequisites: FREN 02211*

This course offers a broad grammar review based on readings, practical use of the language, written compositions and dictations.

### **FREN 02.300: French Phonetics**

**3 s.h.**

*Prerequisites: FREN 02211*

This course provides a scientific study of French based upon the international phonetic system. It emphasizes diction and phonetic transcription and the correction of individual problems in pronunciation.

### **FREN 02.311: Advanced French Conversation**

**3 s.h.**

*Prerequisites: FREN 02212*

This course provides practice in speaking French at conversational speed. It emphasizes clarity and fluency of expression. Classes include discussions in French on topics of contemporary interest. The class uses both formal and informal methods to broaden students' vocabulary and enhance their speaking skills.

## Courses

### **FREN 02.315: Introduction to French Literature**

**3 s.h.**

*Prerequisites: FREN 02212*

This course presents selected representative works of French literature within their social and cultural setting from the Middle Ages to the 19th century in original French texts. The course enhances listening comprehension, speaking, reading and writing proficiency through literature.

### **FREN 02.320: French Civilization and Culture**

**3 s.h.**

*Prerequisites: FREN 02212*

This course provides students with a more profound insight into the varied aspects of contemporary France, its civilization and culture.

### **FREN 02.324: Appreciation of French Literature**

**3 s.h.**

*Prerequisites: FREN 02212*

This course introduces students to the reading of French literary texts. Students acquire a vocabulary of basic critical terms necessary for the discussion and analysis of narrative works, poetry and theatrical texts. Through close reading of at least one text per genre, students develop critical approaches with emphasis on the \*Explication de Texte\* method.

### **FREN 02.325: Readings in Contemporary French Literature**

**3 s.h.**

*Prerequisites: FREN 02212*

This course deals with the main currents shaping contemporary French literature. It selects readings which best bring into focus the characteristics of the time. It emphasizes reading as communication, with analysis and practice of the techniques of effective reading in French.

### **FREN 02.326: The French Novel**

**3 s.h.**

*Prerequisites: FREN 02212*

This course consists of an analysis of the French novel from the beginning to the present day. Students read and discuss selected major works.

### **FREN 02.400: History of the French Language**

**3 s.h.**

*Prerequisites: FREN 02212*

This course gives students an overview of the historical evolution of French from its Latin roots to present-day varieties spoken in France and the Francophone cultures. It provides an introduction to the science of linguistics.

### **FREN 02.410: Advanced French Composition**

**3 s.h.**

*Prerequisites: FREN 02212*

This course provides a systematic study of the problems of translation and of the practical application of written patterns, thus encouraging greater command of writing skills. It gives considerable attention to stylistics.

### **FREN 02.420: Evolution of French Civilization**

**3 s.h.**

*Prerequisites: FREN 02212*

This course surveys French history, art and social institutions as well as the contributions of France to Western Civilization.

### **FREN 02.421: The French Short Story**

**3 s.h.**

*Prerequisites: FREN 02212*

This course analyzes the French short story in its various aspects. It studies in detail selected works of major authors in the genre.

### **FREN 02.435: Individual Study (French)**

**3 to 6 s.h.**

*Prerequisites: FREN 02212*

Students may contract with an instructor to be examined on assigned readings in various areas of French literature. Non-minors may do the readings in translation; French minors must do the readings in French. No more than 3 semester hours may be taken in any one semester.

### **GERM 03.101: Elementary German I**

**3 s.h.**

This beginning course is open to students who have not previously studied German. This course covers mechanics of the language, including intensive practice in listening comprehension, speaking, reading and writing.

## Courses

### **GERM 03.102: Elementary German II**

**3 s.h.**

This beginning course is open to students who have not previously studied German. This course covers mechanics of the language, including intensive practice in listening comprehension, speaking, reading and writing.

### **GERM 03.201: Intermediate German I**

**3 s.h.**

*Prerequisites: GERM 03102*

This course is open to students who have had some limited contact with the German language. It offers expanded practice in listening comprehension, speaking, reading and writing.

### **GERM 03.211: Intermediate German II**

**3 s.h.**

*Prerequisites: GERM 03201*

This course is open to students who have had some limited contact with the German language. It offers expanded practice in listening comprehension, speaking, reading and writing.

### **GERM 03.212: German Reading and Composition**

**3 s.h.**

*Prerequisites: GERM 03211*

This course offers a broad grammar review based on readings, practical use of the language, written compositions and dictations.

### **GERM 03.311: Advanced German Conversation**

**3 s.h.**

*Prerequisites: GERM 03212*

This advanced conversation course uses topics from the contemporary German press. It emphasizes clarity and fluency of expression and includes discussions in German on topics of contemporary interest which lead to the active expansion of vocabulary.

### **GERM 03.320: German Civilization and Culture**

**3 s.h.**

*Prerequisites: GERM 03212*

This course surveys German history, arts and social institutions as well as Germany's contributions to Western civilization.

### **ITAL 04.101: Elementary Italian I**

**3 s.h.**

This introductory course is open to students who have not previously studied Italian. This course studies Italian language structures and patterns and offers practice in articulating these patterns. It also gives some attention to other language skills, such as listening comprehension, speaking, reading and writing.

### **ITAL 04.102: Elementary Italian II**

**3 s.h.**

This introductory course is open to students who have not previously studied Italian. This course studies Italian language structures and patterns and offers practice in articulating these patterns. It also gives some attention to other language skills, such as listening comprehension, speaking, reading and writing.

### **ITAL 04.201: Intermediate Italian I**

**3 s.h.**

This course is open to students who have had some limited contact with the Italian language. It surveys grammar and language patterns and offers expanded practice particularly in speaking and reading in the language.

### **ITAL 04.211: Intermediate Italian II**

**3 s.h.**

*Prerequisites: ITAL 04201*

This course is open to students who have had some limited contact with the Italian language. It surveys grammar and language patterns and offers expanded practice particularly in speaking and reading in the language.

### **LAT 09.101: Elementary Latin I**

**3 s.h.**

This is a beginning course in Latin. It emphasizes Latin grammar and vocabulary. Students will also read representative Latin prose selections, including the writings of Caesar.

### **LAT 09.102: Elementary Latin II**

**3 s.h.**

This is a beginning course in Latin. It emphasizes Latin grammar and vocabulary. Students will also read representative Latin prose selections, including the writings of Caesar.

### **RUSS 06.101: Elementary Russian I**

**3 s.h.**

This beginning course is open to students who have not previously studied Russian. It covers mechanics of the language, practice in articulating Russian speech patterns and reading and writing in Russian.

## Courses

### **RUSS 06.102: Elementary Russian II**

**3 s.h.**

This beginning course is open to students who have not previously studied Russian. It covers mechanics of the language, practice in articulating Russian speech patterns and reading and writing in Russian.

### **RUSS 06.201: Intermediate Russian I**

**3 s.h.**

This course is open to students who have had some limited contact with the Russian language. It surveys grammar and offers expanded practice, particularly in speaking and reading

### **RUSS 06.211: Intermediate Russian II**

**3 s.h.**

*Prerequisites: RUSS 06.201*

This course is open to students who have had some limited contact with the Russian language. It surveys grammar and offers expanded practice, particularly in speaking and reading.

### **RUSS 06.345: Russian Literature in Translation I**

**3 s.h.**

This course studies the major works of Russian prose, poetry and drama of the 18th and 19th Centuries in the context of political, cultural and intellectual history.

### **RUSS 06.347: Women in Russian Literature (in translation)**

**3 s.h.**

This course presents the image and role of Russian women from the 18th to the 20th centuries as reflected in Russian literature. The language of instruction is English.

### **SPAN 05.101: Spanish I**

**3 s.h.**

(No prerequisite) This course introduces the Spanish language and focuses on the students' development of communicative competence in Spanish with emphasis on the four skill areas of listening, comprehension, speaking, reading and writing.

### **SPAN 05.102: Spanish II**

**3 s.h.**

*Prerequisites: SPAN 05101*

(Continuation of Spanish I) This course focuses on the students' continued development of communicative competence in Spanish with emphasis on the four skill areas of speaking, reading, writing and listening comprehension.

### **SPAN 05.201: Spanish III**

**3 s.h.**

*Prerequisites: SPAN 05102*

(Continuation of Spanish I and II) This course focuses on the students' continued development of communicative competence in Spanish with emphasis on the four skill areas of speaking, reading, writing and listening comprehension.

### **SPAN 05.211: Spanish Reading and Conversation**

**3 s.h.**

*Prerequisites: SPAN 05201*

This course focuses on the students' continued development of communicative competence in Spanish with practice in the four skill areas of speaking, reading, writing and listening comprehension, in addition to greater emphasis on reading skills and oral production.

### **SPAN 05.212: Spanish Reading and Composition**

**3 s.h.**

*Prerequisites: SPAN 05211*

This course This course focuses on the students' continued development of communicative competence in Spanish with special emphasis on written communication. Students will produce descriptive, narrative and expository texts.

### **SPAN 05.250: 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.

### **SPAN 05.300: Spanish Phonetics**

**3 s.h.**

This course provides a scientific study of Spanish pronunciation based upon the international phonetic system. It emphasizes exercises in diction and phonetic transcription and the correction of individual problems in pronunciation.

## Courses

### **SPAN 05.301: Appreciation of Hispanic Literature**

**3 s.h.**

*Prerequisites: SPAN 05212*

This course introduces students to the reading of Hispanic literary texts. Students acquire a vocabulary of basic critical terms necessary for the discussion and analysis of narrative works, poetry, and theatrical texts. Through close reading of at least one text per genre, students develop critical approaches with emphasis on the "comentario de textos" method.

### **SPAN 05.302: Introduction to Hispanic Linguistics**

**3 s.h.**

This course will introduce students to the major subfields of Hispanic linguistics, including phonology (sound structure), morphology (word structure), syntax (sentence structure), semantics (structure of meaning), pragmatics (language use), language change and sociolinguistics (language use among speakers with different social and geographical backgrounds).

### **SPAN 05.305: Oral Spanish**

**3 s.h.**

*Prerequisites: SPAN 05211*

This course is open to students who wish to improve their spoken Spanish skills. Its design reflects the objectives of current national trends in encouraging oral Spanish production as outlined and measured by the ACTFL standards. Students will develop greater grammatical accuracy and control, the ability to describe and narrate, and greater facility in the production of sentences and oral paragraphs.

### **SPAN 05.312: Spanish for Business**

**3 s.h.**

This course is designed to help students interact with Hispanic communities on a business level, by improving their verbal and written skills, and exposing them to authentic print and visual media from the world of banking, advertising, and commerce. It stresses the development of functional language skills for real-life purposes within an accurate cultural context that reflects the variety of the Hispanic world.

### **SPAN 05.313: Spanish for Medical Personnel**

**3 s.h.**

*Prerequisites: SPAN 05211*

This course is designed to give students and practicing medical personnel the conversational and cultural tools they need to interact with Hispanic communities in a clinical setting. It stresses the development of functional language skills while addressing the special concerns of medical personnel with Spanish-speaking patients and their families in hospitals, emergency rooms, doctors' offices and clinics.

### **SPAN 05.320: Spanish Civilization and Culture**

**3 s.h.**

*Prerequisites: SPAN 05212*

This course provides an overview of the religious, political, artistic and social history of Spain.

### **SPAN 05.321: Survey of Spanish Literature I**

**3 s.h.**

This course studies texts, beginning with the Middle Ages and continuing to the mid-eighteenth century, examining their relevance in the historical and literary movements of their time.

### **SPAN 05.322: Survey of Spanish Literature II**

**3 s.h.**

*Prerequisites: SPAN 05320 or SPAN 05324*

This course is a continuation of SPAN 05.321 covering works from the mid-eighteenth century to the present.

### **SPAN 05.323: Survey of Spanish American Literature I**

**3 s.h.**

This course is a historical overview of Spanish American literature in its cultural, sociological, biographical and formal make up across many different genres from the Conquest to the precursors of Spanish American Modernism.

### **SPAN 05.324: Spanish-American Civilization and Culture**

**3 s.h.**

*Prerequisites: SPAN 05212*

This course This course is an overview of cultural, social, political and economic history of the different major periods that have shaped Spanish America through tradition, process and crisis.

### **SPAN 05.325: Readings in Contemporary Spanish Literature**

**3 s.h.**

This course examines peninsular works of various genres from Contemporary Spanish writers.

### **SPAN 05.326: Spanish Novel**

**3 s.h.**

This course studies the novel in Spain and its most outstanding characteristics, with reading and discussion of some of the best known writers from the Golden Age to the 19th century.

## Courses

### **SPAN 05.327: Spanish-American Poetry**

**3 s.h.**

Students are introduced to the various movements and philosophies of Spanish American poetry which began to take shape in Spanish American Modernism and continue through the twentieth and twenty-first centuries. Students will examine its genesis and evolution as it adapts and reacts to socio-cultural, geographic and political issues.

### **SPAN 05.328: Spanish-American Theater**

**3 s.h.**

This course examines Spanish American drama in both its textual and performance aspects, tracing its relationships to ethics, society, history, culture and contemporary public issues. Representative works from the European tradition as well as non-traditional, regional and vanguard theater will be examined.

### **SPAN 05.329: Survey of Spanish American Literature II**

**3 s.h.**

This course is a historical overview of Spanish American literature in its cultural, sociological, bibliographical and formal make up across many different genres from the consolidation of Spanish American Modernism to Contemporary literature.

### **SPAN 05.340: Introduction to Spanish Translation**

**3 s.h.**

Beyond acquiring the basic skills necessary for professional Spanish-to-English and English-to-Spanish translation, students of this course will improve their Spanish and English reading comprehension skills, sharpen their insight into the linguistic nature of both Spanish and English, gain knowledge regarding the ways in which both languages communicate cultural values and become acquainted with social and geographical variations of both languages. In addition, students will acquire experience in translating general material, such as from magazines, newspapers, and letters, and specialized material from the fields of literature, business, medicine, law, and the social sciences.

### **SPAN 05.381: Contemporary Spanish Theater**

**3 s.h.**

This course introduces students to recent trends in Peninsular drama beginning with the initial manifestations of formal renovation towards the beginning of the twentieth century and continuing through to present-day Spain.

### **SPAN 05.383: Spanish-American Short Story**

**3 s.h.**

This course analyzes a selection of Spanish American short stories and their relation to culture, aesthetics and modernity, covering a wide variety of authors, both canonical and vanguard.

### **SPAN 05.400: History of the Spanish Language**

**3 s.h.**

This course gives students an overview of the historical evolution of Spanish from its Latin roots to present-day varieties spoken in Spain and Latin America. It provides an introduction to the science of linguistics.

### **SPAN 05.409: Advanced Spanish Grammar (WI)**

**3 s.h.**

*Prerequisites: SPAN 05212 and ENGL 01112*

This course focuses on the continued improvement of writing Spanish with emphasis on narration and description situated in time. It provides an advanced grammar review and practice in the process of writing and in the expression of nuances and idioms in Spanish.

### **SPAN 05.410: Advanced Spanish Grammar and Composition**

**3 s.h.**

This course helps perfect students' skills in writing Spanish and in the knowledge of its grammatical structures. It provides exercises in translating modern authors and in composition.

### **SPAN 05.411: Advanced Spanish Conversation**

**3 s.h.**

This course is open to students who wish to improve their spoken Spanish skills. Students will develop enhanced grammatical precision, the ability to produce connected and cohesive discourse and communicative strategies in a variety of conversational situations.

### **SPAN 05.426: Spanish-American Novel**

**3 s.h.**

This course deals primarily but not exclusively with contemporary Spanish American novels, analyzing their political, historical, social and cultural importance. Also examined are critical aspects such as voice, narratology, discourse and gender.

### **SPAN 05.435: Spanish Individual Study**

**3 to 9 s.h.**

*Prerequisites: SPAN 05320 or SPAN 05324*

This course gives students an opportunity to study independently in order to strengthen their background in a particular area of Hispanic studies.

## Courses

### **SPAN 05.440: 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. Students will expand their knowledge base pertaining to foreign languages and literatures as they gain more in-depth knowledge of a chosen special topic.

### **SPAN 05.481: The Generation of 1898**

**3 s.h.**

This course studies the origin, development and influence of the so-called "Generation of '98," its philosophy and outstanding characteristics. Students read and discuss works of some of the major authors.

### **SPAN 05.482: Contemporary Spanish Novel**

**3 s.h.**

This course studies the contemporary novel of twentieth and twenty-first century Spain, examining its most outstanding characteristics. Texts from several important periods, such as posguera, Transición and present-day Spain among others will be studied. Areas of emphasis include voice, narratology, discourse and gender.

### **SPAN 05.499: Study Abroad**

**1 to 6 s.h.**

*Prerequisites: SPAN 05320 or SPAN 05324*

The Department encourages students to study abroad. This course is designed to give firsthand knowledge of the social, cultural and historical life of Spain and Spanish-American countries. The University offers a study abroad program. For further information contact the Director of the International Center or the department chairperson.

## Geography

### **GEOG 06.100: Introduction to Geography and Earth Studies**

**3 s.h.**

Introduction to Geography and Earth Studies is 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 06.102: 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 06.103: Geology I**

**4 s.h.**

This course introduces students to the study of the Earth's interior and to the processes shaping the Earth's surface. It emphasizes both theoretical understanding and practical application through a combination of lecture and laboratory exercises. Students will learn field methods during a mandatory three-day field trip. This course fulfills the General Education laboratory science requirement.

### **GEOG 06.104: Geology II**

**4 s.h.**

This course emphasizes historical geology, paleontology, structural geology, ocean basins, and applications of remote sensing. Students will be exposed to practical examples in the laboratories and a mandatory three-day field trip.

### **GEOG 06.110: Investigations in Physical Geography**

**4 s.h.**

Intended to develop an understanding of the physical factors of the Earth as human habitat and human adjustments to them, this course emphasizes the analysis of world distributional patterns of landforms, climate, vegetation, soils, and water features, and causes of relationships of these patterns. The integrated laboratory components provide student participation and experiences in observing, measuring, gathering data, analyzing underlying principles in such sub-fields as geomorphology, climatology, pedology, remote sensing, hydrology, and mapping sciences. Students will be exposed to field techniques during one mandatory Saturday field trip. This course fulfills the General Education laboratory science requirement.

### **GEOG 06.111: 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.

## Courses

### **GEOG 06.193: 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 06.201: Geography of the United States and Canada** 3 s.h.

A regional study of the United States and Canada in terms of the areal distribution of physical features, population patterns and economic activities, this course stresses an analysis of the forces stimulating change within the regional patterns.

### **GEOG 06.301: Economic Geography** 3 s.h.

This course is a survey of world patterns of economic development, including the distribution patterns of population, natural and agricultural resources, and manufacturing and service endeavors. Emphasis is placed on spatial variations in types of economic organization and patterns of land and resource utilization. This course may not be offered annually.

### **GEOG 06.302: Urban Geography** 3 s.h.

A study of the geographic principles related to the distribution, growth, function, structure and regional setting of urban centers, this course emphasizes spatial aspects of contemporary urban problems in the U.S.

### **GEOG 06.303: Political Geography** 3 s.h.

Studying political units as spatial phenomena, this course focuses upon the wide range of geographic factors affecting past and present variations of world political organizations and the interrelationships of regional political units. It analyzes "Geopolitik," "The Heartland Theory," and other political-geographic concepts, as well as selected problem areas. This course may not be offered annually.

### **GEOG 06.304: Population Geography** 3 s.h.

This course provides a spatial analysis of population parameters as they exist in the contemporary world, examining demographic, cultural and economic variables and how they affect certain population groups. This course may not be offered annually.

### **GEOG 06.305: Climatology** 3 s.h.

A study designed to develop an understanding of the elements and controls associated with various climatic phenomena, this course examines the consequences of climatic variations and interrelationships with other physical and cultural environmental features. It focuses on the physical and applied aspects of climatology. This course may not be offered annually.

### **GEOG 06.306: Cartography** 3 s.h.

This course studies the elements of cartography with emphasis on the map as a basic form of communication. It explores contemporary design concepts and various graphic techniques. Students draft relatively simple maps to understand techniques used in blending a wealth of information into a complex, yet readable, map.

### **GEOG 06.307: Directed Geographic Field Experiences** 3 s.h.

This course offers an introduction to geographic field research methods, class field trips to places chosen by instructor and students. Students will complete a field research project taken on a topic chosen in consultation with the instructor. This course may not be offered annually.

### **GEOG 06.308: Remote Sensing/Air Photo Interpretation** 3 s.h.

This course introduces students to techniques of spatial analysis using satellite imagery and aerial photography. It intersperses practical exercises in photo interpretation and digital image processing with demonstrations that include a wide range of photographic and non-photographic source material, including infra-red thermal and micro-wave images, digital orthographic photos as well as LANDSAT and other satellite platforms.

### **GEOG 06.309: Remote Sensing II** 3 s.h.

This course emphasizes the integration of remotely sensed data into geographic information systems (GIS). It includes applications of advanced remote sensing techniques and data processing for use in regional planning and land resource management. This course may not be offered annually.

## Courses

### **GEOG 06.310: Land Use and Resource Development**

**3 s.h.**

This course examines people's changing perceptions of the economic use potential of the total environment focusing on the interactions of physical, economic, political and cultural environments.

### **GEOG 06.313: Geography of Transportation**

**3 s.h.**

This course analyzes the significance of transport patterns as they have evolved in terms of physical, economic and cultural factors. It examines transport as both a cause and an effect in regional development and in urban systems. This course may not be offered annually.

### **GEOG 06.315: Field Studies in Geography**

**3 s.h.**

This course provides students with field research skills necessary to geographic research. It emphasizes techniques of field observation and recording, using a combination of lecture-discussion and field practice. This course may not be offered annually.

### **GEOG 06.320: Computer Cartography**

**3 s.h.**

Students learn methods used in automated cartographic data capture and image formation. The course outlines alternative data structures for raster and vector mode approaches. It introduces students to automated thematic map making on the microcomputer.

### **GEOG 06.323: Geography of New Jersey**

**3 s.h.**

A systematic and regional approach to the geography of this, the most densely populated state, this course analyzes the physical environment and cultural milieu in terms of their complex interactions. The course highlights problems of resource utilization and environmental concerns.

### **GEOG 06.325: Geomorphology**

**3 s.h.**

*Prerequisites: GEOG 06103 or GEOG 06101 or GEOL 14100*

A study of the evolution of land forms, this course examines the processes and physical factors which determine the development of the various types of landscape throughout the world.

### **GEOG 06.342: Geography of Europe**

**3 s.h.**

An intensive study of the physical and cultural characteristics of the European continent and the individual countries of which it is comprised, this course examines such topics as regional integration, international problems, changing patterns of economic development, political stability and shifting population patterns. This course may not be offered annually.

### **GEOG 06.343: Geography of Asia**

**3 s.h.**

This course examines the major environmental features of Asia, stressing problems of population pressure and land utilization. The course studies individual culture realms and selected countries intensively. This course may not be offered annually.

### **GEOG 06.344: Geography of Latin America**

**3 s.h.**

This course studies the physical and cultural bases of Latin America's geographic patterns, giving special emphasis to problems of resource development, population trends, and economic activity. This course may not be offered annually.

### **GEOG 06.345: Geography of Africa**

**3 s.h.**

An analysis of the diverse environmental factors, cultural groupings and national states comprising the African continent, this course emphasizes the problems of resource development and political stability of the newly emerging nations. This course may not be offered annually.

### **GEOG 06.346: Geography of the C.I.S. (former Soviet Union)**

**3 s.h.**

This course studies in depth the geography of the former Soviet Union by focusing on regional variations in population distribution, cultural and ethnic inputs and physical environmental constraints. It emphasizes the respective roles of past centralized planning under Communist doctrine, practical experiences and resource distribution as they influenced economic development and, in effect, changed the geography of the area to a major degree in the 20th century. It further examines the consequences of the break-up of the U.S.S.R. on the 15 separate countries. This course may not be offered annually.

## Courses

### **GEOG 06.347: Geography of the Middle East**

**3 s.h.**

This course is a survey of the physical environmental factors as they affect the patterns of settlement, land utilization and economic development of the regions and individual countries that comprise the Middle East. This course emphasizes the geographic bases for the current Arab-Israeli dispute. This course may not be offered annually.

### **GEOG 06.350: Quantitative Methods in Geography**

**3 s.h.**

This course examines the application of inferential statistical methods to geographic research. It also offers an introduction to techniques designed especially for analysis of spatial patterns and distribution. This course may not be offered annually.

### **GEOG 06.355: Metropolitan/Regional Planning**

**3 s.h.**

This course studies the philosophy, history, techniques, and problems of metropolitan and regional planning. Although it focuses on large scale-planning in the United States, the course makes some comparative analysis of planning in other countries. It emphasizes geographic techniques in regional analysis, as well as the roles of federal, state, and local agencies in planning. Students learn and use simulation and gaming techniques in the preparation of regional plans. This course may not be offered annually.

### **GEOG 06.360: 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 06.415: Geographic Information Systems II**

**3 s.h.**

*Prerequisites: GEOG 06193*

Geographic Information Systems II begins with a review of GIS concepts and capabilities. The course then moves to a consideration of the inner workings of GIS by exploring a sample of raster and vector mode cartographic data structures, and by examining the workings of computational algorithms used in GIS analysis. Finally, the course treats more advanced analysis techniques. Students learn the workings of GIS through lectures, demonstrations, and computer laboratory sessions. Student evaluation is based on performance on examinations and projects.

### **GEOG 06.491: Independent Study in Geography**

**2 to 4 s.h.**

Students have an opportunity to pursue individual specialized topics under the guidance of a staff member. This course may not be used as a substitute for a course offered by the department.

### **GEOG 06.493: Undergraduate Research Seminar in Geography-WI(Senior Seminar)**

**3 s.h.**

Students participate in planning a research project, collecting data and preparing a report suitable for publication including cartographic materials. Research subjects are selected according to student interest. This course is generally offered in the Fall Semester.

## Health Education and Exercise Science

### **HLTH 37.170: Stress Management**

**3 s.h.**

This course focuses on the nature of stress and the impact it has on a person's health. The student will study the relationship of the physiological, psychological and social factors which contribute to one's general stress balance and develop life skills to combat the negative impact of stress.

### **HLTH 37.180: Psychological Aspects of Health**

**3 s.h.**

The course deals mostly with assisting students in meeting mental health problems in today's society. It emphasizes modification in behavior, effects of chemicals on behavior, the psychology of sex, the psychology of accident prevention and the psychological problems of aging. This course may not be offered annually.

### **HLTH 37.192: Contemporary Health I**

**3 s.h.**

This is the first in a series of two general knowledge based survey courses which provide students with knowledge of current health issues which occur in the human life cycle. Topics which will be addressed are family life and human sexuality, personal growth and development, mental and emotional health, aging and death and dying.

## Courses

### **HLTH 37.193: Contemporary Health II**

**3 s.h.**

This is the second in a series of two general knowledge based survey courses which provide students with knowledge of current health issues which occur in the human lifecycle. Topics which will be addressed are alcohol, tobacco and other drugs, personal health, chronic and infectious diseases, environmental health and consumerism.

### **HLTH 37.209: Health Education for Elementary School Teachers**

**1 s.h.**

Elementary education majors will be prepared to conduct thorough and effective health education in grades K-6. This course focuses on the nature and philosophy of health education and comprehensive school health programs as well as the teacher's role in curriculum, instruction and evaluation as they impact student health-related behavior.

### **HLTH 37.210: Consumer Health Decisions**

**3 s.h.**

This course examines the rights and responsibilities of a consumer faced with increasing amounts of information related to his or her overall well-being. It examines the major problem of health fraud and the components of scientific research. The role of advertising is explored, as well as sound principles for purchasing nutrition, fitness and other health-related products and services. Students learn important concepts related to health insurance and hospitals, traditional and alternative medical care and how to better manage the decisions they make.

### **HLTH 37.310: Foundations of Health Promotion and Fitness Management**

**3 s.h.**

This course examines the history, purpose and current practice of health promotion and fitness in organizational settings. Concepts of the field as they relate to corporations, hospitals, non-profit community health agencies and commercial providers are discussed. Students meet with professionals in the field and learn how health promotion and fitness are addressed in different organizations. Resources for professionals in the field are reviewed. Characteristics and skills of successful professionals in this field are addressed.

### **HLTH 37.325: Teaching Concepts of Health Education I**

**3 s.h.**

None

### **HLTH 37.326: Teaching Concepts of Health Education II**

**3 s.h.**

None

### **HLTH 37.329: Laboratory in Personal Training Techniques**

**1 s.h.**

*Prerequisites: PHED 35401*

This course prepares the student, with an exercise science background, to successfully work as a personal fitness trainer for individual clients. During this highly experiential learning experience, students will learn to combine their exercise science knowledge, counseling and educational skills, and fitness techniques with clients in the campus exercise facility. Upon successfully completing this course, students will be prepared to qualify for national certification in personal training.

### **HLTH 37.340: Administration of Health Promotion and Fitness Programs**

**3 s.h.**

*Prerequisites: HLTH 37170 and INAR 06200*

This course identifies and explains the components of a successful health promotion and fitness program. Students learn how to conduct a needs assessment, set goals and objectives, design intervention strategies, promote the program, find resources, prepare a budget and evaluate a program. In addition, students sharpen their professional skills related to public speaking, time management and business writing.

### **HLTH 37.350: Health Behavior**

**3 s.h.**

*Prerequisites: HLTH 37310*

This course examines the factors that influence an individual's choices and behaviors related to health and the process of motivating change within the individual to adopt healthful behaviors and discontinue unhealthful ones. Several theories of health behavior are examined and applied. The different roles of the client and educator are addressed as the student is prepared to counsel others in making positive health behavior changes.

### **HLTH 37.390: Health Problems of the Young Child**

**3 s.h.**

Designed primarily for the early childhood and kindergarten-primary education majors, this course covers observation, detection, prevention and alleviation of physical, emotional and social health problems and disorders of the 3-8 year old child. This course may not be offered annually.

## Courses

### **HLTH 37.430: Practicum in Health Promotion and Fitness Management**

**3 s.h.**

*Prerequisites: HLTH 37340*

This is an application-oriented course in which students design and implement a health promotion/ fitness program for the Rowan community. While the major emphasis is on the implementation of the program, students continue to meet weekly to discuss and evaluate their progress. Specific topics related to the field, such as legal liability and resume preparation are also addressed. In addition, students complete a formal evaluation of their professional qualities and skills for the health promotion and fitness field.

### **HLTH 37.453: Health Program Planning**

**3 s.h.**

*Prerequisites: PHED 35286 and HLTH 37192 or PHED 35392 or HLTH 37193*

This course develops an understanding of the competencies essential for the planning of health programs. Though community and work-site program are discussed, compared and contrasted, school health education programs are the major focus of this course. Students are given opportunities to develop sensitivity for the importance of integrating health education in various settings and to address the NJ Core Curriculum Content Standards for Comprehensive Health and Physical Education (Standards 2.1 through 2.4). Actual lesson planning and teaching experiences are required. Students are encouraged to take the junior field experience course simultaneously in order to correlate experiences, observe well, and apply concepts learned.

### **HLTH 37.483: Senior Field Experience in Health Promotion and Fitness Management**

**9 s.h.**

*Prerequisites: HLTH 37430*

Students complete a supervised field experience enabling them to gain knowledge of a wide range of clients and the functioning of a health, sport, or fitness facility or program in the community. Placements are made in agencies selected on the basis of student's needs, interests, and program specializations.

### **HLTH 37.485: Evaluation Procedures in Health**

**3 s.h.**

This course applies knowledge and skill in developing measuring techniques for program effectiveness, through types of research procedures related to health. It includes competence in evaluating and interpreting health-related statistical data and material from various national and international health organizations. This course may not be offered annually.

### **HLTH 37.486: Problems and Issues in Health**

**3 s.h.**

This course assists students in understanding current problems and issues in health solutions by examining past and possible future solutions. It stresses the latest health issues, such as AIDS, the cocaine problem, and teenage pregnancy. This course may not be offered annually.

### **INAR 05.302: Contemporary American Family**

**3 s.h.**

This course examines the dynamic interiors of family life, focusing on the interpersonal relationships of family members and current issues related to family life. Students choose course projects related to their professional or personal goals.

### **INAR 06.200: Basic Nutrition**

**3 s.h.**

Students study human nutrition through the basic knowledge of nutrients and the physiological processes involved in the utilization of food. They also develop an understanding of the ways in which age, health, social, and economic factors and other variables affect nutritional needs and food practices. A computerized dietary analysis may be one of the course requirements.

### **INAR 06.390: Nutrition Education**

**3 s.h.**

This course provides an overview of nutrition education and explores the various settings in which nutrition education is carried out. It introduces students to learning theory and reviews techniques and resources for teaching nutrition. Students learn to assess the needs of different learner groups and develop, select, and evaluate appropriate nutrition education materials. This course may not be offered annually.

### **INAR 06.415: Nutrition for Fitness**

**3 s.h.**

*Prerequisites: INAR 06200*

This advanced nutrition course explores the relationship between nutrition, physical fitness, performance and disease prevention. Specific topics include nutrition fraud, supplementation, ergogenic aids, diet planning for athletes and the relationship between nutrition and chronic diseases such as cancer and heart disease. In addition, students continue to develop their skills as nutrition counselors and educators.

## Courses

### **PHED 35.103: 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 35.105: Introduction to Athletic Training**

**2 s.h.**

This course is designed as an initial experience for students considering a career in athletic training. Students will be introduced to various domains, competencies, and proficiencies related to athletic training. An in-depth look at the field of athletic training and the requirements of the athletic training program will be discussed. An observational field experience is required.

### **PHED 35.109: Adventure and Experiential Learning**

**2 s.h.**

*Prerequisites: PHED 35135 or PHED 35105*

This course in adventure and experiential learning activities is designed to provide the prospective students with the skills and knowledge necessary to conduct adventure and experiential learning activities in a variety of settings. A function of this course is to introduce strategies appropriate for facilitating experiential and adventure experiences for varied settings and groups. We believe that these types of activities are becoming increasingly relevant in today's society, especially in occupational wellness. Thus, the skill and knowledge proficiency is a necessary component of leadership in a variety of settings.

### **PHED 35.135: Introduction to Teaching Health and Physical Education**

**2 s.h.**

This course is required for students majoring in Health and Exercise Science with the specialization of health and physical education teacher certification. The focus of this course is on: historical, philosophical, psychological, sociological, and biomechanical foundations; the interrelationship of health, physical education, sports, dance, recreation, and fitness within the profession; motor learning and motor development; common language used within the varied areas; and alternative solutions to present-day issues/problems.

### **PHED 35.204: Women in Sport**

**2 s.h.**

Students will examine women's participation in sport from historical, cultural, psychological, physical, legal and societal perspectives. Emphasis will be placed on the role of the female in sport in American society.

### **PHED 35.205: Teaching Concepts of Team Sports**

**3 s.h.**

*Prerequisites: PHED 35135*

This course provides an opportunity for students to learn the characteristics of a skilled performance in a variety of team sports. Students will be able to describe and demonstrate the application of appropriate rules, strategies, and sportsmanship behaviors of each team sport.

### **PHED 35.218: Prevention and Care of Orthopedic Injuries**

**3 s.h.**

*Prerequisites: BIOL 10210 or PHED 35241 or BIOL 10212 or PHED 35242*

An examination of current practices and procedures in the basic pathology, prevention and care of athletic injuries. The laboratory experience exposes students to wound care, padding, and the art and science of athletic injury taping. An observational clinical field experience will be required.

### **PHED 35.219: Pathology and Evaluation of Orthopedic Injuries I**

**4 s.h.**

*Prerequisites: BIOL 10210 and BIOL 10212 or PHED 35218*

This course provides an examination of the etiology, epidemiology, pathology, and assessment of injuries and illnesses to the lower extremity. Structural, functional, and surface anatomy will be reviewed. In addition to didactic classroom time, students are also instructed, given time to practice and evaluated on pertinent athletic training psychomotor competencies and clinical proficiencies within a practical laboratory experience. There is an observational field experience associated with this class.

### **PHED 35.220: Pathology and Evaluation of Orthopedic Injuries II**

**4 s.h.**

*Prerequisites: PHED 35219*

This course provides an examination of the etiology, epidemiology, pathology and assessment of injuries and illnesses to the upper extremity, head, axial skeleton, chest, and thorax. Structural, functional and surface anatomy will be reviewed. In addition to didactic classroom time, students are also instructed, given time to practice and evaluated on pertinent athletic training psychomotor competencies and clinical proficiencies within a practical laboratory experience. There is an observational field experience associated with this class.

## Courses

### **PHED 35.228: Rhythmic Activities and Forms**

**3 s.h.**

This course introduces health and exercise science majors specializing in teacher certification to the skills, concepts and knowledge necessary for instructing development and performance sequences in various rhythmic activities (creative rhythms, routines with small hand apparatus, and novelty dances) and dance forms (folk, social, square, contra, and line). The study of selected rhythmic activities and dance forms include: terminology, relative movement patterns, techniques, skill performance, evaluation, basic musical structure, and teaching strategies.

### **PHED 35.231: Teaching Concepts of Individual & Dual Sports**

**3 s.h.**

*Prerequisites: PHED 35135*

This course is designed to prepare health and exercise science teacher certification students to successfully teach specific sport activities in the school setting. Students are exposed to rules, strategies, organizations and skill development in individual and dual sports. Emphasis is placed on the teaching and learning process throughout the various grade levels.

### **PHED 35.235: Safety, First Aid and Basic Understanding of Athletic Injuries**

**3 s.h.**

This course is designed for the individual who is interested in gaining CPR and First Aid certification and a basic understanding of athletic injuries. The first part of this class will allow students to understand and demonstrate appropriate techniques in performing American Red Cross Community CPR and First Aid techniques required for certification. The second component of the class will enable students to understand basic concepts in athletic injury: anatomy, recognition, and basic care.

### **PHED 35.241: Structure and Function of the Human Body I**

**3 s.h.**

This course investigates basic anatomical and physiological concepts of the human body. It includes cellular structure and function, metabolism, and the skeletal, nervous, muscular, circulatory and respiratory systems.

### **PHED 35.242: Structure and Function of the Human Body II**

**3 s.h.**

*Prerequisites: PHED 35241*

This course continues the study of the human body begun in PHED35.241. It investigates the urinary, endocrine, reproductive, digestive and integumentary systems.

### **PHED 35.270: Foundations of Fitness and Motor Development**

**3 s.h.**

*Prerequisites: PHED 35135*

This course is designed to be an introductory course that includes the study of locomotor and non-locomotor patterns, manipulative, rhythmical movement patterns, and skill development as they relate to motor learning. These fundamental principles will be analyzed in terms of teaching elementary school children. Throughout this course the concept of providing challenging yet success assured learning experiences for skill development and the enhancement of self esteem will be consistently reinforced.

### **PHED 35.271: Movement and Meaning in Sports**

**3 s.h.**

This course helps students understand themselves and how they relate physically to their environment. Through movement students discover, understand, control and adjust to their environment and gain an understanding of space, time and force. The course discusses exercise and sport forms. This course may not be offered annually.

### **PHED 35.286: Teaching in Learning Communities II: Foundations of Teaching Health and Physical Education**

**3 s.h.**

*Prerequisites: PHED 35135*

Students in this course are introduced to the profession of teaching health and physical education for pupil outcomes which address the New Jersey Core Curriculum Content Standards for Comprehensive Health and Physical Education, with specific emphasis on teaching skills, student behaviors, and the classroom environment. These three elements are discussed, analyzed and practiced through the principles of learning communities. Students explore the roles and responsibilities of teachers through the study of professional literature; class discussions and activities; simulation exercises; and direct interactions with students, teachers and administrators during on-campus and off-campus experiences. School observations are a required component of this course.

### **PHED 35.334: Advanced Emergency Care**

**3 s.h.**

This is a sophomore level course designed primarily for athletic training majors and other allied health professionals. Students are trained in CPR for the professional rescuer as well as other advanced emergency skills. An additional observation experience in a local emergency room is required. There also is an optional lifeguarding component available in this class.

## Courses

### **PHED 35.336: Elementary School Physical Education Activities**

**3 s.h.**

This course is an introductory survey course designed to help prepare health and exercise science teacher certification majors to teach relevant curriculum at the elementary school level. Students will be exposed to a number of important activities that comprise the focus of elementary school physical education. Methods, techniques and classroom management as they apply to teaching pertinent curriculum will be highlighted.

### **PHED 35.338: Clinical Experience in Athletic Training I**

**3 s.h.**

*Prerequisites: PHED 35220*

This course, designed for first semester juniors, will review and be evaluated on clinical proficiencies previously discussed in pre-specialization course work. Students meet once per week in the Athletic Training Laboratory to practice and discuss topics pertinent to their clinical assignment. The clinical assignment enables students to develop and assimilate patient care skills under the direct supervision of a certified athletic trainer and/or approved clinical instructor within the athletic training room, exposure to intercollegiate athletics and/or at approved affiliated sites.

### **PHED 35.339: Clinical Experience in Athletic Training II**

**3 s.h.**

*Prerequisites: PHED 35338*

This course, designed for second semester juniors, will review and evaluate clinical proficiencies previously discussed in Therapeutic Modalities and related topics relevant to previous course work. Students meet once per week in the Athletic Training Laboratory to practice and discuss topics pertinent to their clinical assignment. The clinical assignment enables students to develop and assimilate patient care skills under the direct supervision of a certified athletic trainer and/or approved clinical instructor within the athletic training room, exposure to intercollegiate athletics and/or at approved affiliated sites.

### **PHED 35.340: Clinical Experience in Athletic Training III**

**3 s.h.**

*Prerequisites: PHED 35339*

This course, designed for first semester seniors, will review and evaluate clinical proficiencies previously discussed in Therapeutic Exercises and related topics relevant to previous course work. Students meet once per week in the Athletic Training Laboratory to practice and discuss topics pertinent to their clinical assignment. The clinical assignment enables students to develop and assimilate patient care skills under the direct supervision of a certified athletic trainer and/or approved clinical instructor within the athletic training room, exposure to intercollegiate athletics and/or at approved affiliated sites.

### **PHED 35.341: Clinical Experience in Athletic Training IV**

**3 s.h.**

*Prerequisites: PHED 35340*

This course, designed for second semester seniors, will review and evaluate clinical proficiencies previously discussed in General Medical Conditions and Pharmacology and related topics relevant to previous course work. Students meet once per week in the Athletic Training Laboratory to practice and discuss topics pertinent to their clinical assignment. The clinical assignment enables students to develop and assimilate patient care skills under the direct supervision of a certified athletic trainer and/or approved clinical instructor within the athletic training room, exposure to intercollegiate athletics and/or at approved affiliated sites.

### **PHED 35.342: K-12 Health and Physical Education Curriculum & Instruction**

**3 s.h.**

K-12 Physical Education Curriculum and Instruction is a critical junior level course designed to help prepare Health and Exercise Science majors to become successful physical education teachers in schools. Teacher candidates will develop expertise in curriculum construction, planning, instruction and evaluation in elementary, middle and high school. In developing this expertise, candidates will address the NJ Core Curriculum Content Standards for Comprehensive Health and Physical Education (Standards 2.1, 2.5 and 2.6).

### **PHED 35.343: Kinesiology**

**3 s.h.**

*Prerequisites: BIOL 10210 and BIOL 10212 or PHED 35241 and PHED 35242*

Kinesiology, the study of human movement, integrates the sciences of anatomy, physiology and physics as they contribute to developing an appreciation for the art of movement. Opportunity is given for an individual study of a movement pattern with emphasis on the application of the mechanical principles of motion.

### **PHED 35.344: Exercise Physiology (without lab)**

**3 s.h.**

*Prerequisites: PHED 35241 and PHED 35242*

A course in applied anatomy and physiology, this course studies the interrelationship of exercise and physiology. This course also covers the functions of the human body under the stress of physical activity.

### **PHED 35.345: Exercise Physiology (with lab)**

**4 s.h.**

*Prerequisites: PHED 35241 and PHED 35242 or BIOL 10210 and BIOL 10212*

A course in applied anatomy and physiology, this course studies the interrelationship of exercise and physiology. This course also covers the functions of the human body under the stress of physical activity.

## Courses

### **PHED 35.352: Technology and Assessment in Health and Exercise Science**

**3 s.h.**

*Prerequisites: PHED 35135 and CS 01050 or PHED 35135 and CS 01100 or PHED 35135 and Computer Competency Exam 70*

This course will prepare students in the Department of Health and Exercise Science to use computers and technology for organizing information, amplifying presentation, developing written documents, assessing client/students, gathering information, and completing research. Students will evaluate software, use peripheral devices, explore internet applications, and use non-computer media applications as they apply to their discipline. An introduction to simple statistical designs will also be a component of this course.

### **PHED 35.368: Motor Learning and Human Movement**

**3 s.h.**

In this course students receive an introduction to major theories and principles concerning motor learning and performance of physical skills. Emphasis is placed on the preparation of instructional designs which enhance skill and knowledge acquisition of the learner.

### **PHED 35.373: Advanced Lifesaving/Cardiopulmonary Resuscitation**

**3 s.h.**

This course is for advanced swimmers who wish to learn the skills and techniques necessary to become qualified lifeguards. This course covers swimming and rescue skills, personal safety skills, lifeguard techniques, cardiopulmonary resuscitation skills and knowledge, and management techniques for aquatic environments. Upon successful completion of the course the student will receive the American National Red Cross Certificate in Basic Cardiopulmonary Resuscitation and in Advanced Lifesaving. This course may not be offered annually.

### **PHED 35.374: Coaching Team Sports (Non-Majors)**

**3 s.h.**

This course develops a sound philosophy in team sports for interscholastic programs in junior and senior high schools. This course presents skills, techniques, theory, rules, strategy and methods through laboratory, classroom experiences and audiovisual aids. This course may not be offered annually.

### **PHED 35.377: Teaching Health and Physical Education to the Handicapped**

**3 s.h.**

This course is a restrictive elective course for special education majors and an elective for all other students. Students study the need for health and physical education for handicapped students as defined in P.L. 94-142. The course demonstrates several teaching styles that correlate physical education with other disciplines focusing on movement. Learning experiences in the gymnasium are used to reinforce methodology studied in the classroom. This course may not be offered annually.

### **PHED 35.378: Recreation and Leisure Studies for the Handicapped**

**3 s.h.**

This course develops an understanding of the values and function of recreation in the lifestyle of handicapped individuals. It explores societal trends, legislation, and barriers which impact on recreation participation. It studies the implementation of leisure education, leisure counseling, recreation as a related service in P.L. 94-142, and the continuum of recreation services in community settings. Open to all students.

### **PHED 35.380: Officiating Competitive Swimming & Diving**

**1 s.h.**

This course prepares students to take the N.J. Swimming Officials State exam. It is also useful for students who have an interest in coaching competitive swimming and diving. This course may not be offered annually.

### **PHED 35.392: Field experience in Teaching Health and Physical Education**

**1 s.h.**

*Prerequisites: PHED 35286 or PHED 35330 or HLTH 37453*

This course introduces students to the nature and operation of elementary and secondary schools. Students learn to organize instructional materials into meaningful daily lessons in both health and physical education. The course emphasizes the development of teaching strategies, classroom management techniques and use of educational media. The field experience involves observation, tutoring, micro-teaching and practice in a variety of other instructional skills. Field assignments are sought that involve the pre-service teacher in a realistic mainstreamed classroom environment.

### **PHED 35.401: Exercise Prescription**

**3 s.h.**

*Prerequisites: PHED 35241 and PHED 35242 and PHED 35344 or PHED 35345*

This course provides students with the knowledge and practical experience in exercise testing and prescription. The information enables students to establish scientific foundations of exercise testing and prescription, to identify the risk factors for disease development and to prescribe an exercise program based on exercise test results and personal limitations. Practical experience is provided for testing subjects in the laboratory.

## Courses

### **PHED 35.405: Organization & Administration in Athletic Training**

**3 s.h.**

*Prerequisites: PHED 35339*

This lecture/laboratory course is designed to meet the entry level competencies for the athletic training student in the area of organization and administration of athletic training. It covers liability, budgeting, athletic training facility design, insurance, administration of medical record keeping systems, data tabulation and interpretation, emergency transportation systems, athletic training facility management, impact of state and national governing body regulations, athletic injury insurance administration and communication, conflict resolution and mediation. The senior level course is designed to meet educational competencies in pharmacology and general medicine for the undergraduate athletic training student. This course will focus on issues in pharmacology and general medicine pertinent to the allied health profession of athletic training. Issues such as the drug approval process, side effects of medications, general medical evaluation will be explored during this course. There is a general medical clinical field experience with the athletic training programs medical director associated with this course.

### **PHED 35.412: Exercise for Special Populations**

**3 s.h.**

*Prerequisites: PHED 35401 and PHED 35345 or PHED 35401 and PHED 35344*

This course provides a study of exercise considerations for special populations. It covers the basic concepts of the physiologic effects of exercise and the application of these concepts to special cases. Cases included are respiratory and cardiovascular diseases, hypertension, obesity, diabetes, arthritis, osteoporosis, pregnancy, children/adolescents, and the elderly.

### **PHED 35.430: Senior Seminar in Athletic Training**

**1 s.h.**

*Prerequisites: PHED 35340*

This senior seminar is an examination of the individual's responsibility to promote athletic training as a profession, remain abreast of current theory and practice, disseminate health and athletic training information, and to enhance the professional growth of self and others.

### **PHED 35.452: Adapted Physical Education**

**3 s.h.**

*Prerequisites: PHED 35135*

This is an introductory course designed to provide teacher candidates with the knowledge and basic skills required to meet the professional and legal mandates pertaining to general physical education for students with unique needs, between ages 3 to 21. The course will focus on the law, placement decisions, assessment, individualized general physical education programming, service delivery, and transition planning for individuals with disabilities. It stresses professionalism in the workplace, awareness of the strengths and limitations of those with disabilities and methods for inclusion.

### **PHED 35.456: Principles of Coaching**

**3 s.h.**

Emphasizes the development of a sound coaching philosophy. Includes aspects related to team organization, supervision, equipment control and its administration and community ethics. Attention will be given to the sociology and psychology of sport.

### **PHED 35.460: Clinical Practice in Health and Physical Education, Elementary**

**5 s.h.**

*Prerequisites: PHED 35392*

This course allows teacher candidates to work under the guidance and direction of an experienced elementary health and physical education teacher. Teacher candidates gain experience and develop insight and skill in the teaching of secondary school health and physical education. An application for clinical practice must be submitted and approved through the Office of Field Experiences.

### **PHED 35.461: Clinical Practice in Health and Physical Education, Secondary**

**5 s.h.**

*Prerequisites: PHED 35286 and PHED 35392*

This course allows teacher candidates to work under the guidance and direction of an experienced secondary health and physical education teacher. Teacher candidates gain experience and develop insight and skill in the teaching of secondary school health and physical education. An application for clinical practice must be submitted and approved through the Office of Field Experiences.

### **PHED 35.465: Clinical Seminar in Health and Physical Education**

**2 s.h.**

*Prerequisites: PHED 35460 or PHED 35461*

This senior-level capstone course is designed to be taken concurrently with student teaching. The seminar will focus on: understanding the current issues in teaching health and physical education; evaluating the application of effective teaching; and understanding the parameters of professional and ethical behaviors in teaching.

## Courses

### **PHED 35.473: Water Safety Instructor**

**3 s.h.**

This course covers the American National Red Cross standardized program of skill proficiency, teaching methodologies, principles of class organization, safety factors in teaching swimming and practice teaching experiences. The course is for advanced swimmers who are interested in learning to teach swimming and water safety. Upon successful completion of this course students receive the American National Red Cross Certificate as a Water Safety Instructor. This course may not be offered annually.

### **PHED 35.475: Therapeutic Modalities for Athletic Training**

**4 s.h.**

*Prerequisites: PHED 35478*

This course focuses on the cognitive, affective and psychomotor competencies involved in developing appropriate therapeutic modality programs for the injured person. This course uses current research to discuss the theory and clinical applications of all potential modalities used in the athletic training room. This course implements a problem-solving approach for the return of functional integrity to the injured person through the use of therapeutic modalities. A laboratory experience is part of this class.

### **PHED 35.478: Therapeutic Exercises in Athletic Training**

**4 s.h.**

*Prerequisites: PHED 35105*

This course covers the cognitive, affective and psychomotor competencies involved in developing appropriate rehabilitation exercise protocols for the injured person. This course uses current research to discuss the physiological and biomechanical concepts involved in the clinical practice of rehabilitation. This course implements a holistic and problem-solving approach for the return of functional integrity to the injured person. A laboratory experience is part of this class.

### **PHED 35.479: Pharmacology and General Medicine in Athletic Training**

**3 s.h.**

This senior level course is designed to meet educational competencies in pharmacology and general medication for the undergraduate athletic training student. The course will focus on issues in pharmacology and general medicine pertinent to the allied health profession of athletic training. Issues such as the drug approval process, side effects of medications, general medical evaluation will be explored during this course. There is a general medical clinical field experience with the athletic training program's medical director associated with this course.

### **PHED 35.480: Trends in School and Community Recreation**

**3 s.h.**

This course, an elective course for all students, assists students to develop and enhance "a worthy use of leisure" by participation in school and community recreation as well as leisure service programs and activities.

## History

### **HIST 05.100: 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 05.101: Western Civilization Since 1660**

**3 s.h.**

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 05.120: 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. This course may not be offered annually.

### **HIST 05.150: 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 05.151: 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.

## Courses

### **HIST 05.299: Introduction to Historical Methods**

**3 s.h.**

*Prerequisites: ENGL 01112 or COMP 01112*

This course studies the history of historical writing with the design of developing a deep, critical knowledge of the writings of the major schools of history. It analyzes readings in terms of the technical and philosophical problems underlying all historical study. Required of history majors in Junior year.

### **HIST 05.300: Ancient Mediterranean World**

**3 s.h.**

*Prerequisites: HIST 05100*

This course begins with the earliest Near Eastern civilization and ends with the collapse of Rome. It deals with the wide diversities within this span through selected topics, using readings from primary sources and secondary interpretations. This course may not be offered annually.

### **HIST 05.301: The American Revolution and Early Republic, 1775-1820**

**3 s.h.**

*Prerequisites: HIST 05150*

This course will examine the political, economic, social, and cultural factors that led to the onset of the American Revolution, the outbreak of the Revolutionary War, and the creation of the United States of America. This will include study of the adoption of the Constitution, popular challenges to federal power, and the character of American society and politics during the Early Republic. This course may not be offered annually.

### **HIST 05.304: Islamic Civilization**

**3 s.h.**

*Prerequisites: HIST 05299*

This course provides an introduction to the broad currents in Islamic history from the emergence of Islam in the 7th century A.D. through the 18th century. It concentrates on the heartland of the Islamic world, the Middle East, using primary sources as well as secondary interpretations. This course is typically offered during the fall semester.

### **HIST 05.308: Modern Middle East**

**3 s.h.**

*Prerequisites: HIST 05299*

This course provides an introduction to the history of the Middle East from 1800 to the present, a period of intense change in the region. It examines the transition from empires to nation states and the rise and fall of European imperialism in the area. This course is typically offered in the spring semester.

### **HIST 05.310: Medieval Europe**

**3 s.h.**

*Prerequisites: HIST 05100*

This course examines the development of Europe from the particularism of the feudal age to the formation of national states. It covers political evolution, integrating it with the social, economic and cultural trends giving particular stress to the reading of primary sources in translation. This course may not be offered annually.

### **HIST 05.311: Renaissance and Reformation**

**3 s.h.**

*Prerequisites: HIST 05100*

This course examines the Renaissance in Italy and northern Europe, the Protestant and Catholic Reformations and their impact upon the politics and culture of the period, the growth of a capitalistic society, overseas expansion and the beginnings of modern science. It uses reading of primary sources. This course may not be offered annually.

### **HIST 05.312: Age of Enlightenment 1648-1789**

**3 s.h.**

*Prerequisites: HIST 05101 or HIST 05120*

This course studies Europe from the end of the Thirty Years War to the French Revolution including the significant intellectual development known as the Enlightenment, the development of the national monarchies, colonization and the colonial wars. This course may not be offered annually.

### **HIST 05.313: Age of Revolution 1760-1815**

**3 s.h.**

*Prerequisites: HIST 05101 or HIST 05120*

This course emphasizes the dramatic changes that occurred in European society during this period. It examines the political, social, economic and intellectual factors that stimulated change, using readings in primary sources and secondary interpretations. This course may not be offered annually.

### **HIST 05.314: Europe 1871-1914**

**3 s.h.**

*Prerequisites: HIST 05101 or HIST 05120*

This course examines the period in terms of its dual character as the climax of Enlightenment and as the source of later disillusionment. The course emphasizes Europe and not any particular country, giving particular attention to the historiographical problem of the causes of World War I. This course may not be offered annually.

## Courses

### **HIST 05.315: Twentieth Century Europe I**

**3 s.h.**

*Prerequisites: HIST 05101 or HIST 05120*

This course analyzes the major factors that have produced the unrest and disturbances of the present century. It stresses the important economic, social and intellectual trends and major political events. This course may not be offered annually.

### **HIST 05.316: Twentieth Century Europe II**

**3 s.h.**

*Prerequisites: HIST 05101 or HIST 05120*

A continuation of in-depth analysis of the modern European historical experience. This study of contemporary Europe is annually subdivided by themes and/or by chronology. Students may enroll for a year of study or opt for either the first or second semester. This course may not be offered annually.

### **HIST 05.321: U.S. History 1820-1861**

**3 s.h.**

*Prerequisites: HIST 05150*

This course analyzes American society and culture from 1820 to 1861 against the background of industrialization, urban development, westward movement, political campaigns, religious revivals, and evolving gender roles, race relations, and social classes. The course will also focus on the growth of the American Empire, the impact of Jacksonian democracy, and the emergence of sectional politics. This course may not be offered annually.

### **HIST 05.322: Civil War and Reconstruction**

**3 s.h.**

*Prerequisites: HIST 05150*

This course provides a detailed political, economic and cultural analysis of the causes of the Civil War. It makes a searching study of the years of reconstruction and their significance for our own times, giving particular emphasis on interpreting the era and its overall significance. This course may not be offered annually.

### **HIST 05.324: Twentieth Century U.S.**

**3 s.h.**

*Prerequisites: HIST 05151*

From the Progressives of the early twentieth century to the present, this course attempts to probe the trends and ideas which form the basis of our present points of view in attempting to solve contemporary problems. This course may not be offered annually.

### **HIST 05.326: England Since 1715**

**3 s.h.**

This course explores developments in English society, government, art, and literature with special emphasis on eighteenth century social and constitutional customs; nineteenth century urbanization, industrialization, imperialism and the attendant social and political consequences; twentieth century world wars, the creation of the welfare state and decolonization. This course may not be offered annually.

### **HIST 05.327: Victorian England**

**3 s.h.**

*Prerequisites: HIST 05101 or HIST 05120 and HIST 05299*

This course examines the social and economic history of England from the Reform Act of 1832 to the constitutional crises of 1910, giving special attention to those social and economic factors that underlie British Imperialism. This course may not be offered annually.

### **HIST 05.328: Colonial North America 1500-1775**

**3 s.h.**

*Prerequisites: HIST 05150 and HIST 05299*

This course will examine in-depth the political, economic, social and cultural forces that shaped North America from the time of Columbus' first voyage to the onset of the American Revolution. This will include the study of the variety of European settlements, the impact of European conquest and colonization on native populations, and the threefold relationship between Native Americans, Europeans and Africans that the colonial experience initiated in North America. This course may not be offered annually.

### **HIST 05.329: The Gilded Age and Progressive Era, 1877-1914**

**3 s.h.**

*Prerequisites: HIST 05299*

During the Gilded Age and Progressive Era, the United States made a critical transition from a nation that was largely agrarian, rural, and relatively ethnically homogenous to one that was industrial, urban, and ethnically diverse. Students will apply a variety of historical methods to examine the United States's late nineteenth and early twentieth century transformation into a modern society characterized by dynamic politics and fluid cultural forms. This course may not be offered annually.

## Courses

### **HIST 05.338: America From War to War, 1914-1945**

**3 s.h.**

*Prerequisites: HIST 05151*

A chaotic combination of issues marked the period of American history between 1914 and 1945. The emergence of the United States as a world power, the symbiosis of mass production and mass consumption, the political ambivalence on issues of social and economic policy, the expansion of opportunities for women, and the confluence of nativism and race relations charged these years with great energy, optimism, and frustration. The students will study the expansion of the federal government's role in the economy and in social life and the restructuring of the American racial, gender, and ethnic systems. A central focus of the course is the development of a mass production economy and the attendant rise of consumerism and media influence that characterized the era between the wars.

### **HIST 05.343: Russia to 1914**

**3 s.h.**

*Prerequisites: HIST 05299*

This course traces the origin, rise and development of Russia until the end of the Imperial period. It emphasizes the formative features in Russian history, using readings from primary sources and secondary interpretations. This course may not be offered annually.

### **HIST 05.344: Russia Since 1914**

**3 s.h.**

*Prerequisites: HIST 05299*

This course emphasizes the revolutionary forces which led to the explosions of 1905 and 1917. The course carefully studies the nature and dynamics of the Communist Party and the Soviet government. It involves readings from primary sources and secondary interpretation. This course may not be offered annually.

### **HIST 05.347: Traditional Latin America**

**3 s.h.**

*Prerequisites: HIST 05299*

This course examines racial and cultural diversity of the region, establishment of Iberian institutions and challenges from other empires, the Enlightenment in Hispanic America and the beginnings of independence movements. This course may not be offered annually.

### **HIST 05.350: Modern Latin America**

**3 s.h.**

*Prerequisites: HIST 05299*

This course examines the history of Latin America from 1825 to the present, including early revolutionary movements, cultural, economic, political and social development with special emphasis on the Organization of American States and United States-Latin American relations.

### **HIST 05.351: Modern Japan**

**3 s.h.**

*Prerequisites: HIST 05299*

Analysis of the developments of island East Asia (Japan) from the time of the Tokugawa Shogunate's contribution to the development of modern Japan and Japanese involvement in modern Western expansionism to the emergence of Japanese expansionism and contemporary Japan, including the various aspects which affect historical development. This course may not be offered annually.

### **HIST 05.355: Modern China**

**3 s.h.**

*Prerequisites: HIST 05299*

This course analyzes the development of mainland and island East Asia (China and Japan) from the early involvement with the rising Western expansionism to the present. This course may not be offered annually.

### **HIST 05.362: History of Mexico and the Caribbean**

**3 s.h.**

*Prerequisites: HIST 05261*

This course focuses on the development of Mexico and her Central American and Caribbean island neighbors. Although the course deals mainly with events from the time of independence to the present, it also discusses key eras in the pre-Columbian and colonial periods. This course may not be offered annually.

### **HIST 05.375: America Since 1945: The Modern Era**

**3 s.h.**

*Prerequisites: HIST 05151*

This course is designed to provide students with an in-depth study of the social, economic, cultural, technological and political forces that shaped modern America since 1945.

### **HIST 05.376: Afro-American History to 1865**

**3 s.h.**

*Prerequisites: HIST 05299*

This course surveys the major social, economic and cultural developments of the black community from Africa to the Civil War. It emphasizes a comparison of the transition from Africa to slave culture and studies the contribution of blacks to the making of America.

## Courses

### **HIST 05.377: Afro-American History Since 1865**

**3 s.h.**

*Prerequisites: HIST 05299*

This course studies the development of the black community from emancipation to contemporary America, tracing such major themes as the pattern of migration and the various methods of black protest developed and employed in the 20th century.

### **HIST 05.380: Traditional Jewish History**

**3 s.h.**

This course traces the origin, faith, law and development of the Jewish people to the 16th century, with emphasis on traditional Jewish culture and values; Jewish literature, the phenomenon of anti-Semitism and the Jewish contribution to Western civilization. This course may not be offered annually.

### **HIST 05.381: Modern Jewish History**

**3 s.h.**

This course examines the development of Jewry in Poland, Germany and the U.S. with special emphasis on modern Jewish thought, Zionism, the Nazi holocaust, the rise of Israel and the situation of Judaism and Jews at the present time. This course may not be offered annually.

### **HIST 05.394: Sub-Saharan Africa to 1800**

**3 s.h.**

*Prerequisites: HIST 05299*

This course surveys the regions and cultures of sub-Saharan Africa from the earliest origins to the beginning of European colonialism to provide an appreciation of the variety and significance of historical developments prior to the coming of the Europeans. This course may not be offered annually.

### **HIST 05.397: Sub-Saharan Africa Since 1800**

**3 s.h.**

*Prerequisites: HIST 05299*

Students survey the development of sub-Saharan Africa during the colonial period and the new national period which followed, making an analysis of colonialism both as a European venture and as an episode in African historical development. This course may not be offered annually.

### **HIST 05.403: Sport in History**

**3 s.h.**

*Prerequisites: HIST 05120 or HIST 05151 or HIST 05100 and HIST 05299*

This course will explore the cultural history of modern sport. This process will include not only an examination of the development of the games themselves, but also the manner in which these developments relate to the societies from which the sports emerged. The geographic area of concentration will be primarily Great Britain, the British Empire and the United States. The course will examine key developments, trends, and issues that historically have influenced the formation of a Western sporting tradition. This course may not be offered annually.

### **HIST 05.404: Arab-Israeli Conflict**

**3 s.h.**

*Prerequisites: HIST 05299*

This course focuses on the history and development of the Arab-Israeli conflict from its genesis in the late 19th century to the present day. It covers a variety of topics including the origins of Zionism, Palestinian nationalism, the development of the conflict before 1948, the Arab-Israeli Wars, and peace plans. It is typically offered every other year.

### **HIST 05.406: Jewish Holocaust 1933-1945**

**3 s.h.**

*Prerequisites: HIST 05299*

This course examines this unprecedented human destruction by dividing it into two phases: origins in Germany before 1939 and the war itself. Its sweep encompasses the killers, the victims of all faiths and status and the onlookers. Because this is a case study of genocide, students are urged to form their own conclusions as to its meaning for our own time. This course may not be offered annually.

### **HIST 05.407: History of World War II**

**3 s.h.**

*Prerequisites: HIST 05299*

This course studies the causes and events of the Second World War with special attention to diplomatic and military history as well as to the personalities and cultural trends of the war. This course may not be offered annually.

### **HIST 05.408: Chinese Cultural History**

**3 s.h.**

*Prerequisites: HIST 05299*

This course covers essential features of Chinese culture from the 5th century BC to the present, including philosophy, religion, literature, geography, social and family structure, foreign cultural relations, and art. Students will also learn current scholarship on the subject and recent cultural trend. This course may not be offered annually.

## Courses

### **HIST 05.409: Latin American Revolutions and Reform**

**3 s.h.**

*Prerequisites: HIST 05299*

This course examines the often violent movements in Latin American history directed to achieve social, economic, and political reform. It emphasizes the Mexican, Cuban, and Chilean movements. This course may not be offered annually.

### **HIST 05.410: European Intellectual History Since the 16th Century**

**3 s.h.**

*Prerequisites: HIST 05101*

This course covers the major themes in European intellectual history. It includes such topics as the birth and diffusion of the Enlightenment, Romanticism, 19th century liberalism, positivism, the Darwinian Revolution, Marxism, nationalistic thought, irrationalism in political and philosophical thought, existentialism and contemporary ideas. This course may not be offered annually.

### **HIST 05.411: Topics in Latin American History**

**3 s.h.**

*Prerequisites: HIST 05299*

This course analyzes selected topics in Latin American history since 1808. It reviews various topics and historiographical controversies. This course may not be offered annually.

### **HIST 05.412: Intellectual History of the U.S.**

**3 s.h.**

*Prerequisites: HIST 05150 and HIST 05151*

This course deals with the main currents in American thought and society from colonial times to the present. It emphasizes discussion of high culture as essential to the understanding of the political and economic process of the American democratic experiment. This course may not be offered annually.

### **HIST 05.413: Urban History of the U.S.**

**3 s.h.**

*Prerequisites: HIST 05299*

This course surveys the development of urban America from the 17th century in the U.S. with emphasis on architecture and city planning as well as the traditional attitudes of Americans toward the city and the country. This course may not be offered annually.

### **HIST 05.413: Comparative Race Relations: South Africa, Brazil, and the U.S.**

**3 s.h.**

*Prerequisites: HIST 05299*

A comparative examination of the development of multi-racial societies in Brazil, South Africa and the United States, and the impact of race on the political, social and economic cultures of the respective countries. This course may not be offered annually.

### **HIST 05.414: Diplomatic History of the U.S. to 1900**

**3 s.h.**

*Prerequisites: HIST 05150*

This course surveys U.S. diplomatic history from the Revolutionary period through the emergence of the U.S. as a colonial power. The course stresses the impact of public opinion, cultural and political relations, as well as economic and strategic factors. It will analyze conflicting scholarly interpretations. This course may not be offered annually.

### **HIST 05.415: Diplomatic History of the U.S. Since 1900**

**3 s.h.**

*Prerequisites: HIST 05151*

This course details the U.S. attempt to cope with the international complications and responsibilities brought about by 20th-century reality. The course stresses the impact of public opinion, cultural and political relations, as well as economic and strategic factors and analyzes conflicting scholarly interpretations. This course may not be offered annually.

### **HIST 05.417: Women in Islam**

**3 s.h.**

*Prerequisites: HIST 05299*

This course aims to acquaint students with the role of women in Islam as a religion. It focuses on the wide range of women's experiences in different periods of history and in diverse Muslim societies, and introduces students to a variety of works and approaches to the field, including primary and secondary sources. The course is typically offered every other year.

### **HIST 05.418: Women in Europe to 1700**

**3 s.h.**

*Prerequisites: HIST 05100*

This course traces the changing status and experience of women from classical civilizations through the early modern period of European history. Themes covered include women's role in religious life, early women's writings, women in the age of chivalry, early modern witch hunting, and the first stirrings of feminist thought. This course may not be offered annually.

## Courses

### **HIST 05.419: Women in Modern Europe**

**3 s.h.**

*Prerequisites: HIST 05101 or HIST 05120*

This course examines the history of women in modern Europe, from the 18th century to the 20th. Themes covered include the rise of domesticity, feminism in the age of revolutions, Victorian women, changing patterns of work and family, and the rise of women's activism. This course may not be offered annually.

### **HIST 05.422: Women in American History**

**3 s.h.**

This course focuses on the role of women in American history and culture, but some consideration is also given to Western traditions, myths and ideas which have affected American women. The range of topics is almost limitless. This course may not be offered annually.

### **HIST 05.425: History of Feminisms**

**3 s.h.**

This course examines the history and origins of modern feminisms from European and American traditions to emergence in developing nations. Students will analyze and comprehend the intellectual, social, philosophical, political, and religious underpinnings of the development of feminisms from the Middle Ages to the present day in western and non-western contexts. This course may not be offered annually.

### **HIST 05.428: Family History**

**3 s.h.**

*Prerequisites: HIST 05100 and HIST 05101 or HIST 05100 and HIST 05120*

A comparative and thematic study employing the methods and techniques of new social historians, this course gives students an understanding of the interplay between family and historical processes. This course may not be offered annually.

### **HIST 05.429: Proseminar in History**

**3 s.h.**

*Prerequisites: HIST 05299*

This course introduces students to in-depth historical analysis of a selected theme, including work with historical sources, critical reading of historians' accounts, intensive writing and class discussion. Past and proposed topics include early modern witchcraft, the partition of Africa, comparative historiography of China and Europe, revolutions and revolutionaries, and historical analysis of visual texts.

### **HIST 05.436: U.S. Home Front 1941-1945**

**3 s.h.**

*Prerequisites: HIST 05299*

This course explores the lives of ordinary people under the strains of war, examining social and economic factors which undergirded the military and political decisions of World War II. This course may not be offered annually.

### **HIST 05.437: Twentieth Century African Nationalism**

**3 s.h.**

*Prerequisites: HIST 05270 and HIST 05299*

In this course students will explore the history of 20th century Africa through an in-depth analysis of independence movements from their roots in the European conquest of the continent at the turn of the century to their legacies in Africa today. This course may not be offered annually.

### **HIST 05.438: History of the Vietnam War**

**3 s.h.**

*Prerequisites: HIST 05299*

This course will explore the political, economic, military, diplomatic, social, and cultural dimensions and ramifications of the war from the perspective of all peoples involved. This course may not be offered annually.

### **HIST 05.441: Imperialism and Colonialism**

**3 s.h.**

*Prerequisites: HIST 05101 and HIST 05120*

This course analyzes Nineteenth and Twentieth century imperialism in terms of its meaning, origins and development. It emphasizes institutional background, theory and practice and the "national liberation" movements, using readings in primary sources and secondary interpretations. This course may not be offered annually.

### **HIST 05.443: Global Proseminar in History**

**3 s.h.**

This course introduces students to in-depth historical analysis of a selected theme in global history including work with historical sources, critical reading of historians' accounts, intensive writing and class discussion. Past and proposed topics include the partition of Africa and Islamic reform movements.

## Courses

### **HIST 05.455: Gender, Sexuality and History**

**3 s.h.**

*Prerequisites: HIST 05100 and HIST 05101 or HIST 05100 and HIST 05120*

This course approaches the study of human sexuality from an historical point of view; i.e., how attitudes towards sexual behavior have varied over the centuries. The course uses the world of Western Civilization as an historical laboratory for the course. A major research paper is required. This course may not be offered annually.

### **HIST 05.470: Issues in American History**

**3 s.h.**

*Prerequisites: HIST 05299*

This course introduces a topical approach to U.S. history and involves an analysis of major events and ideas that have shaped U.S. society that uses historical methodology and interpretation. The course covers issues such as race, sex and youth in American Society and protest movements.

### **HIST 05.471: History of the American West**

**3 s.h.**

*Prerequisites: HIST 05150 and HIST 05299*

This course considers the settlement and economic development of the American West from the arrival of Europeans in the sixteenth century to the present. Among the topics considered will be: the role of the frontier in American history; the settlement of the region first by Native Americans and later by Europeans, Africans, and Asians; conflicts between Europeans and Native Americans; Manifest Destiny and American Expansionism; the Gold Rush; Vigilantism; women and the frontier experience; farming on the Great Plains; Mexican immigration; high technology and the economy of the Modern West; and the frontier in the American imagination.

### **HIST 05.472: Cultural History of the U.S.**

**3 s.h.**

*Prerequisites: HIST 05299*

This course explores trends in the fine arts and literature from 1607 to the present on three different levels: high style or urban culture, popular culture and rural or folk culture. It emphasizes specific American interpretations of parallel European developments. This course may not be offered annually.

### **HIST 05.473: American Military History, 1775-Present**

**3 s.h.**

*Prerequisites: HIST 05299*

A survey of American military experience since the Revolution, this course analyzes military action and its effect on the home front against a background of politics, technology, diplomacy, and personality. This course may not be offered annually.

### **HIST 05.474: U.S. Labor History**

**3 s.h.**

*Prerequisites: HIST 05150 and HIST 05151 and HIST 05299*

This course examines the changing nature of the work and working conditions and the workers' efforts to find their place in the American economy from colonial times to the era of the Wagner and Taft-Hartley Acts, with special attention to workers' organizations. This course may not be offered annually.

### **HIST 05.475: History of New Jersey**

**3 s.h.**

*Prerequisites: HIST 05299*

This course explores the historical background of the pre-European beginnings, colonial exploitation and settlement, the Revolution, growth of the state's leading industries, the development of transportation and problems of government. It stresses the history of New Jersey.

### **HIST 05.492: Seminar**

**3 s.h.**

*Prerequisites: 75 hour prerequisite*

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 05.493: Independent Study**

**3 to 6 s.h.**

This course provides an opportunity to pursue individual specialized historical topics under the guidance of a staff member. This course may not be used as substitute for a course offered by the Department. This course may not be offered annually.

### **HIST 05.495: Field Service in History**

**3 s.h.**

Designed to introduce students to actual historical work, this course places students with an historical society, museum, library or similar institution, where they serve a minimum of nine hours per week for one semester as a volunteer working in the arranging of archival material, exhibits, etc. This course may not be offered annually.

## Courses

## Honors

### **HONR 01.111: Honors Writing Arts: College Composition I** **3 s.h.**

This course teaches students to write competent expository prose. It emphasizes the writing process, including prewriting, drafting and rewriting skills. Students write frequently, both in and out of class. Students also read and analyze the work of professionals and peers.

### **HONR 05.105: Honors Humanities** **3 s.h.**

This is a lower level interdisciplinary General Education course which can be taken by honors students as a Humanities General Education course. It introduces the student to significant primary texts, taken from literature, philosophy, religion, and history, within the Western and non-Western traditions and provides a common base of cultural literacy. Emphasis is placed on critical thinking and the qualitative evaluation of human experience. Topics and themes may change.

### **HONR 05.114: Honors: Artistic and Creative Experience** **3 s.h.**

This is a lower level interdisciplinary general education course that can be taken by Bantivoglio Honors Scholars or Honors-eligible students. The course will utilize an interdisciplinary approach to the study of the various types of fine and performing arts including art, music, theatre and dance, and radio/tv/film. Topics will vary each semester and will be interdisciplinary in content and/ or methodology.

### **HONR 05.180: Honors Mathematics** **3 to 4 s.h.**

This is a lower level General Education course which provides the student with a working knowledge of the foundations of mathematics. Basic concepts and principles in the philosophy of mathematics and mathematical logic, including set theory, and the concept of infinity and proof will be explored. Mathematical applications form a major portion of the course.

### **HONR 05.185: Honors Natural Sciences** **3 to 4 s.h.**

This is a lower level interdisciplinary General Education course which can be taken by honors students as a Natural Science General Education course. It permits students to explore the natural sciences from a problem-oriented perspective. Students are encouraged to examine evidence and assess scientific theories critically. Topics may change each semester.

### **HONR 05.190: Honors Social Sciences** **3 to 4 s.h.**

This is a lower level interdisciplinary General Education course which can be taken by honors students as a Social Science General Education course. It provides the student with the opportunity to examine, in-depth, a contemporary social issue. This course explores a given substantive concern from several social science perspectives; anthropological, historical, political, economic, psychological, social, and cultural theories and methods are applied to the analysis of that issue. Announcements will be made each semester for specific topic areas being offered.

### **HONR 05.390: Honors Selected Topics** **3 to 6 s.h.**

This is an upper level seminar style course that will address itself to topics and problems taken from various disciplines and which is interdisciplinary in nature. Examples of courses offered in recent semesters include Caribbean Culture; Times of Crisis-What is An American?; The Play in Performance; Environmental Ethics; Issues in Women's' Health; and Biology, History and the Fate of Societies. This course may be repeated for a total of 9 s.h.

## Interdisciplinary

### **INTR 01.102: Introduction to Social Science: Self, Society and Power** **3 s.h.**

This is an interdisciplinary general education course intended to introduce social science thinking, concepts and methods. The course describes the core social science disciplines and their typical methods and examines the common themes of self, society and power through readings selected from such prominent contributors to social science as Sigmund Freud, Erving Goffman, Ruth Benedict, and Karl Marx.

## Courses

### **INTR 01.104: Introduction to Africana Studies**

**3 s.h.**

This course will introduce students to the interdisciplinary, multicultural and international field of Africana Studies, from the perspective of the experiences and scholarly and creative contributions of Africans and African descendants to the making of the modern world. Our primary focus in the course will be to explore how the experiences and contributions of African peoples have influenced historical and contemporary developments, addressed urgent societal issues, and helped to shape social consciousness, social activism and social change, within the African Diaspora and the global community.

### **INTR 01.120: Biology, History, and Human Societies**

**3 s.h.**

This course explores the ultimate causes of differences in the development of human societies over approximately the last 13,000 years. Students will be introduced to the methods of two disciplines, history and evolutionary biology. This course will reveal the importance of an interdisciplinary approach for addressing a major question in human history: why did early societies on different continents develop at different rates?

### **INTR 01.130: Women in Perspective**

**3 s.h.**

An introduction to Women's Studies, this course surveys the field, focusing on how both men and women are depicted and represented in culture: in the arts, in popular media, in the sciences and in psychology, sociology and history. This interdisciplinary course probes questions of sex roles, sexism in language, stereotyping in society.

### **INTR 01.132: Biology, History, and the Fate of Human Societies**

**3 s.h.**

This course Explores the ultimate causes of differences in the development of human societies over approximately the last 13,000 years. Students will be introduced to the methods of two disciplines, history and evolutionary biology. This course will reveal the importance of an interdisciplinary approach for addressing a major question in human history: why did early societies on different continents develop at different rates?

### **INTR 01.134: Readings in American Democracy**

**3 s.h.**

This course will acquaint students with the theoretical and intellectual underpinnings of American democracy by providing opportunities to read, respond to, discuss and write about seminal American political literature from diverse times and perspectives

### **INTR 01.136: Gateway to Asia**

**3 s.h.**

Combining visual presentations with other innovative pedagogical methods, this course offers an introduction to various aspects of Asian culture, ranging from philosophy, history, and social structure to literature, martial arts, and family and gender relations. Students will not only learn and discuss important issues related to the study of Asian cultural developments and the Asian American experiences, they will also acquire first hand experience through field trips, live demonstrations, and the exchange of ideas in and outside the class.

### **INTR 01.138: Issues in Sustainable Development**

**3 s.h.**

This course is an introduction to local and global sustainability challenges. The course will discuss the environmental dimensions of development at the local and global level addressing issues such as resource use, greenhouse gas emissions, and population growth. The course will also focus on technological solutions to sustainable development.

### **INTR 01.140: Diverse Approaches to Environmental Literature**

**3 s.h.**

This is a multidisciplinary course that addresses the understanding of diversity of selected environmental issues at local, regional and global settings and in a historical context through the reading of literature pieces. The selected readings will help students to understand today's environmental challenges, and to think about the profound ethical, political, economic, religious, and technological implications of these challenges.

### **INTR 01.142: Three Generations of Family Life: Diversity and Democracy Through Family**

**3 s.h.**

Using the concepts of diversity and democracy as the common unifying scheme, students will employ a sociological perspective to explore the macro level changes in the family as an institution as well as the parallel micro level changes in the life of their own families. The historical period under examination extends from 1880 to 1970 and ,thus, captures approximately three generations of family life. The changes in family life will be explored within the larger context of the political, economic and social changes that characterize the historical period under examination.

### **INTR 01.144: Human Ecology: An Evolutionary Approach**

**3 s.h.**

This course will take an evolutionary approach to understand how the environment has shaped biological and cultural changes in humans, and how humans have and are continuously impacting the environment. The emphasis of this course will be to understand the biological, cultural and environmental diversity that has emerged through human history and its impact in the intricate interactions among humans and between humans and their environment.

## Courses

### **INTR 01.146: Identity, Culture, and Democracy: Being an American**

**3 s.h.**

This interdisciplinary course strengthens writing and critical thinking skills through explorations of one's cultural history, an investigations on American society and national identity(ies). This multi-disciplinary course will acclimate students to American cultural and political roots and sensitize students to patterns of difference that constitute life in the twenty-first century United States.

### **INTR 01.148: Environmental Ethics: Through the Lens of Diversity**

**3 s.h.**

This is a multidisciplinary course that addresses ethical issues and concerns regarding the environment; the relationships between individual, society and the natural environment; the importance of different attitudes and world-views for understanding and responding to environmental challenges; and the need for changes in those attitudes and world-views. Students will be encouraged to think about the profound ethical, political, economic, religious, and technological implications of these environmental challenges.

### **INTR 01.150: Language, Rhetoric, and Propaganda: The Weapons of the Cold War**

**3 s.h.**

This course introduces students to knowledge of the political, social, economic and cultural history of the Cold War. Students will learn to critically and rhetorically analyze scholarly writing and decipher and evaluate primary source documents relating to the history of the Cold War.

### **INTR 01.152: Beyond Face Value: Critical Analysis of Texts and Images**

**3 s.h.**

This is an interdisciplinary course that addresses the social construction of identity from three interconnected, disciplinary perspectives: literature, art and gender studies. This class will teach students how to read stories and images critically in order to uncover the often hinder ways certain aspects of lived identity are presented and/or experienced as "natural" when they, in fact, are constructed by the society in which we live.

### **INTR 01.154: Emotions in Organizations**

**3 s.h.**

This course will consider the role of emotions in organizational settings. Attention will be paid to the nature of emotions, emotional expression, and perceptions of emotions. Factors related to emotions, including cultural and individual diversity will be addressed throughout the course.

### **INTR 01.156: Freedom and Artistic Expression in 20th Century America**

**3 s.h.**

This course is designed to help students understand what free speech is, the legal limits on free speech, and current debates on free speech. Additionally, students will come to understand aesthetics, aesthetics as related to the arts, and how aesthetics changed as America into and through the 20th century. Specifically, this course will enable the students to see how specific art works comment on current events or are a reaction to the suppression of speech/expression and how artists have been subjected to control while pursuing their arts in the United States during the 20th century. The course will also help students appreciate diversity by studying various works of art and various artists, and will help students understand democracy by examining free speech and related issues in art and artistic expression.

### **INTR 01.158: From Nancy Drew to Lara Croft: Historical and Critical Dimensions of the Female Detective Genre**

**3 s.h.**

This course analyzes historic and multi-cultural constructions of the female detective/action figure in literature, motion pictures, and video games. Students will confront a variety of texts in order to increase their awareness of how cultural assumptions come into play and often unconsciously influence their reading and viewing of texts. The course will culminate in the development and implementation of a cooperatively devised critical thinking rubric, which allows students to more critically analyze textual and visual media.

### **INTR 01.160: Growing Up Female in 20th Century America: Historical and Psychological Perspectives**

**3 s.h.**

This course combines the historical and psychological approaches to female adolescence in the 20th century America from a multicultural perspective. Its topics include the historical development of adolescence, theories of adolescent development, and representations of female adolescence.

### **INTR 01.162: The Leadership of Ideas**

**3 s.h.**

The college experience includes constant engagement with new and challenging ideas. This course explores how little ideas become big and public ideas by drawing on the knowledge and experiences students bring to college. The course will focus on the learning mechanisms for expanding those ideas. The intent is to enhance the student's academic experience by exploring critical thinking skills and developing concrete strategies that lead to lifelong learning success.

## Courses

### **INTR 01.164: Science Fiction as a Gateway to Human Diversity**

**3 s.h.**

This course will explore the intersection between the ways in which scientific theories (especially evolutionary and genetic ones) are used to justify or reduce discrimination in human societies and the hypothetical exploration of similar issues in science fiction literature. Students will critically examine examples of utopian and dystopian science fiction and investigate how such writings can inform our thinking about current, real-world diversity issues.

### **INTR 01.166: Rhetoric of Music - RS**

**3 s.h.**

This course examines the rhetoric of music with particular emphasis given to the rhetorical aspects of music's aural, non-discursive elements. The course will consider how these elements functioned in diverse cultures and political systems from antiquity to the twentieth century.

### **INTR 01.168: What's Wrong With Normal? - RS**

**3 s.h.**

This course will address the topic of the body and physical difference as it is theorized in Disability Studies. As a Rowan Seminar, special attention will be paid to basic skills and critical inquiry. Particular topics will include Deaf culture, Supercrips, Accessibility, the ADA, images of disability and resistance to normative structures of embodiment.

### **INTR 01.170: Law and Order - RS**

**3 s.h.**

This course explores the three components of the criminal justice system: police, courts, and corrections, based on our understanding of Nature's order. In particular, it presents the case for taking a mathematical and scientific approach to dealing with many of the issues facing our criminal justice system today: racial profiling, affirmation action hiring, cost of crime, cost effectiveness of prevention and rehabilitation programs, admissibility of evidence, standards of proof, incarceration policies. These issues will provide context for developing mathematical proficiencies such as calculating means, percentages, and rates of change; representing quantitative information visually; and making predictions by extrapolating from existing data. The underlying theme will be to quantitatively analyze whether our legal policies reflect and protect the interests of diverse groups in our society pertaining to issues of social order, civil liberties and fairness.

### **INTR 01.172: Songs of Praise/Protest - RS**

**3 s.h.**

This course will examine the ways in which music has served as an instrument for social change. African-American music in the form of Spirituals and Blackface Minstrelsy will provide a mechanism for exploring social change, tensions between races, confused dynamics of racial identity, and stereotypes. Hymns of the late 18th and early 19th century will demonstrate how women used song as a means of self-expression denied them in other spheres. Finally, the civil rights and protest songs of the 60s and 70s will provide a backdrop for exploring issues of race and social culture.

### **INTR 01.174: Ethics and the Professions**

**3 s.h.**

This course will provide students with a critical examination of moral and ethical issues that arise in the context of various professions. The course will address and seek to bridge conceptual issues with more practical real-life examples. Students will discuss longstanding philosophical questions concerning social justice, equality, and the place of religion in a diverse society.

### **INTR 01.176: Historical Aesthetics of Suffering**

**3 s.h.**

The subject of suffering is a universal one, and forces all human beings to acknowledge the commonality of a shared experience. Yet, while this phenomenon transcends time and place, and is inclusive of all communities and their members, responses to, and representations of suffering may, and have, differed greatly. This class is intended to prompt reflection upon the diversity of questions and answers provoked by suffering in various socio-historical contexts, as preserved in contemporary accounts, religious and philosophical writings, literature, drama, the visual arts, and music. A detailed examination of these documents, texts, and performances hopefully will move students from initial, personal understanding of this complex topic, towards group empathy and cultural sensitivity, as well as fostering appreciation and respect for the many, and profound ways in which individuals and societies have wrestled with tragedy.

### **INTR 01.178: In Search of Democracy: The Quest for Civil Liberties**

**3 s.h.**

This course will explore critical issues in contemporary civil rights, placing them in their historical, philosophical and political contexts. Specific issues to be discussed include separation of church and state, freedom of speech, the role of the federal government in the protection of civil liberties, the right to privacy and its implications for women's reproductive rights, and Prohibition and its implications for gay marriage and marijuana.

### **INTR 01.200: Issues in Women's Health**

**3 s.h.**

This interdisciplinary course examines issues in women's health. Biological, socio-cultural, psychological, historical and political processes that shape and define women's health and healthcare experiences will be explored, including the ways in which medical knowledge has been applied to women.

## Courses

### **INTR 01.265: Computers and Society**

**3 s.h.**

*Prerequisites: CMS 06202*

This interdisciplinary course focuses upon the effects of computer systems on individuals and institutions. How computer systems are developed and operated will be related to an analysis of current trends in American society. A study of present and probably future applications of computers in such areas as management, economic planning, data collection, social engineering, education and the military will be followed by an exploration of the relationship of computer systems to problem solving orientations, bureaucratization, centralization of power, alienation, privacy, autonomy and people's self concept. This course is open to students at any level who satisfy the prerequisite and have course work in computer science or sociology or permission of instructor.

### **INTR 01.265: Computer and Society**

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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 collections, social engineering, education and the military will be followed by an exploration of the relationship of computer systems to problem solving orientations, bureaucratization, centralization of power, alienation, privacy, autonomy and peoples' self-concept. This course is open to students at any level who satisfy the prerequisite and have course work in computer science or sociology or permission of instructor.

### **INTR 01.266: Computer and Society - WI**

**3 s.h.**

*Prerequisites: CMS 06202*

This interdisciplinary course focuses upon the effects of computer systems on individuals and institutions. How computer systems are developed and operated will be related to an analysis of current trends in American society. A study of present and probably future applications of computers in such areas as management, economic planning, data collections, social engineering, education and the military will be followed by an exploration of the relationship of computer systems to problem solving orientations, bureaucratization, centralization of power, alienation, privacy, autonomy and peoples' self-concept. This course is open to students at any level who satisfy the prerequisite and have course work in computer science or sociology or permission of instructor.

### **INTR 01.266: Computers and Society - WI**

**3 s.h.**

*Prerequisites: CMS 06202*

Same as INTR01.265. The course offered as writing intensive.

### **INTR 01.304: Africana Social and Political Thought**

**3 s.h.**

*Prerequisites: INTR 01103*

This course engages students in an introductory overview of major ideas, ideological debates, and social/political movements that have emerged in the African Diaspora to challenge national and global social, political, economic and other realities, and to produce a dynamic framework of historical and contemporary thought that have helped to shape social consciousness, social activism, and public policy.

### **INTR 01.430: Women, Sex, and Power: A Capstone Seminar in Women's Studies**

**3 s.h.**

This capstone seminar will be interdisciplinary in focus with a writing-intensive component. Students in this course will engage in critical analyses of selected readings on women and gender from six different subject areas, including biology, history, literature, psychology, philosophy and sociology. Students will study and learn the dominant issues and debates concerning the study of women and gender within these specific academic disciplines.

### **INTR 01.486: Interdisciplinary Materials Science**

**3 s.h.**

This interdisciplinary course discusses selected topics of current technological importance drawn from the field of materials science. Three faculty members from different backgrounds in engineering and science will co-teach this course, offering the students different perspectives to a given topic. The topics are chosen by the faculty and may include nanotechnology, semiconductors, polymers, inorganic materials, superconductors, fiberoptics, spintronics, and photonics.

### **INTR 02.492: Senior Seminar in Math/Science**

**3 s.h.**

*Prerequisites: ENGL 01112 or COMP 01112*

This course provides the opportunity for students to engage in their own research into specific scientific topics and to significantly advance their own scholarly development in the field. Students will interact with the instructor and the other students in the seminar in the development and completion of their individual projects. The central theme will vary by semester. Topics will include case studies of applied and theoretical math and scientific research.

## Courses

### **INTR 99.300: Environmental Internship**

**6 s.h.**

The internship provides for career-oriented training outside the college under the guidance of a faculty adviser and an experienced sponsor. Assignments will be based on matching the needs and objectives of the students and sponsors. Students become involved in work with a community resource group, industry, governmental agency, etc.

## Journalism

### **JRN 02.205: Journalism Principles and Practices**

**3 s.h.**

*Prerequisites: ENGL 01111 or ENGL 01105 or COMP 01111 or COMP 01105*

This course introduces students to the world of journalism: the culture, commerce, ethics, history, working conditions, rights, responsibilities, standard practices, and effects of evolving technology. Students learn about the nature of a journalism career and gather information that will serve as a foundation for their future journalism skills as well as for their lecture and seminar courses.

### **JRN 02.210: Journalistic Writing**

**3 s.h.**

*Prerequisites: ENGL 01112 or COMP 01112 or 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, and sports copy. The course also introduces students to page make-up, headline writing and copy editing. This course is open to non-majors and may not be offered annually.

### **JRN 02.305: Broadcast Journalism : TV Newscast**

**3 s.h.**

*Prerequisites: JRN 02310 or RTF 03222*

Students write, gather, edit, and present a cable newscast on Rowan University's closed-circuit cable system and adapt that newscast for transmission over the World Wide Web. Students learn the duties and responsibilities of all television newscast personnel, including anchors, executive producers, writers, directors, camera operators, audio operators, graphic artists, and editors. During the semester, students rotate through various duties, including writing, anchor and reporter positions.

### **JRN 02.307: On-Camera Field Reporting**

**3 s.h.**

*Prerequisites: JRN 02341*

On-Camera Field Reporting provides the fundamentals of reporting and includes writing, TV news photography, editing, gathering sources, and on-camera presentation. Students will gain extensive hands-on experience that will prepare them to work in any television market.

### **JRN 02.310: News Reporting I**

**3 s.h.**

*Prerequisites: JRN 02205*

This course teaches students basic reporting and writing skills. They learn newspaper style and use a computer to write basic stories that deal with accidents, obituaries, construction, statistics, speeches, interviews and polls. Students also learn how to write humorous stories and how to rewrite news releases. Students take weekly spelling and style quizzes to sharpen writing skills.

### **JRN 02.311: News Reporting II**

**3 s.h.**

*Prerequisites: JRN 02310*

This course stresses government reporting. Students learn about the Sunshine Law and how to deal with government sources. They use a computer to write stories about governing bodies, zoning and planning boards, school boards, budgets, arrests, hearings, arraignments, indictments and trials. Students cover a local community and write various meeting stories.

### **JRN 02.312: Newspaper Feature Writing**

**3 s.h.**

*Prerequisites: JRN 02310 and JRN 02311*

Designed to develop competence in the writing of features, editorials, sports, reviews and columns, the course offers students ample opportunity to become familiar with each journalistic form through writing.

### **JRN 02.313: Magazine Article Writing**

**3 s.h.**

*Prerequisites: 45 hour prerequisite*

Students get started as free-lance 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 free-lance markets. Students submit work for publication.

## Courses

### **JRN 02.314: Photojournalism**

**3 s.h.**

*Prerequisites: 45 hour prerequisite*

This course covers the practices and techniques used by photojournalists on modern American newspapers. Students take, develop and edit photographs on a weekly basis. Weekly laboratory assignments are required.

### **JRN 02.317: Publication Layout and Design**

**3 s.h.**

*Prerequisites: 45 hour prerequisite*

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 02.318: Enterprise Journalism**

**3 s.h.**

*Prerequisites: 45 hour prerequisite*

This course acquaints students with federal and state public records laws. They learn where to find and how to use public records at federal, state, county and local levels. Students investigate property records, records on public officials and business and nonprofit records. They use this and other information to write long-form journalism articles.

### **JRN 02.319: Media Ethics**

**3 s.h.**

*Prerequisites: JRN 02205*

Media Ethics examines decision-making in media professions. The course examines the moral aspects of media conduct, and helps the student develop a more complete understanding of not only the historical background of ethics, but how the interplay of politics, science, economics, law, philosophy, and other disciplines have influenced the way we view right and wrong. The course also strengthens analytical skills as they relate to ethical decisions, cultivating a perception of how media professionals come to a decision and the many factors that influence that decision.

### **JRN 02.320: Broadcast Journalism : Radio**

**3 s.h.**

*Prerequisites: JRN 02310*

This course provides training in the necessary skills students must demonstrate to obtain entry level employment as news reporters and editors in radio. Students learn broadcast writing and reporting techniques. The course is designed primarily for those interested in newscasting as a career.

### **JRN 02.321: Online Journalism I**

**3 s.h.**

*Prerequisites: JRN 02310*

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 02.325: Online Journalism II**

**3 s.h.**

*Prerequisites: CS 01050 or CS 01100 or Computer Competency Exam 70*

Students will learn to conceptualize, design, and implement a basic website, with emphasis on content creation and presentation. The course will examine content strategy, editing and production techniques for sites related to newspapers, television, radio, public relations and advertising.

### **JRN 02.332: The Publishing Industry**

**3 s.h.**

*Prerequisites: 45 hour prerequisite*

The Publishing Industry examines the business and practice of publishing, focusing on understanding of markets as those markets are changed by technology, demographic shifts, and globalization. Students learn how to develop a strategic marketing plan, manage and edit content, and see a project through the production stages. Coursework includes exploration of a book, magazine, newsletter, online, and multimedia publishing; the course does not include literary and academic publishing. Students study the publishing industry through case histories and other sources and prepare a launch plan for a hypothetical publication. The course also deals with management of publications from business and editorial points of view.

### **JRN 02.335: Communication Law**

**3 s.h.**

*Prerequisites: 45 hour prerequisite*

This course examines laws that deal with the legal responsibilities of print, broadcast, and film media as well as public relations and advertising practitioners. Students analyze topics such as libel, privacy, broadcast regulations and copyright.

## Courses

### **JRN 02.341: Broadcast News Writing**

**3 s.h.**

*Prerequisites: ENGL 01112*

Broadcast News Writing provides instruction in the fundamentals of television news writing essential to all careers in television news. Students will explore the fast paced world of writing breaking news for radio and television, learning how to write for the ear, integrate audio, video and integrate stories into a newscast.

### **JRN 02.355: Journalism Practicum**

**1 to 3 s.h.**

*Prerequisites: 75 hour prerequisite*

Journalism Practicum allows students to apply their skills and knowledge by working on-campus with department faculty on a variety of technical, creative, or research-related assignments. Students earn 1 credit for every 40 hours of work, with most practica implemented for 3 credit hours. Students keep a detailed log of working hours, prepare an extensive portfolio, write an analytical critique of the practicum and are evaluated by their faculty supervisor.

### **JRN 02.356: Journalism Field Experience I**

**1 to 3 s.h.**

*Prerequisites: 75 hour prerequisite*

Under professional supervision in the field, students practice theories and skills learned in the classroom. Students earn 1 credit for every 40 hours of work, with most field experiences implemented for 3 credit hours. Students keep a detailed log of working hours, prepare an extensive portfolio, write an analytical critique of the practicum, and are evaluated by their faculty supervisor. Offered in Fall semester.

### **JRN 02.358: Journalism Field Experience II**

**1 to 3 s.h.**

*Prerequisites: 75 hour prerequisite*

Under professional supervision in the field, students practice theories and skills learned in the classroom. Students earn 1 credit for every 40 hours of work, with most field experiences implemented for 3 credit hours. Students keep a detailed log of working hours, prepare an extensive portfolio, write an analytical critique of the internship, and are evaluated by their faculty member. Offered in Spring semester.

### **JRN 02.410: Problems in Contemporary Journalism**

**3 s.h.**

The course probes four issues: ethics, group ownership of the media, the public and the press, and journalism education. Students read and react to articles in professional journals and other publications. They present panel discussions and interview media professionals.

### **JRN 02.411: Copy Editing**

**3 s.h.**

*Prerequisites: JRN 02310*

Students learn modern copy-editing skills. They use computers to edit copy and write captions and headlines. Students interview copy editors to learn more about the job. They take weekly style quizzes to sharpen their editing skills.

### **JRN 02.420: Newspaper Laboratory**

**3 s.h.**

*Prerequisites: JRN 02310*

This laboratory course teaches students to use desktop publishing equipment and modern design principles to produce a newspaper. It emphasizes interview and research techniques. Students use concepts learned in liberal arts courses to go beyond the mere facts of a story to add depth that will help readers understand issues. Students function as editors, making assignments and directing production.

### **JRN 02.425: Advanced Publication Layout**

**3 s.h.**

*Prerequisites: JRN 02317*

This course provides a thorough experience in print production through its various stages: writing, editing, layout, imposition, proofs, and printer specs. Using QuarkXPress, students build on the skills and knowledge acquired in Publication Layout and Design. They work with various page sizes, create multiple-page documents such as booklets and magazines, practice newspaper pagination, and create master pages, templates, and tables. Other topics include digital photography, manipulation of art in Photoshop, an overview of Adobe InDesign, and working with commercial printers.

## Law and Justice

### **LAWJ 05.120: 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.

## Courses

### **LAWJ 05.175: 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 05.205: Minorities, Crime and 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 05.210: 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 05.220: 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 05.250: The Scholarship of Criminal Justice**

**3 s.h.**

*Prerequisites: ENGL 01112*

This course is designed to augment required composition courses with a specific focus on writing within the discipline. The course is designed to prepare students to be more effective scholars in criminal justice in preparation for criminal justice research and other advanced law and justice courses.

### **LAWJ 05.255: 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 05.274: 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

### **LAWJ 05.276: 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 05.285: 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 05.290: Forensic Law**

**3 s.h.**

A comprehensive analysis of legal issues involving forensic techniques in the justice systems. This course examines the importance of admissibility, relevance and materiality as it relates to the evidence and the various experts in Forensics. The topics include bloodstain pattern and trace evidence, pathology of gunshot wounds, DNA fingerprinting, micrography, postmortem determinations and case studies in Forensic Science.

## Courses

### **LAWJ 05.305: 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 05.310: 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 05.312: Criminal Procedure II**

**3 s.h.**

This course will examine the legal procedures by which the criminal justice system operates. Students will assess United States Supreme Court opinions so as to explore issues related to the Fourth, Fifth, Sixth, Eighth, and Fourteenth Amendments to the Constitution, including pre-trial processes, speedy trial, the prosecution function, bail, the identification of suspects, the right to counsel, the adjudication process, the law of confessions and interrogation, and the privilege against compelled self-incrimination. This course has two primary objectives. The first is to introduce students to the analysis of judicial opinions, a primary source of law in the American legal system. The second is to become familiar with both the fundamental doctrines of constitutional criminal procedure and the important policy issues that emanate therefrom.

### **LAWJ 05.315: 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 05.320: 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 05.322: 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 05.324: 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 05.330: Problems of 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 05.335: Criminal Procedure I**

**3 s.h.**

This course will examine the legal procedures by which the criminal justice system operates. Students will assess United States Supreme Court opinions so as to explore issues related to the Fourth Amendment to the Constitution, including search and seizure of premises and persons, the arrest and detention of suspected criminals, and the remedies available for constitutional violations. This course has two primary objectives. The first is to introduce students to the analysis of judicial opinions, a primary source of law in the American legal system. The second is to become familiar with both the fundamental doctrines of constitutional criminal procedure and the important policy issues that emanate therefrom.

### **LAWJ 05.337: 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.

## Courses

### **LAWJ 05.342: 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 05.346: 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 05.356: Criminal Justice Internship I**

**3 to 6 s.h.**

*Prerequisites: ENGL 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 05.357: Criminal Justice Internship II**

**3 s.h.**

*Prerequisites: ENGL 01112 or COMP 01112*

This course provides students with an additional opportunity to pursue practical or research experience in a criminal justice setting. Students may continue with a previously approved internship or may complete an internship in a different area of criminal justice. A criminal justice related cooperative education experience may be substituted for the internship. This course is not intended to replace Criminal Justice Internship I (SOSW05.356) but is intended to allow students additional opportunities for field experience. Students are advised to complete Criminal Justice Internship I (SOSW05.356) prior to enrolling in this course. Students are also encouraged to discuss this course with the internship coordinator prior to enrolling. (Implementation Spring 2004)

### **LAWJ 05.361: 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 05.369: 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 05.370: Theories of Crime and Criminality - WI**

**3 s.h.**

This is a writing intensive course in which students explore the extent of crime and delinquency in the United States and the full range of relevant theories of causation. They also synthesize and apply appropriate theories to such concepts and topics as race, social class, gangs, drugs, family, schools, and neighborhoods.

### **LAWJ 05.379: 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 05.380: 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 05.392: 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.

## Courses

### **LAWJ 05.395: 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 05.415: 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 05.469: Seminar in Law/Justice - WI**

**3 s.h.**

*Prerequisites: ENGL 01112 and LAWJ 05255 and LAWJ 05380 or COMP 01112 and LAWJ 05255 and LAWJ 05380*

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.

## **MIS (Information Processing for Managers)**

### **MIS 02.300: Integrated Software Tools for Business**

**3 s.h.**

*Prerequisites: CS 01200 and MIS 02300*

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 02.320: Seminar in Management Information Systems - Spring semester only**

**3 to 16 s.h.**

*Prerequisites: 57 hour prerequisite*

A seminar course providing a broad overview of information system management technology, this course emphasizes investigation and application of state-of-the-art concepts. Topics will be relevant to current trends in the industry.

### **MIS 02.325: Project Management- Fall semester only**

**3 s.h.**

*Prerequisites: 57 hour prerequisite*

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 02.327: Network Management**

**3 s.h.**

*Prerequisites: 57 hour prerequisite*

This course introduces students concepts associated with managing a network within a business setting. Furthermore, to solve business problems, students will apply theoretical concepts to fully design, specify, and justify networking solutions.

### **MIS 02.330: Business Systems- Fall semester only**

**3 s.h.**

*Prerequisites: 57 hour prerequisite*

This course is designed to introduce business students to the terminology and administrative issues that arise when simultaneously managing multiple systems in a business environment. Students must demonstrate effective communications and a clear understanding of the organization implications when working with each of the business disciplines when supporting and administering systems.

### **MIS 02.332: E-Business - Information Systems Perspectives - Fall semester only**

**3 s.h.**

*Prerequisites: 57 hour prerequisite*

The course explores the nature of electronic business including such topics as current business models, various ethical implications, international issues in e-business, and e-commerce payment mechanisms. Students will also gain practice in creating interactive web pages that process form data, such as provide the foundation for electronic-business.

## Courses

### **MIS 02.334: Management Information Systems**

**3 s.h.**

*Prerequisites: 57 hour prerequisite*

This course introduces the concept of information as a resource in business. It covers the systems approach for decision making and describes how the computer can be used in this process. Case studies are used to integrate the course material.

### **MIS 02.338: Design of Database Systems - Fall semester only**

**3 s.h.**

*Prerequisites: 57 hour prerequisite*

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 02.338: Advanced Database Management - Spring semester only**

**3 s.h.**

*Prerequisites: 57 hour prerequisite*

The course provides students with an understanding of client-server databases, and the skills to develop one using a reputed database development. Students learn to use Structured Query Language (SQL) extensively to create an integrated database application. Knowledge of a programming language and a basic understanding of relational database concepts are expected.

### **MIS 02.340: Decision Support Systems**

**3 s.h.**

*Prerequisites: MIS 02300 and MIS 02334 or CS 02300 and CS 02334*

Students study principles and techniques of building business models using decision support systems. Each student is assigned a number of case assignments using a 4th generation language. This course demonstrates the importance of "what-if" scenarios in the business environment.

### **MIS 02.422: Principles of System Design**

**3 s.h.**

*Prerequisites: CS 01141 and MIS 02336 and MIS 02325 or CS 01141 and CS 02336 and CS 02325*

This course explores the methodology and techniques in analysis and design of computer information systems. The systems analyst, the architect of information systems, is a liaison between user and programmer. The roles and responsibilities of the systems analyst are emphasized at all stages of the Systems Development Life Cycle.

### **MIS 02.428: Business Web Applications**

**3 s.h.**

*Prerequisites: CS 02410 and CS 01141 or MIS 02410 and CS 01141 or CS 02410 and CS 04141 or MIS 02410 and CS 04141 or MIS 02336 and CS 04141 or MIS 02336 and CS 01141 or CS 02336 and CS 04141 or CS 02336 and CS 01141*

Students will learn how to create web pages with various types of functionality as required in the business environment. Students will create web pages to display a business' catalog, allow customers to select and place items in a shopping cart, etc. Human factors will be considered for all design aspects.

### **MIS 02.450: MIS Capstone Experience- Spring semester only**

**3 s.h.**

This course integrates the material covered in the MIS specialization courses, so that students can understand how each of the elements work together. It also affords an opportunity for students to complete a complex, realistic project where they must utilize and hone skills they learned in prerequisite courses (i.e. project management concepts, systems analysis and design methodologies, data modeling and database design, programming skills, interpersonal skills, writing skills, and problem solving skills). This course will also reinforce ethical awareness and good decision making in IS situations, and discuss the specific professional and ethical responsibilities of the IS practitioner.

## Management

### **MGT 06.101: Introduction to Management (Non-business majors only)**

**3 s.h.**

This course studies the basic concepts of management: planning, organizing, directing, and controlling, as well as communication and decision making. It includes an introductory analysis of human resources and requirements. It emphasizes the decision-making and leadership roles of the manager.

### **MGT 06.300: Organizational Behavior**

**3 s.h.**

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.

## Courses

### **MGT 06.304: Organizational Change and Development**

**3 s.h.**

*Prerequisites: MGT 06300 or MGT 06309*

This course studies factors that facilitate or inhibit organizational change as well as research findings and theory which deal with methods for diagnosing organizational climate, and selecting and utilizing techniques for bringing about change and overcoming resistance to change. It also analyzes and evaluates roles and strategies used by change agents to initiate structure and direct organizational change.

### **MGT 06.305: Operations Management**

**3 s.h.**

*Prerequisites: STAT 02260 and MATH 01130 or STAT 02260 and MATH 03125*

This course provides a critical study of the operational functions of the business enterprise. Its topics include capital costs and investment criteria, plant location and layout, process planning and production design, job designs, work methods and cost controls.

### **MGT 06.309: Organizational Behavior (WI)**

**3 s.h.**

*Prerequisites: ENGL 01112 or COMP 01112*

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 06.310: Leadership and Supervision for Managers**

**3 s.h.**

*Prerequisites: CMS 06202*

The course is designed for undergraduate business students. Course content will cover the theories of business leadership and supervision- with the focus on first line supervisors. Students will focus on the theory and acquisition of various business leadership and supervisory tasks and skills necessary to work with other business managers in a global market world and to supervise workers with diverse backgrounds. These business skills will include establishing workplace goals, organizing work units for productivity, conducting interviews, giving feedback to subordinate employees, designing and implementing employee motivation programs, and supervising workteams. By the end of the course, students will be able to effectively diagnose the complex dynamics of leadership and supervision in business environments and take action as leaders and supervisors to improve individual and organization performance.

### **MGT 06.311: Decision-Making Tools for Managers**

**3 s.h.**

*Prerequisites: MGT 06305*

The course will focus on how the quality of managerial problem solving and decision-making can be enhanced by the use of business statistical tools and quantitative models. It will increase students' knowledge of how to identify business situations which would benefit by the application of common business analytical methods and models and require that they use these methods and models to solve realistic business problems. Spreadsheet applications will be emphasized.

### **MGT 06.312: Selected Topics in Management I**

**3 s.h.**

*Prerequisites: 45 hour prerequisite*

The course will provide students with the opportunity to learn about and respond to situations which are causing changes in the current business environment. Students will collect business information about the change and analyze it, make business decisions, discuss implementation of these decisions, and modification of those decisions in these situations. Students will also have the opportunity to become thoroughly familiar with all of the business aspects of the industries in South Jersey in which most of them will be employed.

### **MGT 06.313: Selected Topics in Management II**

**3 s.h.**

*Prerequisites: 45 hour prerequisite*

The course will provide students with the opportunity to become thoroughly familiar with all of the business aspects of the industries in the local economic environment in which most of them will be employed. Students will become knowledgeable about a specific industry in the multiple business facets of accountint, finance, human resources, use of information systems, facilities, etc. Industries can include the gaming and hospitality industries, the manufacturing sector, the health-care industry.

### **MGT 06.318: Human Resources Information Systems**

**3 s.h.**

This course will provide students with a working knowledge of the structure, use, and evaluation of human resource information systems

### **MGT 06.319: Special Topics in Human Resource Management**

**3 s.h.**

*Prerequisites: 57 hour prerequisite*

This course presents human resource management topics related to recent development in HRM practice and research.

## Courses

### **MGT 06.327: Strategic Issues in Family Business**

**3 s.h.**

*Prerequisites: 57 hour prerequisite*

This course examines a new discipline that has developed in the last 10 years and focuses on the unique aspects of family business. Organizational behavior, law, finance operations, and basic small business concepts are integrated into this course. Students will have an opportunity to consult with and develop transition plans for a family firm in a live field project.

### **MGT 06.330: Managing International Business**

**3 s.h.**

*Prerequisites: ECON 04101 and ECON 04102 and MGT 06309 or ECON 04101 and ECON 04102 and MGT 06300*

Students will learn about the evolution and current environment for international trade and investment and understand the challenges and issues facing business organizations with international operations. They will apply these insights to the analysis of actual business decision-making situations by means of case studies and research projects.

### **MGT 06.342: Financing and Legal Aspects of Entrepreneurship**

**3 s.h.**

*Prerequisites: 57 hour prerequisite*

This course provides an overview of the legal and financing issues most frequently encountered by entrepreneurs and others involved in start-ups and small, closely-held, or family businesses. The course covers various aspects of financing an entrepreneurial venture. Major topics include attracting seed and growth capital from sources such as venture capital, investment banking, government, and commercial banks; creating, protecting and leveraging intellectual property. Among the issues discussed are valuing a company, going public, selling out, acquisitions, bankruptcy, different legal forms of organization, employment relationships, partnerships, and taxes.

### **MGT 06.346: Social Entrepreneurship**

**3 s.h.**

*Prerequisites: 57 hour prerequisite*

The Social Entrepreneurship course provides a broad theoretical perspective and practical framework for understanding social entrepreneurs and the social ventures they create ranging from local social organizations to large international social ventures leading global change. The course introduces students to the possibilities of social entrepreneurship and an introduction to the entire social venture creation process and life cycle.

### **MGT 06.354: Managerial Data Analysis**

**3 s.h.**

*Prerequisites: MATH 03125 and STAT 02260 or MATH 03125 and STAT 02260*

This course is designed to acquaint management students with the knowledge to collect and analyze business information from a variety of sources and under various conditions of uncertainty in order to analyze this data in order to increase the productivity and effectiveness of the businesses by which they are employed. The focus is placed upon the ability to collect relevant business data and report the findings of their analysis in order that the findings may be applied in specific business situations. The emphasis will be on the use of realistic business data, business analysis processes, business applications, and business reporting techniques.

### **MGT 06.361: Supervised Internship**

**3 to 6 s.h.**

*Prerequisites: MGT 06309 or MGT 06300*

This course includes field experience in government, business, industry or non-profit organizations. Trainees are given assignments that prepare them for productive employment upon graduation. The learning process is monitored by the College of Business faculty members.

### **MGT 06.375: Managing Services**

**3 s.h.**

*Prerequisites: MGT 06203 and MGT 06304 and MGT 06309*

This course is oriented to service industries, such as medical services, financial institutions, airlines, transportation companies and retail establishments. The course covers understanding services, designing and delivering services, managing capacity and demand, service quality, customer service, human resources in service organizations, information systems and service strategies.

### **MGT 06.402: Business Policy**

**3 s.h.**

*Prerequisites: MGT 98242 and CS 02334 or MIS 02334 and MKT 09300 and MGT 06300 and MGT 06305 and FIN 04300 and Senior Standing*

This capstone course in business policy provides students with an opportunity to integrate what they have learned in separate business fields and use this knowledge in the analysis of complex business problems. There is an emphasis on the skills of identifying, analyzing and solving problems which are not pre-judged as being marketing problems, finance problems, etc. Students are encouraged to consider issues from the viewpoint of general management rather than as a functional specialist or researcher.

## Courses

### **MGT 06.404: Quality Management**

**3 s.h.**

*Prerequisites: MGT 06305*

This course is designed to acquaint students with a fundamental knowledge of the principals and techniques of quality management and operational control. Emphasis will be given to systems and the function of quality, technical methods and tools used in quality management, quality improvement and problem solving, and managerial issues of quality management as a new paradigm. Practical application with actual case studies for both product- and service-oriented fields will be provided.

### **MGT 06.405: Business Management Simulation**

**3 s.h.**

*Prerequisites: FIN 04300 and MGT 06305 and MGT 06309 and MKT 09200 or FIN 04300 and MGT 06305 and MGT 06300 and MKT 09200*

This course is designed to provide students with the opportunity to experience many of the problems of risk and uncertainty that managers face when making decisions in the real world. Students work in teams while managing a computer simulated corporation in a highly competitive international business environment. Students are challenged to use and improve their business and leadership skills utilizing knowledge from previous business courses.

### **MGT 06.415: Management Consulting Field Study**

**3 s.h.**

*Prerequisites: 57 hour prerequisite*

This course is designed to provide education and training opportunities in the art and application of techniques from various business and non-business courses primarily to firms with under \$25 million in sales. The overall purpose of the course is the acquisition of knowledge and skills that will enable students to provide consulting advice to entrepreneurs and small business owners that will be understood, accepted, implemented, and will improve the performance of the firms. The emphasis in the course is on experiential approaches that provide a participative type of learning about the crucial issues firms face.

### **MGT 06.420: Principles of Training and Training Management**

**3 s.h.**

*Prerequisites: MGT 06302 or MGT 06309*

This course will expose students to various theories and methodologies used to plan, design, conduct and evaluate training and management development programs in organizations. The learning experience within the course is designed to provide the student with the knowledge, information and skills required to develop and implement a training program. The course material offers a practical, "how-to" approach to training and development, as well as managing the training function. Each student in the course will participate in the development of a training program or module, which will be presented and critiqued at the end of the semester.

### **MGT 06.430: Business Field Research Experience**

**3 s.h.**

*Prerequisites: MGT 06305*

Students will choose a business activity approved by their instructor and do an in-depth research study of that activity. It will include library research as well as interviews with local businesses. Students will be guided by the instructor with the help of a classroom component during which students will share their research and experience with other students.

### **MGT 06.450: Technology Entrepreneurship**

**3 s.h.**

*Prerequisites: 57 hour prerequisite*

This course provides the student with insights into the creation, development, management, and transfer of intellectual assets. Real world product based projects will form the central core of the learning process. Students will gain an increased appreciation for the details of technology transfer and commercialization and an awareness of these critical issues from both industry and university perspectives. Examples of typical license, sponsored research, and other agreements will be provided.

### **MGT 07.430: Principles of Management Science**

**3 s.h.**

*Prerequisites: CS 01200 and STAT 02260 and MATH 03125*

This course introduces students to various topics in operations research. Topics will be chosen from the following list: linear programming and transportation problems, decision theory, PERT, linear regression analysis, queuing theory, forecasting and inventory models.

### **MGT 98.242: 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.

## Courses

### **MGT 98.335: Legal Aspects of Human Resource Management**

**3 s.h.**

*Prerequisites: MGT 06302 and MGT 98242*

This course introduces students to three areas of human resources management which are extensively regulated by federal and state legislation. Legislation studied includes the Occupational Safety and Health Act (OSHA), the Equal Employment Opportunity Act (EEO), and the Employee Retirement Income Security Act (ERISA). The course emphasizes practical applications to the human resource function.

## Marketing

### **MKT 09.200: Principles of Marketing**

**3 s.h.**

*Prerequisites: ENGL 01111 or ENGL 01105 or COMP 01111 or COMP 01112 and ECO 04102 and Sophomore Standing*

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 09.290: Marketing Basics**

**3 s.h.**

An introduction to marketing, designed for non-business majors only. Students examine key concepts in marketing, such as product and service development, promotion, pricing and distribution.

### **MKT 09.305: Internet Marketing**

**3 s.h.**

*Prerequisites: Required Credits: 57.000*

This course examines the Internet as a tool to enhance firms' marketing activities. The course presents a customer-centric view of marketing and focuses on how firms can create or maintain relationships with their potential or existing customers. Key online and offline marketing activities to that end are also discussed.

### **MKT 09.315: Personal Selling**

**3 s.h.**

*Prerequisites: MKT 09200*

This course examines the role of personal selling in the marketing mix. Students learn theory and gain practice in prospecting, presenting, overcoming objections, closing, and follow-up.

### **MKT 09.330: Marketing Channels**

**3 s.h.**

*Prerequisites: MKT 09200*

This course discusses how channels can be managed strategically to serve as a competitive advantage for the firm. Key topics include power and conflict within the channel, middlemen, vertical marketing systems and managing channel members.

### **MKT 09.350: Management of Advertising and Promotion**

**3 s.h.**

*Prerequisites: MKT 09200*

This course explores the role of the V.P. Marketing in the development of the corporate mission statement and the translation of corporate objectives into advertising and promotion objectives, strategy and practice. The course also explores the relationship of the marketing management function to the advertising department, promotion department, market research, the advertising agency and other outside vendors.

### **MKT 09.360: Services Marketing**

**3 s.h.**

*Prerequisites: MKT 09200*

The course provides students with an understanding of the unique characteristics of services and the application of standard marketing tools in service marketing. It emphasizes consumer decision-making, marketing planning, and development of the marketing mix. Students will apply theoretical knowledge learned in class to real world case studies and projects.

### **MKT 09.372: Retailing**

**3 s.h.**

*Prerequisites: MKT 09200*

This course examines retailing as part of the marketing process. It emphasizes the qualitative and quantitative factors in location and merchandise selection, merchandise pricing, planning and management, as well as promotional activities. Other topics include market research, consumer behavior, organizational patterns and internal control procedures and their impact on the retail process.

## Courses

### **MKT 09.375: Business Logistics**

**3 s.h.**

*Prerequisites: MKT 09200*

This course focuses on the logistics of physical distribution. Topics include traffic routing, inventory analysis and control, warehousing, and location of production and storage facilities.

### **MKT 09.376: Consumer Behavior**

**3 s.h.**

*Prerequisites: MKT 09200*

This course analyzes both the societal norms and the internal processes which impact on the consumer's purchase decisions. How consumers process product information and make decisions is evaluated for strategic marketing implications.

### **MKT 09.378: Product, Price, New Venture Management**

**3 s.h.**

*Prerequisites: MKT 09200*

In this course, students analyze new product development and new product management. The course covers idea screening, concept testing, new product evaluation, pricing theory and practice. Students study the use of marketing techniques, including advertising, promotion and pricing for each phase of the product life cycle. Actual class participation in the concept and development of a specific product selected by the class supplements theory.

### **MKT 09.379: International Marketing**

**3 s.h.**

*Prerequisites: MKT 09200*

Basic marketing concepts as they relate to foreign markets are analyzed in depth in this course. Two approaches are used: the environmental approach introduces the setting in which international marketing takes place; and the managerial approach incorporates marketing strategies of firms that choose to venture abroad.

### **MKT 09.382: Sales Force Management**

**3 s.h.**

*Prerequisites: MKT 09200*

From the viewpoint of a district manager, this course focuses on planning, directing, and controlling the marketing plan through a sales force. Topics include recruiting, selecting, training, motivating, and evaluating the sales force, as well as sales forecasting and time and territory management. Additionally, this course examines the role of personal selling in the marketing mix. Students learn theory and gain practice in prospecting, presenting, overcoming objections, closing and follow-up.

### **MKT 09.384: Research Methods in Marketing-WI**

**3 s.h.**

*Prerequisites: ENGL 01112 and MKT 09200 or COMP 01112 and MKT 09200 or ENGR 01201 and MKT 09200*

This course focuses on the relevant methodologies and analytic tools that marketing researchers apply to obtain information for decision-making. Students are expected to get hands-on experience and develop proficiency in using primary and secondary sources of data. Writing is an essential component of the course.

### **MKT 09.390: Selected Topics in Marketing**

**3 s.h.**

*Prerequisites: MKT 09200*

Students will investigate new areas and developments in theory, research and practice in Marketing. Specialized topics will vary each semester. Course activities will include in-depth study of current topics and preparation of case analyses and/or research papers. Students may consult with the department chair or the instructor for course details.

### **MKT 09.391: Business to Business Marketing**

**3 s.h.**

*Prerequisites: MKT 09200*

Students will investigate key concepts and strategic issues associated with marketing to business and organizational customers. Strategic differences between business and consumer marketing will be examined. Students will apply course concepts by means of analysis of case studies of actual decision situations.

### **MKT 09.403: Strategic Marketing Management**

**3 s.h.**

*Prerequisites: MKT 09376*

Students will investigate the approaches and problems of developing marketing plans and marketing decision making under conditions of uncertainty. The course focuses on the major types of decisions facing marketing executives in their attempts to harmonize the objectives and resources of the firm with the opportunities in the market place.

### **MKT 09.411: Supervised Internship in Marketing.**

**3 s.h.**

*Prerequisites: Required Credits: 72.000*

This course is intended to provide students with actual business experience. Fieldwork is combined with lectures and discussion sessions in the classroom. Registration in the course and prior approval from the instructor are required.

# Courses

## Mathematics

### **MATH 01.096: Basic Algebra**

**3 s.h.**

This full semester basic skills course includes signed numbers, first degree equations, factoring, exponents, roots and radicals, rational expressions, systems of equations and graphing. The 3.0 hours of credit granted for it do not apply toward graduation. Use of calculator is required.

### **MATH 01.115: Contemporary Mathematics**

**3 s.h.**

This course is designed to develop an appreciation of what mathematics is and how it is used today. Topics covered include: statistics and probability; graphs, trees and algorithms; geometrical perspectives including transformations, symmetry, and similarity; and the mathematics of social choice. Students are expected to have completed equivalents of Basic Algebra and Basic Skills Reading.

### **MATH 01.121: Intermediate Algebra**

**3 s.h.**

This course emphasizes the basic algebraic skills and techniques used in business and social sciences. It will prepare students to take science and mathematics courses in the general education bank. Topics included are a review of algebra, solutions of linear, rational and quadratic functions, exponential notions, relations and functions, graphs, and determinants. Use of a calculator is required. Students are expected to have completed the equivalent of Basic Algebra.

### **MATH 01.122: Precalculus Mathematics**

**3 to 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 Intermediate Algebra.

### **MATH 01.123: College Algebra**

**3 s.h.**

This course is designed to help students who are weak in algebra prepare for Statistics I or Calculus Techniques & Applications. The contents include: a brief review of intermediate algebra, the structure of the real number system, elementary analytic geometry, and algebraic, exponential and logarithmic functions (including their inverses and related functions). Graphs of functions are also studied. A graphing calculator is required. Students are expected to have completed Intermediate Algebra or its equivalent.

### **MATH 01.130: Calculus I**

**4 s.h.**

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. (Students are expected to have completed Precalculus or its equivalent.)

### **MATH 01.131: Calculus II**

**4 s.h.**

*Prerequisites: MATH 01130 or HONR 05180*

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 01.201: Structures of Mathematics**

**3 s.h.**

This course concerns the development of number systems and algebraic structures, including the natural numbers, the integers, rational numbers, real and complex numbers. Concrete examples of selected algebraic structures such as modular arithmetic and matrices are also included. Students will be required to reason mathematically, solve problems, and communicate mathematics effectively at different levels of formality, using a variety of representations of mathematical concepts and procedures. Use of calculators is required. (Students are expected to have completed an equivalent of Intermediate Algebra.)

## Courses

### **MATH 01.202: Introduction to Geometry**

**3 s.h.**

This course develops the fundamental concepts of Euclidean geometry from a modern point of view. Its topics include sets, points, lines, space, betweenness, incidence, congruence, parallelism, similarity, transformations, volumes, and areas. Non-Euclidean geometries are introduced. Not open to mathematics majors. Use of calculators is required. Students are expected to have completed an equivalent of Intermediate Algebra.

### **MATH 01.205: Technological Tools for Discovering Mathematics**

**2 s.h.**

*Prerequisites: CS 01102 and MATH 01130*

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 01.210: Linear Algebra**

**3 s.h.**

*Prerequisites: MATH 01131 and MATH 03150 or MATH 01131 and 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 01.230: Calculus III**

**4 s.h.**

*Prerequisites: 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 01.231: Ordinary Differential Equations**

**3 s.h.**

*Prerequisites: 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 01.235: Mathematics for Engineering Analysis I**

**4 s.h.**

*Prerequisites: MATH 01131*

This course gives a comprehensive introduction to functions of several variables, linear algebra, vector calculus and ordinary differential equations. It includes partial derivatives, double integrals, matrices, matrix operations, eigenvalues and eigenvectors, dot and cross products, divergence, curl, first order ordinary differential equations and numerical methods. A computer algebra system such as Mathematica is required.

### **MATH 01.236: Mathematics for Engineering Analysis II**

**4 s.h.**

*Prerequisites: MATH 01235*

This course is a continuation of Mathematics for Engineering Analysis I. Methods for solving second-order ordinary differential equations and systems of first-order equations are discussed, including the Laplace transform. Methods for solving partial differential equations are also studied. A computer algebra system such as Mathematica is required.

### **MATH 01.310: College Geometry**

**4 s.h.**

*Prerequisites: PHIL 09130 and MATH 01131 and MATH 01210*

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 01.330: Introduction to Real Analysis I**

**3 s.h.**

*Prerequisites: MATH 01230*

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.

## Courses

### **MATH 01.331: Introduction to Real Analysis II**

**3 s.h.**

*Prerequisites: 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 01.332: Numerical Analysis**

**3 s.h.**

*Prerequisites: CS 01102 and 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 01.340: Modern Algebra I**

**3 s.h.**

*Prerequisites: PHIL 09130 and MATH 01210*

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 01.341: Modern Algebra II**

**3 s.h.**

*Prerequisites: 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 01.352: Theory of Numbers**

**3 s.h.**

(For Mathematics majors; open to others with permission; background in abstract or linear algebra is recommended.) 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 01.354: 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 01.386: Introduction to Partial Differential Equations**

**3 s.h.**

*Prerequisites: MATH 01231*

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 01.410: History of Mathematics**

**3 s.h.**

*Prerequisites: MATH 01131*

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 01.421: 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 01.430: Introduction to Complex Analysis**

**3 s.h.**

*Prerequisites: 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.

## Courses

### **MATH 01.499: Mathematics Seminar**

**3 s.h.**

*Prerequisites: MATH 01340 and MATH 01231 and MATH 01330 and MATH 01310 or MATH 01340 and MATH 01231 and MATH 01330 and 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 foundations. Additionally, each student is required to write and to present orally a research report on a mathematical topic. Effective Fall 2004

### **MATH 03.125: 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 03.150: 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 03.160: 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 03.305: Patterns in Nature I: Visual Geometry**

**3 s.h.**

*Prerequisites: BIOL 01105 and CS 01102 and STAT 02260 and PHYS 02150 and CHEM 05102*

This course for students in the natural/science track of the Liberal Studies major illustrates the connections between geometry and the natural sciences, using computers, manipulatives, and hands-on models. Concepts covered include properties of two- and three-dimensional shapes, transformations, dimension, and non-Euclidean geometries.

### **MATH 03.315: Patterns in Nature II: Projects in Calculus**

**4 s.h.**

*Prerequisites: MATH 03305*

This project-oriented course for students in the Liberal Studies Math/Science program provides an introduction to the mathematics of change. Topical coverage includes a review of functions, limits, continuity, the notion of the derivative and its applications, and the notion of integration and its applications. The use of numerical methods will be included in the context of mathematical modeling and various types of technologies, including graphing calculators, spreadsheets, and mathematical software packages will be utilized.

### **MATH 03.400: Applications of Mathematics**

**3 s.h.**

*Prerequisites: MATH 01210 and MATH 01230*

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 03.411: Deterministic Models in Operations Research**

**3 s.h.**

*Prerequisites: MATH 01230 and MATH 01210 or MATH 01230 and 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.

## Courses

### **MATH 03.412: Stochastic Models in Operations Research**

**3 s.h.**

*Prerequisites: STAT 02360 and MATH 01230 or STAT 02360 and MATH 01235 or STAT 02360 and MATH 03411*

This course is an introduction to mathematical modeling, analysis, and solution procedures applicable to decision-making problems in an uncertain (stochastic) environment. Methodologies covered include dynamic programming, Markov chains, queuing theory, decision trees, system reliability and inventory theory. Solutions will be obtained using theoretical methods and software packages.

### **STAT 02.100: Elementary Statistics**

**3 s.h.**

This course gives a basic introduction to the fundamental concepts and methods of statistics. Its topics include: basic measures of central tendency and variability, graphical displays, elementary design of experiments, descriptive simple linear regression, elementary probability, the normal and t-distributions, confidence intervals and hypothesis testing. Use of a statistical calculator, graphing calculator or software package is required. Note: many majors require a different introductory statistic course; students should check their major requirements before signing up for this course.

### **STAT 02.260: Statistics I**

**3 s.h.**

Students learn to use various graphical displays and measures of location and variability to describe data. The course considers elementary probability and sampling distributions, and uses the normal and t-distributions in estimation and hypotheses testing. It includes descriptive techniques for simple linear regression and correlation. Use of a graphing calculator is required; computer software may be used. Students are expected to have completed an equivalent of College Algebra.

### **STAT 02.261: Statistics II**

**3 s.h.**

*Prerequisites: STAT 02260*

This course is a continuation of Statistics I. Confidence intervals and hypothesis tests are studied in more detail, beginning with two sample inference for means and proportions. The inferences in simple linear regression and multiple regression are presented. Analysis of variance and experimental design are introduced. Other topics include chi-square tests for goodness-of-fit and independence, and the principles of nonparametric tests. Use of statistical software such as Minitab, SPSS or SAS, is also required.

### **STAT 02.280: Biometry**

**4 s.h.**

*Prerequisites: MATH 01130 and BIOL 01100 and BIOL 01101*

This laboratory course considers elementary data analysis, probability and sampling distributions. It uses the normal and t-distributions to introduce estimation and hypotheses testing. It includes descriptive techniques and inference for simple linear regression and correlation. Analyses of variance, nonparametric tests and chisquare tests are covered in this course. Emphasis is placed on experimentation and the application of statistical methods to the biological sciences. Computer software is used regularly in data manipulation, statistical analyses, and formal presentation of results.

### **STAT 02.360: Introduction to Probability and Statistics I**

**3 s.h.**

*Prerequisites: MATH 01131*

An introduction to the theory and application of mathematical statistics at the post-calculus level. After a brief introduction to the concepts of descriptive statistics, the emphasis is on probability theory and its applications. Topics covered include sample spaces, random variables, discrete and continuous probability distributions, mathematical expectation and multivariate distributions. Use of a graphing calculator is required.

### **STAT 02.361: Introduction to Probability and Statistics II**

**3 s.h.**

*Prerequisites: STAT 02360*

A continuation of Introduction to Probability & Statistics I, 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 02.371: Statistical Design of Experiments I**

**3 s.h.**

*Prerequisites: STAT 02260 and STAT 02261*

Students will gain an understanding of the major theoretical and practical concepts in the statistical design of experiments. The relevance of statistical experimental design to all experimentation will be presented in a highly applied manner. Students will be exposed to a variety of applications from a wide range of subject areas. Students will learn how to use the statistical design of experiments to obtain the maximum information with a minimum number of experimental trials for any type of experimentation or data collection. Examples from business, social and physical sciences and engineering will be used to illustrate concepts.

## Courses

### **STAT 02.372: Statistical Design of Experiments II**

**3 s.h.**

*Prerequisites: STAT 02260 and STAT 02261 and STAT 02371*

Students will be exposed to advanced techniques and theories in statistical design of experiments. Applications from a wide variety of disciplines will be considered in detail. Students will learn the theoretical aspects of statistical design as well as the application of complex techniques to realistic situations. Optimization of experimental design techniques will also be covered.

## Mechanical Engineering

### **ME 10.201: Vibrations**

**2 s.h.**

*Prerequisites: ENGR 01291*

The course deals with vibration of single and multi-degree of freedom systems. First free vibration of single degree of freedom spring mass system is formulated and developed. Concepts of damping, and forced vibrations, and dynamic balancing are then introduced. Two degree of freedom systems are then considered to introduce the matrix system of equations. Multi-degree of freedom systems and modeling of continuous systems are presented. Fourier analysis for general forms of forced vibrations are discussed. Experimental experience will be integrated throughout the course.

### **ME 10.241: Machine Design**

**2 s.h.**

*Prerequisites: ENGR 01272*

This course introduces the students to machine design. It deals with the design and selection of machine elements such as shafts, couplings, bearings, gears, springs, clutches, brakes, screws, and fasteners. Laboratory experience will include computer simulation and analysis. Design experience will be synergistically integrated throughout the curriculum and culminate in a design project.

### **ME 10.311: Engineering Thermodynamics I**

**2 s.h.**

*Prerequisites: MATH 01236 and PHYS 02200 and CHEM 06105 or CHEM 06100 and ME 10312*

The first and second laws of thermodynamics, and their applications to energy transformations during various processes are introduced. Property relations are developed for pure simple compressible substances and ideal gases. Closed systems and open systems are analyzed using first and second law analyses. Steam power cycles are analyzed to determine the performance parameters and energy efficiencies.

### **ME 10.312: Engineering Thermodynamics II**

**2 s.h.**

*Prerequisites: ME 10311*

This course emphasizes application of the first and second laws of thermodynamics to a variety of systems, including gas power systems, refrigeration systems, and combustion systems. In addition, advanced thermodynamics topics are covered, including Maxwell relations, energy analysis, chemical equilibrium and phase equilibrium.

### **ME 10.313: Fluid Mechanics II**

**2 s.h.**

This course emphasizes application of the conservation equations of mass, momentum and energy to problems involving boundary layers, incompressible external flow over immersed bodies, one-dimensional steady-state supersonic flow and turbomachinery. Specific applications include determination of drag and lift for flow over immersed bodies, supersonic nozzle flow, supersonic flow with friction and normal shock waves.

### **ME 10.341: Mechanical Design and Synthesis**

**4 s.h.**

*Prerequisites: ENGR 01291*

This course introduces the student to mechanical design process, synthesis techniques, and modern analysis tools. It focuses on synthesis of linkage and cam mechanisms. Laboratory experience will include computer simulation and analysis. Design experience will be synergistically integrated throughout the curriculum and culminate in a design project.

### **ME 10.342: Quality & Reliability in Design and Manufacture**

**3 s.h.**

*Prerequisites: MATH 01236*

This course introduces concepts of quality and reliability for application in design and manufacture. Basic aspects of dimensioning, tolerancing, and fits are introduced through application of the normal distribution and its variations. Geometric tolerances of form, orientation, position and runout are presented. Aspects of process capability and statistical process control are discussed. Concepts of failure and reliability are presented.

## Courses

### **ME 10.343: Mechanical System Dynamics and Control**

**3 s.h.**

*Prerequisites: ME 10201*

This course introduces the students to system modeling, analysis and control. The first part of the course deals with physical system dynamics. The second part of the course focuses on the design of control systems. Laboratory experience will include computer simulation and analysis of mechanical systems. Students will model a system with realistic specifications and develop a control system.

### **ME 10.401: Introduction to Computer Integrated Manufacturing and Automation**

**3 s.h.**

*Prerequisites: ENGR 01282*

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 10.403: Emerging Topics in Mechanical Engineering**

**2 s.h.**

This course will introduce emerging technologies and designs in individual or interdisciplinary areas of Mechanical Engineering. The topics can include but are not limited to microscale machinery and manufacturing, remotely operated vehicles (ROV), etc. The course will be integrated with hands-on research, design, build and test experience through a design project.

### **ME 10.405: Special Topics in Mechanical Engineering**

**3 s.h.**

This course covers special topics in individual areas of Mechanical Engineering. Specific prerequisites are determined by the nature of the course when it is announced.

### **ME 10.411: Introduction to Combustion**

**3 s.h.**

*Prerequisites: ME 10312*

This course serves as an introduction to combustion, chemically reacting flow systems and flames. It covers the fundamental concepts of chemically reacting systems along with many practical applications. Specific topics include chemical equilibrium, chemical kinetics, premixed laminar flames, detonations, diffusion flames and environmental issues.

### **ME 10.412: Introduction to Rocket Propulsion**

**3 s.h.**

*Prerequisites: ME 10312 and ME 10313*

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 10.413: Advanced Heat and Mass Transfer**

**3 s.h.**

*Prerequisites: CHE 06311 and ME 10312*

The topics covered in this course extend and complement the Transfer Processes I course. While Transfer Processes I provides an overview and introduction to the engineering fundamentals of heat transfer, Advanced Heat Transfer will provide a deeper knowledge of heat transfer principles, and will allow more rigorous and open-ended problems to be examined. The course will include two additional topics: radiation and mass transfer. Students successfully completing this course will be able to solve a wider range of heat and mass transfer problems encountered in industry.

### **ME 10.414: Introduction to Energy Conversion Systems**

**3 s.h.**

*Prerequisites: ENGR 01341 and ME 10312*

This course will introduce energy conversion technologies for the generation of electrical power. Topics will include a review of power cycles, steam and gas cycles, generation of thermal power, combustion and fuels, steam power plant design considerations, gas turbine power plant operation and design considerations, combined cycles, co-generation, nuclear power, alternative energy sources, fuel cells, and environmental considerations in power generation.

### **ME 10.421: Introduction to Gas Dynamics**

**3 s.h.**

*Prerequisites: ME 10312 and ME 10313*

This course emphasizes application of the conservation equations of mass, momentum and energy to solve problems in one-dimensional and two-dimensional compressible flow. Specific applications of one-dimensional compressible flow include one-dimensional isentropic flow, flow with area change, adiabatic flow with friction, normal shock waves and flow with heat addition. The method of characteristics is introduced to solve two-dimensional compressible flow problems.

## Courses

### **ME 10.422: Introduction to Computational Fluid Dynamics**

**3 s.h.**

This course serves as an overview of the techniques used to solve problems in fluid mechanics on computers and describes in detail those most often used in practice. Included are advanced techniques in computational fluid dynamics, like direct and large-eddy simulation of turbulence, multigrid methods, parallel computing, moving grids, structured, block-structures and unstructured boundary-fitted grids, and free surface flows. The issues of numerical accuracy, estimation and reduction of numerical errors are treated in detail with many examples.

### **ME 10.441: Advanced Mechanism Design for Undergraduates**

**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 synthesis, as well as branch defects and circuit defects that occur during mechanism synthesis. In addition, it covers the modeling and simulation of mechanical systems using appropriate mechanism design software. Students will perform analysis and simulation of mechanisms.

### **ME 10.442: Mechatronics**

**3 s.h.**

*Prerequisites: ENGR 01302*

This course introduces the students to the design and development of mechatronic systems. It introduces the students to the multidisciplinary nature of mechatronic products and teaches them to design and develop such products. Students will learn about mechatronic design philosophy, mechatronic system modeling, sensors, actuators, microprocessors and their interfaces. The course project will involve the design of a real-world mechatronic system.

### **ME 10.443: Design for X**

**3 s.h.**

*Prerequisites: ENGR 01302*

This course introduces the students to the design of systems from Design for X perspective. The Design for X course teaches how to deal with conflicting and ever increasing number of constraints in the design process. It teaches the students to adopt a systematic design approach that addresses issues related to manufacture, assembly, environment, reliability and other factors from concept design stage to product manufacture. Students also learn to customize CAD systems with their own intelligent design assistants to help them in the design process.

### **ME 10.444: Introduction to Automotive Engineering**

**3 s.h.**

*Prerequisites: ENGR 01291 and ME 10241 and ME 10341 and ME 10312 and ME 10313 and CHE 06311*

This Course deals with the engineering of automobiles at the undergraduate level. The course draws upon knowledge from the fields of dynamics, thermodynamics, fluid mechanics, heat transfer, and machine design. Topics covered include vehicle dynamics, internal combustion engines, power transmission, and advanced technology vehicles. The course includes appropriate exams and automobile related design project.

### **ME 10.451: Introduction to the Mechanics of Continuous Media**

**3 s.h.**

*Prerequisites: ENGR 01271 and MATH 01130 and MATH 01131*

The fundamental concepts governing the behavior of continuous media, primarily solids, are introduced. Governing equations are derived for classical problems such as the spinning disk. Constitutive laws are employed in the solution of boundary value problems in both Cartesian and cylindrical coordinate systems. Classical solutions are examined using symbolic mathematics and finite element software.

### **ME 10.452: Introduction to Structural Acoustics**

**3 s.h.**

*Prerequisites: ME 10201*

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 10.470: Introduction to Biomechanics**

**3 s.h.**

*Prerequisites: ENGR 01291*

This course presents an introduction to biomechanics of human motion. The course will encompass the use of engineering principles to describe, analyze and assess human movement. Topics will include kinematics, kinetics, anthropometry applied to the synthesis of human movement and muscle mechanics.

## Courses

### **ME 10.471: Introduction to Biofluids**

**3 s.h.**

*Prerequisites: ENGR 01341*

The goal of this course is to present an introduction to fundamental concepts of fluid mechanics and mass transport that are involved in mammalian cell function. Special attention is given to the vascular circulation system and problems that commonly occur therein. This course will include a small laboratory component and will involve independent learning about the state-of-the-art in biofluids research.

### **ME 10.472: Introduction to Biomaterials**

**3 s.h.**

*Prerequisites: ENGR 01281*

The goal of this course is to present an introduction to the numerous issues that factor into the choice of material selection for biomedical devices. Issues to be examined include mechanical properties, biocompatibility, production costs, and ease of manufacture. This course will familiarize students with relevant material issues and highlight the process for matching material performance with the desired design characteristics and functionality.

### **ME 10.475: Introduction to Crash Safety Engineering**

**3 s.h.**

*Prerequisites: ENGR 01291*

This course presents an introduction to the design and analysis of crashworthy cars and light trucks. The course will encompass three major focus areas: the crash response of (1) the vehicle structure, (2) the occupant, and (3) the occupant restraints. Topics will include the analysis of crash tests, vehicle crash kinematics, vehicle modeling, the biomechanics of impact injury, occupant modeling, and airbag design.

## Military Science

### **MILS 01.101: Basic Leadership Laboratory/Practicum**

**3 s.h.**

Provides hands-on experience to reinforce leadership fundamentals, while emphasizing increased awareness of and proficiency in military skills. (No service obligation)

### **MILS 01.102: Basic Leadership Laboratory/Practicum**

**3 s.h.**

Provides hands-on experience to reinforce leadership fundamentals, while emphasizing increased awareness of and proficiency in military skills. (No service obligation)

### **MILS 01.110: Leadership and Personal Development**

**3 s.h.**

Introduces students/cadets to the personal challenges and competencies that are critical for effective leadership. Focus is placed on developing basic knowledge and comprehension of the U.S. Army's Leadership Dimensions while gaining a "big picture" understanding of the Army ROTC program, its purpose in the U.S. Army and our nation, and its advantages for the student. Classes are conducted for one hour once each week. (No service obligation).

### **MILS 01.120: Foundations in Leadership**

**3 s.h.**

Reviews leadership fundamentals such as setting direction, problem solving, listening, presenting briefs, providing feedback and using effective writing skills. Students/cadets are also exposed to key fundamentals of skills required to be successful as an MS II cadet; namely, military map reading and land navigation, and small unit operations/ leadership drills. (No service obligation).

### **MILS 01.201: Basic Leadership Laboratory/Practicum**

**3 s.h.**

Provides hands-on experience to reinforce leadership fundamentals, while emphasizing increased awareness of and proficiency in military skills. (No service obligation)

### **MILS 01.202: Basic Leadership Laboratory/Practicum**

**3 s.h.**

Provides hands-on experience to reinforce leadership fundamentals, while emphasizing increased awareness of and proficiency in military skills. (No service obligation)

### **MILS 01.210: Innovative Tactical Leadership**

**3 s.h.**

*Prerequisites: MILS 01110 or MILS 01120 Minimum Grade of B*

Explores the dimensions of creative and innovative tactical leadership strategies and styles by studying historical case studies and engaging in interactive student exercises. Focus is on continued development of the knowledge of leadership values and attributes through an understanding of rank, uniform, customs and courtesies. (No service obligation).

## Courses

### **MILS 01.220: Leadership in Changing Environments**

**3 s.h.**

*Prerequisites: MILS 01210 and MILS 01110 and MILS 01120 and Minimum Grade of B*

Examines the challenges of leading in complex contemporary operational environments. Students/cadets are exposed to more complex land navigation/map reading tasks, as well as more advanced small unit operations/leadership drills. Cadets develop greater self awareness as they practice communication and team building skills. (No service obligation).

### **MILS 01.301: Advanced Leadership Laboratory/Practicum**

**3 s.h.**

Provides hands-on experience to reinforce leadership fundamentals, while emphasizing increased awareness of and proficiency in military skills. (Service obligation upon enrollment in MILS01.310 and MILS01.301.)

### **MILS 01.302: Advanced Leadership Laboratory/Practicum**

**3 s.h.**

Provides hands-on experience to reinforce leadership fundamentals, while emphasizing increased awareness of and proficiency in military skills.

### **MILS 01.310: Leadership in Contact**

**3 s.h.**

*Corequisites: MILS 01301 Prerequisites: MILS 01101 and MILS 01102 and MILS 01201 and MILS 01202*

Uses increasingly intense situational leadership challenges to build cadet awareness and skills in leading small units. Skills in decision-making, persuading, and motivating team members when "in combat" are explored, evaluated, and developed. (Service obligation incurred upon enrollment in MILS01.310.)

### **MILS 01.320: Complex Team Leadership Issues**

**3 s.h.**

*Prerequisites: MILS 01310 Minimum Grade of B and MILS 01101 and MILS 01102 and MILS 01201 and MILS 01202*

Challenges cadets with more complex leadership issues to further develop, practice, and evaluate adaptive leadership. Cadets continue to analyze and evaluate their own leadership values, attributes, skills, and actions in preparation for the Leadership Development and Assessment Course (LDAC). Primary attention is given to preparation for LDAC and the development of both tactical skills and leadership qualities.

### **MILS 01.401: Senior Leadership Laboratory/Practicum**

**3 s.h.**

Provides hands-on experience to reinforce leadership fundamentals, while emphasizing increased awareness of and proficiency in military skills.

### **MILS 01.402: Senior Leadership Laboratory/Practicum**

**3 s.h.**

Provides hands-on experience to reinforce leadership fundamentals, while emphasizing increased awareness of and proficiency in military skills.

### **MILS 01.410: Developing Adaptive Leaders**

**3 s.h.**

*Corequisites: MILS 01401 Prerequisites: MILS 01310 and MILS 01310 Minimum Grade of B*

Develops cadet proficiency in planning, executing, and assessing complex operations, functioning as a member of a staff, and providing leadership performance feedback to subordinates. Cadets are given situational opportunities to assess risk, make ethical decisions, and provide coaching to fellow ROTC cadets.

### **MILS 01.420: Leadership in the Contemporary Operating Environment of the 21st Century**

**3 s.h.**

*Prerequisites: MILS 01410 Minimum Grade of B*

Explores the dynamics of leading in the complex situations of current military operations. Cadets examine differences in customs and courtesies, military law, principles of war, and rules of engagement in the face of international terrorism. Aspects of interacting with non-government organizations, civilians on the battlefield, and host nation support are examined and evaluated.

## Music

### **MUS 04.050: Student Recitals**

**0 s.h.**

Students perform for both faculty and students. Seven or eight semesters are required, depending on the chosen curriculum.

### **MUS 04.110: Sight Singing and Ear Training**

**2 s.h.**

The techniques of singing at sight, solfeggio, and taking dictation are reviewed and applied.

## Courses

### **MUS 04.118: Music Fundamentals**

**3 s.h.**

This course leads to a broader understanding of music through study of its basic elements: melody, rhythm, harmony and form.

### **MUS 04.125: Music Composition I**

**3 s.h.**

A detailed study of compositional devices emphasizing the twentieth century is made. Compositions are written for available media and performed in class.

### **MUS 04.126: Music Composition II**

**3 s.h.**

This is a continuation of Music Composition I. A detailed study of compositional devices emphasizing the twentieth century is made. Compositions are written for available media and performed in class.

### **MUS 04.129: Jazz Improvisation**

**1 to 2 s.h.**

This course presents the blues scale, major, and minor scales/chords for a thorough understanding of the blues form. Students learn the fundamentals of improvisation through performance and written composition.

### **MUS 04.130: Music Theory I - Written**

**2 s.h.**

A detailed study of the visual aspects of writing and performing music. The corresponding aural theory section must be taken concurrently. The departmental entrance exams for written and aural theory must be passed before admission to these courses. These courses must be taken in sequence.

### **MUS 04.131: Music Theory II - Written**

**2 s.h.**

*Corequisites: MUS 04133 Prerequisites: MUS 04130 and MUS 04132*

A detailed study of the visual aspects of writing and performing music. The corresponding aural theory section must be taken concurrently. The departmental entrance exams for written and aural theory must be passed before admission to these courses. These courses must be taken in sequence.

### **MUS 04.132: Music Theory I - Aural**

**2 s.h.**

A detailed study of the aural aspects of writing and performing music. The corresponding written theory section must be taken concurrently. The departmental entrance exams for written and aural theory must be passed before admission to these courses. These courses must be taken in sequence.

### **MUS 04.133: Music Theory II - Aural**

**2 s.h.**

*Corequisites: MUS 04131 Prerequisites: MUS 04130 and MUS 04132*

A detailed study of the aural aspects of writing and performing music. The corresponding written theory section must be taken concurrently. The departmental entrance exams for written and aural theory must be passed before admission to these courses. These courses must be taken in sequence.

### **MUS 04.140: Wind Ensemble**

**0 to 1 s.h.**

Variable credit is given to those students who participate.

### **MUS 04.141: String Ensemble**

**0 to 1 s.h.**

Variable credit is given to those students who participate.

### **MUS 04.142: College Band**

**0 to 1 s.h.**

Variable credit is given to those students who participate.

### **MUS 04.143: Jazz Band**

**0 to 1 s.h.**

Variable credit is given to those students who participate.

### **MUS 04.144: Orchestra**

**0 to 1 s.h.**

Variable credit is given to those students who participate.

### **MUS 04.145: Lab Band**

**0 to 1 s.h.**

Variable credit is given to those students who participate.

### **MUS 04.146: Concert Choir**

**0 to 1 s.h.**

Variable credit is given to those students who participate.

## Courses

- MUS 04.147: Contemp Music Ensemble** **0 to 1 s.h.**  
Variable credit is given to those students who participate.
- MUS 04.148: Percussion Ensemble** **0 to 1 s.h.**  
Variable credit is given to those students who participate.
- MUS 04.149: Guitar Ensemble** **0 to 1 s.h.**  
Variable credit is given to those students who participate.
- MUS 04.150: Flute Ensemble** **0 to 1 s.h.**  
Variable credit is given to those students who participate.
- MUS 04.151: Opera Company** **0 to 1 s.h.**  
Variable credit is given to those students who participate.
- MUS 04.152: Saxophone Ensemble** **0 to 1 s.h.**  
Variable credit is given to those students who participate.
- MUS 04.153: Clarinet Ensemble** **0 to 1 s.h.**  
Variable credit is given to those students who participate.
- MUS 04.154: Women's Chorus** **0 to 1 s.h.**  
Variable credit is given to those students who participate.
- MUS 04.155: Men's Chorus** **0 to 1 s.h.**  
Variable credit is given to those students who participate.
- MUS 04.160: Professional Applied Instrumental: Bassoon** **1 to 4 s.h.**  
An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.
- MUS 04.161: Professional Applied Instrumental: Bass** **1 to 4 s.h.**  
An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.
- MUS 04.162: Professional Applied Instrumental: Cello** **1 to 4 s.h.**  
An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.
- MUS 04.163: Professional Applied Instrumental: Clarinet** **1 to 4 s.h.**  
An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.
- MUS 04.164: Professional Applied Instrumental: Euphonium** **1 to 4 s.h.**  
An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

## Courses

### **MUS 04.165: Professional Applied Instrumental: Flute** **1 to 4 s.h.**

An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

### **MUS 04.166: Professional Applied Instrumental: French Horn** **1 to 4 s.h.**

An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

### **MUS 04.167: Professional Applied Instrumental: Guitar** **1 to 4 s.h.**

An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

### **MUS 04.168: Professional Applied Instrumental: Harp** **1 to 4 s.h.**

An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

### **MUS 04.169: Professional Applied Instrumental: Oboe** **1 to 4 s.h.**

An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

### **MUS 04.170: Professional Applied Instrumental: Organ** **1 to 4 s.h.**

An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

### **MUS 04.171: Professional Applied Instrumental: Percussion** **1 to 4 s.h.**

An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

### **MUS 04.172: Professional Applied Instrumental: Piano** **1 to 4 s.h.**

An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

### **MUS 04.173: Professional Applied Instrumental: Saxophone** **1 to 4 s.h.**

An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

### **MUS 04.173: Professional Applied Instrumental: Trombone** **1 to 4 s.h.**

An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

## Courses

**MUS 04.175: Professional Applied Instrumental: Trumpet** **1 to 4 s.h.**

An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

**MUS 04.176: Professional Applied Instrumental: Tuba** **1 to 4 s.h.**

An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

**MUS 04.177: Professional Applied Instrumental: Viola** **1 to 4 s.h.**

An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

**MUS 04.178: Professional Applied Instrumental: Violin** **1 to 4 s.h.**

An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

**MUS 04.179: Professional Applied Instrumental: Jazz Piano** **1 to 4 s.h.**

An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

**MUS 04.180: Applied Voice** **1 to 4 s.h.**

The student must pass a departmental audition before being accepted into this course. Performance in student recitals and ensembles is required each semester. See Department Curriculum Guides for specific requirements for vocal majors.

**MUS 04.202: Language through Vocal Repertoire (Italian)** **1 s.h.**

Phonetics and exact spellings are taught with examples of vocal literature. This course stresses special pronunciation problems for the singer with an Anglo-Saxon language background.

**MUS 04.203: Language through Vocal Repertoire (French)** **1 s.h.**

Phonetics and exact spellings are taught with examples of vocal literature. This course stresses special pronunciation problems for the singer with an Anglo-Saxon language background.

**MUS 04.204: Language through Vocal Repertoire (German)** **1 s.h.**

Phonetics and exact spellings are taught with examples of vocal literature. This course stresses special pronunciation problems for the singer with an Anglo-Saxon language background.

**MUS 04.225: Music Composition III** **3 s.h.**

This is a continuation of Music Composition II. A detailed study of compositional devices emphasizing the twentieth century is made. Compositions are written for available media and performed in class.

**MUS 04.226: Music Composition IV** **3 s.h.**

This is a continuation of Music Composition III. A detailed study of compositional devices emphasizing the twentieth century is made. Compositions are written for available media and performed in class.

**MUS 04.229: Secondary Applied Piano (Jazz)** **1 s.h.**

This course includes a basic approach to playing and using the piano in jazz music through an introduction to chords (their symbols and structures), scales (and their relation to chords) and jazz melodies as played and realized by the jazz pianist.

## Courses

### **MUS 04.230: Secondary Applied Piano II (Jazz)**

**1 s.h.**

Emphasis is placed on learning how to "comp" and solo on the piano. A comprehensive array of advanced chords and scales is studied, with an introduction to the electronic piano.

### **MUS 04.240: Music Theory III - Written**

**2 to 4 s.h.**

*Corequisites: MUS 04242 Prerequisites: MUS 04131 and MUS 04133*

A detailed study of the visual aspects of writing and performing music. The corresponding aural theory section must be taken concurrently. The departmental entrance exams for written and aural theory must be passed before admission to these courses. These courses must be taken in sequence.

### **MUS 04.241: Music Theory IV - Written**

**2 to 4 s.h.**

*Corequisites: MUS 04243 Prerequisites: MUS 04240 and MUS 04242*

A detailed study of the visual aspects of writing and performing music. The corresponding aural theory section must be taken concurrently. The departmental entrance exams for written and aural theory must be passed before admission to these courses. These courses must be taken in sequence.

### **MUS 04.242: Music Theory III - Aural**

**2 s.h.**

*Corequisites: MUS 04240 Prerequisites: MUS 04131 and MUS 04133*

A detailed study of the aural aspects of writing and performing music. The corresponding written theory section must be taken concurrently. The departmental entrance exams for written and aural theory must be passed before admission to these courses. These courses must be taken in sequence.

### **MUS 04.243: Music Theory IV - Aural**

**2 s.h.**

*Corequisites: MUS 04241 Prerequisites: MUS 04240 and MUS 04242*

A detailed study of the aural aspects of writing and performing music. The corresponding written theory section must be taken concurrently. The departmental entrance exams for written and aural theory must be passed before admission to these courses. These courses must be taken in sequence.

### **MUS 04.309: Chamber Music I**

**1 s.h.**

Small groups in which the individual performer has the opportunity to develop skills under the guidance of a more skilled musician. These small groups can explore literature unique to their composite formation. Courses must be taken in sequence: MUS04.309, MUS04.310, MUS04.409, and MUS04.410.

### **MUS 04.310: Chamber Music II**

**1 s.h.**

Small groups in which the individual performer has the opportunity to develop skills under the guidance of a more skilled musician. These small groups can explore literature unique to their composite formation. Courses must be taken in sequence: MUS04.309, MUS04.310, MUS04.409, and MUS04.410.

### **MUS 04.315: Piano Accompanying I**

**1 s.h.**

This course gives majors in piano and in vocal pedagogy experience and practice in an accompanying role. Students in this course are required to do much performing. This course may not be offered annually.

### **MUS 04.325: Music Composition V**

**3 s.h.**

This is a continuation of Music Composition IV. A detailed study of compositional devices emphasizing the twentieth century is made. Compositions are written for available media and performed in class.

### **MUS 04.326: Music Composition VI**

**3 s.h.**

This is a continuation of Music Composition V. A detailed study of compositional devices emphasizing the twentieth century is made. Compositions are written for available media and performed in class.

### **MUS 04.329: Junior Recital**

**0 s.h.**

*Prerequisites: MUS 04322 and MUS 04324 and MUS 97405 or MUS 04322 and MUS 04324 and MUS 97308*

The Junior Recital is the recital performance culminating six semesters of applied lessons for performance majors.

### **MUS 04.333: Stage Band Rehearsal Techniques**

**3 s.h.**

For music majors only. Required in the Jazz Studies Program and may be elected by others. The course examines the history interpretation and conducting necessities for rehearsing stage bands. Score reading, conducting with recordings and conducting an ensemble are taught.

## Courses

### **MUS 04.344: Audio Recording**

**3 s.h.**

This course explores the techniques of audio recording. A study of equipment and acoustics is integrated with hands-on training. Students actually record and produce finished products of recorded music or speech.

### **MUS 04.350: Computer Technology and Music I**

**3 s.h.**

This course is a short survey of literature and styles of electronic music plus an introduction to the equipment and technical possibilities of the electronics studio and the technique of electronic tape composition. This course may not be offered annually.

### **MUS 04.351: Computer Technology and Music II**

**3 s.h.**

*Prerequisites: MUS 04350*

A continuation of Computer Technology and Music I. This course may not be offered annually.

### **MUS 04.361: Arranging for Large/Small Jazz Ensembles**

**3 s.h.**

*Prerequisites: MUS 04241 and MUS 04243*

This course provides the experience of writing for the traditional big band and jazz studio orchestra, as well as a small number of instruments. Students explore the possibilities with voicings, chord selection and compositional structures used in the aforementioned ensembles. In addition, contemporary compositional techniques are introduced to encourage the continuation of the ensembles in jazz music of the 21st century.

### **MUS 04.363: Writing in Contemporary/Traditional Jazz Styles**

**3 s.h.**

*Prerequisites: MUS 04217 and MUS 04305*

Students explore contemporary jazz styles by listening to and analyzing the music of masters of contemporary, including Chick Corea, Miles Davis, Dave Grusin and many others. Students compose scores in this style for performance in class and on Department of Music jazz concerts. It also explores the construction of the traditional popular jazz melodies that have dominated the history of jazz.

### **MUS 04.403: Choral Arranging**

**2 s.h.**

Students explore the art of arranging songs for choral groups with or without accompaniment. Music for different choral ensembles is written, rehearsed and sung by the class.

### **MUS 04.404: Orchestration**

**2 s.h.**

*Prerequisites: MUS 04130 and MUS 04131 and MUS 04240 and MUS 04241*

Characteristics of string, wind and percussion instruments (including harp) are examined through lectures and demonstrations. Transcriptions for ensembles and orchestra are made from piano music and performed in class.

### **MUS 04.409: Chamber Music III**

**1 s.h.**

Small groups in which the individual performer has the opportunity to develop skills under the guidance of a more skilled musician. These small groups can explore literature unique to their composite formation. Courses must be taken in sequence: MUS04.309, MUS04.310, MUS04.409, and MUS04.410.

### **MUS 04.410: Chamber Music IV**

**1 s.h.**

Small groups in which the individual performer has the opportunity to develop skills under the guidance of a more skilled musician. These small groups can explore literature unique to their composite formation. Courses must be taken in sequence: MUS04.309, MUS04.310, MUS04.409, and MUS04.410.

### **MUS 04.411: Project Audio Recording**

**3 s.h.**

*Prerequisites: MUS 04344 and MUS 97105 and MUS 97106 and MUS 97205 and MUS 97206 and MUS 97305 and MUS 97306*

In this course, students make a recorded project (record, television video, radio commercial, or television commercial) beginning with preliminary discussions of the project contents and culminating with actual marketing/packaging of the final product.

### **MUS 04.425: Music Composition VII**

**3 s.h.**

This is a continuation of Music Composition VI. A detailed study of compositional devices emphasizing the twentieth century is made. Compositions are written for available media and performed in class.

### **MUS 04.426: Music Composition VIII**

**3 s.h.**

This is a continuation of Music Composition VII. A detailed study of compositional devices emphasizing the twentieth century is made. Compositions are written for available media and performed in class.

## Courses

### **MUS 04.430: Senior Recital**

**0 s.h.**

*Prerequisites: MUS 97406 and MUS 97408 or MUS 97406 and MUS 04422 or MUS 97406 and MUS 04424*

The Senior Recital is the recital performance culminating eight semesters of applied lessons for majors in the Bachelor of Music programs.

### **MUS 04.450: Form and Analysis**

**3 s.h.**

An in-depth study and examination of musical scores from various style periods with an emphasis on large-scale forms and structures.

### **MUS 04.455: Counterpoint**

**3 s.h.**

This course is a study of the principles of constructing a multilinear musical texture and the application of those principles analytically to music literature.

### **MUS 97.100: Piano Class I**

**1 s.h.**

Instruction is given in classes including sight reading, improvising, and playing by ear. These courses must be taken in sequence, simultaneously with or after the indicated theory courses: Piano Class I (MUS97.100) with or after Written Theory I (MUS04.130); Piano Class II (MUS97.101) with or after Written Theory II (MUS04.131); Piano Class III (MUS97.200) with or after Written Theory III (MUS04.240), and Piano Class IV (MUS97.241) with or after Written Theory IV (MUS04.217). Not open to non-music majors.

### **MUS 97.101: Piano Class II**

**1 s.h.**

*Prerequisites: MUS 97100*

Instruction is given in classes including sight reading, improvising, and playing by ear. These courses must be taken in sequence, simultaneously with or after the indicated theory courses: Piano Class I (MUS97.100) with or after Written Theory I (MUS04.130); Piano Class II (MUS97.101) with or after Written Theory II (MUS04.131); Piano Class III (MUS97.200) with or after Written Theory III (MUS04.240), and Piano Class IV (MUS97.241) with or after Written Theory IV (MUS04.217). Not open to non-music majors.

### **MUS 97.102: Piano I for Non-Music Majors**

**3 s.h.**

Beginning piano taught in a class. No previous experience in music is necessary. Not for music majors.

### **MUS 97.103: Piano II for Non-Music Majors**

**3 s.h.**

A continuation of Piano I for Non-Music Majors. Not for music majors.

### **MUS 97.111: String Class-Low**

**1 s.h.**

The fundamentals of cello and bass are studied. The fundamentals of cello and bass are studied.

### **MUS 97.112: String Class-High**

**1 s.h.**

Fingering and bowing patterns, tone production, tuning, methods and materials are studied for the violin and viola.

### **MUS 97.200: Piano Class III**

**1 s.h.**

*Prerequisites: MUS 97101*

Instruction is given in classes including sight reading, improvising, and playing by ear. These courses must be taken in sequence, simultaneously with or after the indicated theory courses: Piano Class I (MUS97.100) with or after Written Theory I (MUS04.130); Piano Class II (MUS97.101) with or after Written Theory II (MUS04.131); Piano Class III (MUS97.200) with or after Written Theory III (MUS04.240), and Piano Class IV (MUS97.241) with or after Written Theory IV (MUS04.217). Not open to non-music majors.

### **MUS 97.201: Piano Class IV**

**1 s.h.**

*Prerequisites: MUS 97200*

Instruction is given in classes including sight reading, improvising, and playing by ear. These courses must be taken in sequence, simultaneously with or after the indicated theory courses: Piano Class I (MUS97.100) with or after Written Theory I (MUS04.130); Piano Class II (MUS97.101) with or after Written Theory II (MUS04.131); Piano Class III (MUS97.200) with or after Written Theory III (MUS04.240), and Piano Class IV (MUS97.241) with or after Written Theory IV (MUS04.217). Not open to non-music majors.

### **MUS 97.212: Conducting-Instrumental I**

**1 s.h.**

This course demonstrates and rehearses the skills of instrumental conducting through music for instrumental ensembles.

## Courses

- MUS 97.213: Conducting-Choral I** **1 s.h.**  
The skills necessary to conduct choral music are developed through rehearsals in class and by participation in other planned ensemble situations.
- MUS 97.229: Guitar Class I** **3 s.h.**  
A study of the guitar performance and a study of the materials available.
- MUS 97.230: Guitar Class II** **3 s.h.**  
A continuation of the study of the guitar through performance and a study of the materials available.
- MUS 97.300: French Horn Class** **.5 s.h.**  
The fundamentals of the French horn are studied.
- MUS 97.301: Trombone Class** **.5 s.h.**  
The fundamentals of the trombone are studied.
- MUS 97.302: Percussion Class** **1 s.h.**  
A study of rudimental and ensemble techniques of snare drum, timpani, bass drum, cymbals and accessory instruments.
- MUS 97.309: Trumpet Class** **.5 s.h.**  
The fundamentals of trumpet are studied.
- MUS 97.310: Tuba Class** **.5 s.h.**  
The fundamentals of tuba are studied.
- MUS 97.312: Conducting-Instrumental II** **1 s.h.**  
*Prerequisites: MUS 97212*  
This course demonstrates and rehearses the skills of instrumental conducting through music for instrumental ensembles.
- MUS 97.313: Conducting-Choral II** **1 s.h.**  
*Prerequisites: MUS 97213*  
The skills necessary to conduct choral music are developed through rehearsals in class and by participation in other planned ensemble situations.
- MUS 97.400: Voice Class** **1 s.h.**  
This course offers techniques of vocal production designed to give a general knowledge of the principles of good singing. Choral techniques through vocal development will be studied for elementary, junior high, and secondary levels. Correct use and pronunciation of English as applied to vocal literature in individual and group participation.
- MUS 97.401: Bassoon Class** **.5 s.h.**  
This course teaches the fundamentals of the bassoon.
- MUS 97.402: Clarinet Class** **.5 s.h.**  
This class teaches the fundamentals of the clarinet.
- MUS 97.403: Saxophone Class** **.5 s.h.**  
The fundamentals of the saxophone are studied.
- MUS 97.404: Reedmaking and Instrument Repair** **.5 to 3 s.h.**  
The fundamentals of reedmaking and repair of instruments are studied.
- MUS 97.409: Flute Class** **.5 s.h.**  
The fundamentals of the flute are studied.
- MUS 97.410: Oboe Class** **.5 s.h.**  
The fundamentals of the oboe are studied.

## Courses

### **MUSG 06.102: General Music History**

**3 s.h.**

An introduction to styles and analysis of music through a historical overview. The techniques of listening and aural analysis of representative works serves as exercise material for the course.

### **MUSG 06.109: Music Appreciation**

**3 s.h.**

Music literature is approached through recordings, live performance and appropriate reading.

### **MUSG 06.115: Growth and Development of Jazz**

**3 s.h.**

African and European influences, the evolution of jazz styles and the influence of jazz on the musical world are covered.

### **MUSG 06.117: Expressing Music**

**3 s.h.**

The language of music is learned through singing, rhythmic reading, creative, instrumental and playing activities.

### **MUSG 06.120: Keyboard Literature**

**3 s.h.**

The course is a survey of the important compositions written for keyboard instruments, primarily piano, from ca. 1600 to the present. This course may not be offered annually.

### **MUSG 06.210: Vocal Literature**

**3 s.h.**

Historical development and analytical study of literature for the solo voice from the 17th century to the 20th representing classic song literature and arias from opera and oratorio. Particular attention is given to interpretation and style through class performance as well as recordings and concert performance.

### **MUSG 06.211: Brass and Woodwind Literature**

**3 s.h.**

Brass and woodwind literature informs the music students of the availability of the following brass and woodwind materials: methods and studies, ensemble literature, solos, books, periodicals and recordings. This course may not be offered annually.

### **MUSG 06.214: Development of Musical Styles and Form I**

**3 s.h.**

The principle forms and styles of music and their place in the history of Western Civilization from ancient times through the Renaissance are studied.

### **MUSG 06.215: Development of Musical Styles and Form II**

**3 s.h.**

A continuation of Development of Musical Styles and Forms I from the Baroque era through Impressionism.

### **MUSG 06.220: The Singing Music of African-Americans**

**3 s.h.**

This course will be an investigation of the singing music tradition of the music of African-Americans, featuring music from the earliest field songs and spirituals, through the latest blues, gospel, jazz, pop, rap, and crossover genres. It will provide insight into the social, political, and religious institutions of African-Americans as these institutions influenced the development of music. The course builds on a basic critical music vocabulary.

### **MUSG 06.303: 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 06.335: Development of Musical Styles and Forms III**

**3 s.h.**

The major trends in the music of our time, their role in our society and their relation to other arts are examined.

### **MUSG 06.337: Music and the Theater**

**3 s.h.**

The variety of musical styles, the function of music in this environment and its psychological effect on audiences of the past and present are studied. This course may not be offered annually.

### **MUSG 06.435: Collegium Musicum**

**1 s.h.**

An investigation of little known musical works, utilizing instruments and techniques of style of the period in study. Performance of these works will constitute much of the study of them.

### **MUSG 06.439: New Jazz Structures**

**3 s.h.**

A comprehensive study of compositional and improvisational techniques employed by contemporary (1960-) jazz writers and performers; i.e., John Coltrane, Ornette Coleman, David Baker, Cecil Taylor, Sun Ra.

## Courses

### **MUSG 06.447: Music in World Cultures: Asia & Oceania**

**3 s.h.**

A survey is made of the musical cultures of the world (excluding western art music), the role of music in society, and its relationship to other arts. Consideration will also be given to scale structure, instruments, musical forms and performance standards. Cultural areas of particular concern are Asia and Oceania.

### **MUSG 06.448: Music in World Cultures: Africa, India, Near & Middle East**

**3 s.h.**

A survey is made of the musical cultures of the world (excluding western art music), the role of music in society and its relationship to other arts. Consideration will also be given to scale structure, instruments, musical forms and performance standards. Cultural areas of particular concern are Africa, India, and the Near and Middle East.

## Nursing

### **NURS 03.303: Comprehensive Health Assessment**

**3 s.h.**

*Prerequisites: NURS 03301*

This course focuses on total health assessment with differentiation between normal and abnormal findings of individuals across the life span. Emphasis is placed on data collection and analysis through history, physical examination, and clinical studies.

### **NURS 03.304: 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 03.305: Pathophysiology**

**3 s.h.**

*Prerequisites: NURS 03303 and NURS 03307*

Fundamental concepts of physiology, the changes that produce signs, symptoms, and the body's remarkable ability to compensate for these changes are reviewed and extended in this course.

### **NURS 03.306: Pharmacology**

**3 s.h.**

This course reviews and extends the students' previous knowledge of pharmacological science. It explores mechanisms of action of drugs used to treat various health conditions at the cellular level. 3 credits Elective.

### **NURS 03.307: Epidemiology in Nursing Practice**

**3 s.h.**

In this course, the professional nursing student is introduced to a population-based approach to health care. Students will incorporate information on the etiology and predictors of events in order to design health promotion and disease prevention strategies.

### **NURS 03.309: 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 03.401: Community Health Nursing**

**6 s.h.**

*Prerequisites: NURS 03301 and NURS 03303 and NURS 03305 and NURS 03306*

Students in this course will explore how community health nurses use concepts from nursing and public health to provide comprehensive, continuous, preventative healthcare thereby promoting health for communities, populations at risk, aggregates, families, and individuals. Students will use critical thinking skills to formulate healthcare strategies which consider the biopsychosocial, cultural, ethical, legal, and economic issues impacting the community as client. The clinical practicum focuses on clients with diverse needs in a variety of settings.

### **NURS 03.402: Environmental and Occupational Health**

**4 s.h.**

*Prerequisites: NURS 03301 and NURS 03303 and NURS 03305 and NURS 03306 and NURS 03304*

The relationships that exist between the environment, the workplace, and health are the focus of this course. Key concepts, principles, and strategies related to environmental and occupational health nursing are explored. Teaching-learning strategies focus on critical thinking skills related to these areas of health care. Knowledge obtained from this course will prepare students to assess changes in health status that may be related to the environment or the workplace. Students are provided with skills needed to recognize, evaluate, and to recommend control strategies for these phenomena.

## Courses

### **NURS 03.403: Nursing Care Delivery Systems**

**4 s.h.**

*Prerequisites: NURS 03401 and NURS 03402 and NURS 03404*

The focus of this course is the professional nurse's leadership and management role within health care 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. Organization Behavior, decision-making, and the change process and 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. The clinical component focuses on the application of relevant theory and research as a basis for decision making. Students are mentored by Master's prepared nurses degree, and interact with members of the management team, and are exposed to the political process within health care agencies.

### **NURS 03.404: Research Applications in Nursing Practice**

**3 s.h.**

*Prerequisites: NURS 03304 and STAT 02100*

Students enrolled in this course will be introduced to the concepts and processes of research in nursing. Emphasis is placed on critiquing published studies and developing plans for using research findings in practice.

### **NURS 03.405: Health Care Policy and Finance**

**3 s.h.**

*Prerequisites: NURS 03401 and NURS 03404*

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 financing and policy making 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.

## Philosophy & Religion

### **PHIL 09.110: 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 09.120: 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 09.121: Introduction to Philosophy - WI**

**3 s.h.**

*Prerequisites: ENGL 01112 or COMP 01112*

Same as PHIL09.120, but meets general education writing intensive guidelines with a variety of graded and ungraded writing assignments.

### **PHIL 09.130: 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 09.211: World Philosophy I**

**3 s.h.**

*Prerequisites: COMP 01112 or ENGL 01112*

This course addresses questions about the nature of reality, and the nature and possibility of knowledge, through examination of selected texts by western and non-western philosophers from the ancient, medieval and renaissance periods.

### **PHIL 09.213: World Philosophy II**

**3 s.h.**

*Prerequisites: COMP 01112 or ENGL 01112*

This course addresses questions about the nature of reality, and the nature and possibility of knowledge, through the examination of selected texts by western and non-western philosophers from the modern and contemporary period.

### **PHIL 09.220: Survey of Western Philosophy**

**3 s.h.**

This course acquaints students with some of the major figures and ideas in the history of Western philosophy.

## Courses

### **PHIL 09.221: Survey of Western Philosophy - WI**

**3 s.h.**

*Prerequisites: ENGL 01112*

Same as PHIL09.220, but meets general education writing intensive guidelines with a variety of graded and ungraded writing assignments.

### **PHIL 09.226: Philosophy of Mind**

**3 s.h.**

This course addresses philosophical questions about the nature of the mind. Some of these questions include: What is the relationship between the mind and the body? Can science fully understand the mind? Are minds like computers? What type of minds do non-human animals have? Students will learn the responses of classical and contemporary philosophers to these questions. Students will also develop and refine their own views in response to these questions.

### **PHIL 09.227: Philosophy of Mind - WI**

**3 s.h.**

*Prerequisites: ENGL 01112*

Same as PHIL09.226, but meets general education writing intensive guidelines with a variety of graded and ungraded writing assignments.

### **PHIL 09.230: Symbolic Logic**

**3 s.h.**

*Prerequisites: PHIL 09130*

This advanced course in symbolic logic studies both sentential and quantificational techniques as well as the completeness and consistency of systems of natural deduction.

### **PHIL 09.240: Philosophy and Society**

**3 s.h.**

This is a basic course in political and social philosophy. Through selected readings from classical and modern philosophers, students gain a better understanding of the philosophical issues which underlie the theory and practice of political and social life.

### **PHIL 09.241: Philosophy and Society - WI**

**3 s.h.**

*Prerequisites: ENGL 01112 or COMP 01112*

Same as PHIL09.240, but meets general education writing intensive guidelines with a variety of graded and ungraded writing assignments.

### **PHIL 09.250: Introduction to Ethics**

**3 s.h.**

This historically structured course emphasizes both the nature of moral problems and the variety and adequacy of selected moral theories.

### **PHIL 09.251: Introduction to Ethics - WI**

**3 s.h.**

Same as PHIL09.250, but meets general education writing intensive guidelines with a variety of graded and ungraded writing assignments.

### **PHIL 09.310: Aesthetics**

**3 s.h.**

This course offers students an approach to such philosophical issues as the nature of art; the role of the arts in human culture; and the articulation of criteria for interpretation and criticism. Students will refine their own approach to these issues by attending to specific works of poetry, fiction, drama, music, painting, sculpture, and other arts, including student works, and to philosophical texts in aesthetics.

### **PHIL 09.311: Aesthetics - WI**

**3 s.h.**

*Prerequisites: ENGL 01112*

Same as PHIL09.310, but meets general education writing intensive guidelines with a variety of graded and ungraded writing assignments.

### **PHIL 09.322: Business Ethics**

**3 s.h.**

This course considers issues of human values in management, the relevance of ethical norms for management decisions and the relationship between business and society. Case studies of corporations are utilized to illustrate and clarify these issues.

### **PHIL 09.325: 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.

## Courses

### **PHIL 09.328: 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 09.330: Asian Thought**

**3 s.h.**

This course attempts to identify the key concepts in the intellectual histories of both India and China. The course studies important thinkers in both traditions to discover how they used these concepts in their own systems of thought and what they contributed to later developments of the concept.

### **PHIL 09.341: Biomedical Ethics**

**3 s.h.**

*Prerequisites: COMP 01112 and one Philosophy course*

Ethical issues in health care, medicine and bio-technology; for example, abortion, termination of treatment, euthanasia, truth-telling and confidentiality, medical experimentation and informed consent, genetics, transplant surgery, artificial reproductive techniques, the allocation of medical resources and the impact of race, class and gender as they relate to biomedical issues.

### **PHIL 09.346: Feminist Ethics**

**3 s.h.**

Examines the central currents of feminist ethics, such as ethics of care and justice, abortion, parenting, social ethics, violence, eating disorders and embodiment, pornography, prostitution, medical and reproductive ethics, aging, disability, theological ethics.

### **PHIL 09.368: Philosophy of Science**

**3 s.h.**

This course offers the student a basic understanding of some of the philosophical issues involved in modern science. The nature of scientific explanation and prediction, the structure and function of scientific theories, and the confirmation of scientific hypothesis are among the issues treated.

### **PHIL 09.369: Philosophy of Science - WI**

**3 s.h.**

*Prerequisites: ENGL 01112 or COMP 01112 or ENGR 01102*

Same as PHIL09.368, but meets general education writing intensive guidelines with a variety of graded and ungraded writing assignments.

### **PHIL 09.370: Epistemology**

**3 s.h.**

This course addresses philosophical questions concerning the nature of knowledge. Some of these questions include: How can we be sure that our knowledge of the world is accurate? What is the relation of evidence to our understanding of the world? What distinguishes mathematical knowledge from scientific and ethical knowledge? Students will study and criticize both traditional and contemporary approaches to the understanding of knowledge. Students will also develop and refine their own views in response to these issues.

### **PHIL 09.371: Epistemology- WI**

**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. Meets general education writing intensive guidelines with a variety of graded and ungraded writing assignments.

### **PHIL 09.392: Contemporary Moral Problems**

**3 s.h.**

This course will acquaint the student with recent work in applying moral theory to such issues as the environment, nuclear war and deterrence, and computers and to such professions as medicine, nursing, business, education and law.

### **PHIL 09.393: Contemporary Moral Problems- WI**

**3 s.h.**

*Prerequisites: ENGL 01112 or COMP 01112*

Same as PHIL09.392, but meets general education writing intensive guidelines with a variety of graded and ungraded writing assignments.

### **PHIL 09.440: Selected Topics in Philosophy**

**3 s.h.**

This course enables students to synthesize previous work in philosophy and to connect that work more directly with their academic majors.

## Courses

### **PHRE 11.340: Selected Topics in Philosophy & Religion Studies**

**3 s.h.**

*Prerequisites: One Philosophy or Religion course*

This interdisciplinary course examines intersections between philosophy and religion studies. May not be offered every year.

### **REL 10.100: Introduction to Religion**

**3 s.h.**

This introductory course studies the relationship of religion to culture. It explores varieties of religious expression as well as methods used in studying religion as a human phenomenon.

### **REL 10.110: Introduction to the Bible**

**3 s.h.**

This course acquaints students with the Bible by a study of its books with the aid of the findings of archeology, literary criticism and other related fields.

### **REL 10.200: Religions of the World**

**3 s.h.**

This course surveys the major world religions in both the Eastern and Western traditions.

### **REL 10.210: Religion in America**

**3 s.h.**

This course explores the wide variety of religious movements that have existed and continue to exist in America. Both traditional religions and cults are considered within the context of American culture.

### **REL 10.220: Introduction to Buddhism**

**3 s.h.**

This course introduces students to the central teachings and practices of Buddhism, from its Indian origins and East Asian development to its interactions with the modern West. Instructional methods include observation of Buddhist practice as well as study of Buddhist scriptures.

### **REL 10.230: Religions of Asia**

**3 s.h.**

This course introduces students to major religions in Asia: Hinduism, Buddhism, Confucianism, Taoism and Shinto. It focuses on the historical contexts, central teachings and traditional practices of these religions and their dynamic relations with societies and cultures. Instructional methods include observation of religious practice as well as study of religious scriptures.

### **REL 10.300: Philosophy of Religion**

**3 s.h.**

This course investigates such basic problems as the nature of religious language, the possibility of religious knowledge, revelation, the nature of religious experience, the concept of God, the relation of religion and morality and the role of religion in modern society.

### **REL 10.320: Introduction to Christianity**

**3 s.h.**

*Prerequisites: COMP 01112 and one HHL Course*

This course will introduce students to the history, texts, worldview, and contemporary issues of the Christian religious tradition. Spanning two thousand years, the Christian tradition has undergone many changes as it had evolved in the world. Students will study basic texts and historical events while also reflecting on contemporary issues.

### **REL 10.328: Development of Western Religious Thought**

**3 s.h.**

This course emphasizes the contributions to the Western, and more specifically the Christian, tradition of such figures as Augustine, Aquinas, Luther, Kierkegaard, Tillich and Barth.

### **REL 10.330: Introduction to Daoism**

**3 s.h.**

*Prerequisites: REL 10230 or REL 10200*

This course introduces students to the central teachings and practices of Daoism, from its early founders Laozi and Zhuangzi to its interactions with the modern West. Instructional methods include observations of Daoist practice as well as study of Daoist scriptures.

### **REL 10.340: Selected Topics in Religion Studies**

**3 s.h.**

*Prerequisites: REL 10100 and REL 10200*

This course examines one topic in religion in depth. Its topic may vary. This course may not be offered annually.

## Courses

## Physics

### **PHSC 01.110: Principles of Physical Science**

**3 s.h.**

This course provides experiences and information that will develop a better understanding of the function and significance of science in today's world. It emphasizes the general principles of physics and stresses their influences in the development of all the physical sciences.

### **PHSC 01.310: Independent Study (Physical Sciences)**

**1 to 6 s.h.**

Students who enter the independent study program working under the supervision of a faculty member are required to identify and select an appropriate project area, develop an achievable plan, execute the project and prepare a presentation of the completed study.

### **PHYS 02.120: Selected Topics in Physics**

**3 s.h.**

The content of this course varies to reflect the role of physics in society. A limited number of topics are selected from among the following: mechanics, thermodynamics, sound, light and optics, electricity and magnetism, electric circuits, modern physics or the investigation of the physics of applied technologies. It studies the fundamental principles underlying the topics and considers connections to the physical and social environment.

### **PHYS 02.140: The Physics of Current Technologies (Lecture and Lab)**

**4 s.h.**

This course introduces contemporary concepts of physics through their application in commercially available technologies. The course mostly focuses on information storage technologies but actual course content evolves to reflect the specialties of the instructor. Concepts such as electrical resistance, magnetic fields, magnetic domains, electron tunneling, and assorted microscopic techniques will be introduced. Laboratories consist of hands-on activities including the imaging of magnetic information (magnetic domains), optical information (CD dyes) and individual atoms.

### **PHYS 02.150: Physics of Everyday Life (Lecture and Lab)**

**4 s.h.**

The goal of this course is to expose students with a non-science background to physics. The students will experience the excitement of physics by examining phenomena of our everyday environment. The historical development of such ideas will be studied as well. Topics selected for study include Mechanics, Matter, Heat, Sound, Light, Electricity, Magnetism, Atomic and Nuclear Physics. Physics will be communicated conceptually rather than mathematically.

### **PHYS 02.175: Physics of Sound and Music (Lecture and Lab)**

**4 s.h.**

The goal of this course is to expose students to physics through its application to sound and music. The students will study these applications by examining the phenomena of voice, sound, hearing, musical instruments, acoustics, electronic technology and reproduction of sound and music. The historical development of such topics will be studied as well.

### **PHYS 02.200: Physics I (For scientists and engineers - Lecture and Lab)**

**4 s.h.**

*Prerequisites: MATH 01130*

This course studies the basic principles of mechanics, heat, and waves. It emphasizes problem work. This is a required course for Physics, Chemistry, Physical Science, and Engineering students.

### **PHYS 02.201: Physics II (For scientists and engineers - Lecture and Lab)**

**4 s.h.**

*Prerequisites: PHYS 02200 or HONR 05185*

This course studies the basic principles of electricity, magnetism, and light. It emphasizes problem work. This is a required course for Physics, Chemistry, Physical Science, and Engineering students.

### **PHYS 02.202: Physics I (For the life sciences - Lecture and Lab)**

**4 s.h.**

This course covers the same topics as PHYS02.200. Calculus is not used. The course emphasizes problem work involving the use of Algebra and Geometry.

### **PHYS 02.203: Physics II (For the life sciences - Lecture and Lab)**

**4 s.h.**

*Prerequisites: PHYS 02202 or PHYS 02200*

This course covers the same topics as PHYS02.201. Calculus is not used. It emphasizes problem work involving the use of Algebra and Geometry.

## Courses

### **PHYS 02.211: Physics Research I**

**1 to 3 s.h.**

This course introduces and/or develops modern research techniques used in physics. Research is performed in collaboration with one or more faculty in an area of specialization of the faculty. Emphasis will be placed on developing research skills, developing technical writing skills, and the development of skills needed for scientific presentations.

### **PHYS 02.212: Physics Research II**

**1 to 3 s.h.**

This course introduces and/or develops modern research techniques used in physics. Research is performed in collaboration with one or more faculty in an area of specialization of the faculty. Emphasis will be placed on developing research skills, developing technical writing skills, and the development of skills needed for scientific presentations.

### **PHYS 02.300: Modern Physics (Lecture and Lab)**

**4 s.h.**

*Prerequisites: MATH 01131 and PHYS 02201 or MATH 01131 and PHYS 02203*

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 02.305: Optics and Light (Lecture and Lab)**

**4 s.h.**

*Prerequisites: MATH 01131 and PHYS 02201 or MATH 01131 and PHYS 02203*

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 02.311: Physics Research III**

**1 to 3 s.h.**

This course introduces and/or develops modern research techniques used in physics. Research is performed in collaboration with one or more faculty in an area of specialization of the faculty. Emphasis will be placed on developing research skills, developing technical writing skills, and the development of skills needed for scientific presentations.

### **PHYS 02.315: Analytical Mechanics (Lecture Only)**

**4 s.h.**

*Prerequisites: MATH 01131 and PHYS 02200*

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 02.325: Mathematical Physics (Lecture Only)**

**3 s.h.**

*Prerequisites: MATH 01131 and PHYS 02201 or MATH 01131 and PHYS 02203*

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 02.333: Introduction to optical design program ZEMAX**

**3 s.h.**

The ZEMAX optical design program is a comprehensive software tool for optical design. It integrates all the features required to conceptualize, design, optimize, analyze, tolerance, and document virtually any optical system. This course discusses the theory of optical system design with focus on geometrical optics and aberration theory. It introduces the computer program ZEMAX as a tool for lens designs such as spectrometers, scanning systems and telescopes. ZEMAX is widely used in the optics industry as a standard design tool.

### **PHYS 02.387: Statistical Physics**

**3 s.h.**

*Prerequisites: PHYS 02300*

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 02.399: Electric Circuits (Lecture and Lab)**

**4 s.h.**

*Prerequisites: MATH 01131 and PHYS 02201 or MATH 01131 and PHYS 02203*

This course provides an analytic study of electric circuit theory and methods of single phase and polyphase circuit analysis. Intended for Pre-engineering and Physical Sciences majors. Problem work is emphasized. This course may not be offered annually.

## Courses

### **PHYS 02.401: Quantum Mechanics I**

**4 s.h.**

*Prerequisites: PHYS 02300*

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 02.402: Quantum Mechanics II**

**3 s.h.**

*Prerequisites: PHYS 02401*

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 on a higher level.

### **PHYS 02.411: Physics Research IV**

**1 to 3 s.h.**

This course introduces and/or develops modern research techniques used in physics. Research is performed in collaboration with one or more faculty in an area of specialization of the faculty. Emphasis will be placed on developing research skills, developing technical writing skills, and the development of skills needed for scientific presentations.

### **PHYS 02.430: Electricity and Magnetism I**

**4 s.h.**

*Prerequisites: PHYS 02201 or PHYS 02203*

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 02.431: Electricity and Magnetism II**

**3 s.h.**

*Prerequisites: PHYS 02430*

This course studies advanced applications of Maxwell's equations. For example, the generation of electromagnetic radiation and its propagation through matter will be discussed. The connection between Maxwell's equations and the special theory of relativity will be emphasized.

### **PHYS 02.440: Advanced Laboratory**

**4 s.h.**

*Prerequisites: PHYS 02300*

This course introduces modern experimental techniques commonly used in physics. Experimental results will be correlated with existing theories. Technical writing skills will be developed and evaluated.

### **PHYS 02.470: Selected Topics in Advanced Physics**

**3 s.h.**

*Prerequisites: PHYS 02300*

This course is aimed to expose students to advanced physics topics that are important for their career development and their involvement with faculty research. The topics include, but are not limited to, Solid State Physics, Atomic and Molecular Physics, Occupational Physics, Special Relativity, and Elementary Particles. One topic from the above list will be chosen each time the course is offered.

### **PHYS 08.305: Biophysical Chemistry**

**4 s.h.**

*Prerequisites: BIOL 01101 and MATH 01131 and PHYS 02201 and CHEM 07201 and CHEM 09250*

This course covers the topics of physical chemistry and their applications in biochemistry. Topics include thermodynamics, kinetics and spectroscopy. This course also provides laboratory experience in physical methods that apply to biological systems.

## Political Science

### **POSC 07.100: 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.

## Courses

### **POSC 07.110: 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.

### **POSC 07.200: Survey of Western Political Theory**

**3 s.h.**

This course provides students with an understanding of Western political thought from Plato to Karl Marx. It surveys Western political theory and analyzes such major concepts as order, justice, freedom, authority, power and political obligation.

### **POSC 07.220: State and Local Government**

**3 s.h.**

*Prerequisites: POSC 07110*

This course studies legislatures, executives, judicial systems and bureaucrats in the working of state and local government and the influence of political parties, interest groups, and elections on government policy. It examines inter-governmental relations and the role of state and local government in the federal system. This course may not be offered annually.

### **POSC 07.230: Comparative Political Systems**

**3 s.h.**

This course presents a comparative analysis of the fundamental law, political institutions, policies and processes and their relationship to political culture in Britain, France, the C.I.S. and a selected Third World country.

### **POSC 07.303: Campaigns, Political Parties and Interest Groups**

**3 s.h.**

*Prerequisites: POSC 07110*

This course compares the functions of U.S. political parties, interest groups, and political movements in recruiting and nominating candidates for public office, supporting campaigns and elections, organizing and staffing government, representing and shaping public opinion, and rationalizing and mobilizing the vote. The U.S. system is compared to the systems of other countries. Special attention is given to the civil rights movement, the reform of the presidential election process, and the candidate-centered professional campaign in the decline of the influence of the political parties.

### **POSC 07.305: The Legislative Process**

**3 s.h.**

*Prerequisites: POSC 07110*

This course examines the structure, politics and policy-making functions within the legislative process, focusing on the role of Congress and the state legislature in the U.S. political system. This course may not be offered annually.

### **POSC 07.306: The Presidency**

**3 s.h.**

*Prerequisites: POSC 07110*

This course studies the office of the President, its history, powers and role in the American political system. The course stresses the relationship of the presidency to other branches of government and of the White House agencies to the other elements of the Executive Branch. This course may not be offered annually.

### **POSC 07.308: Current Problems in American Politics**

**3 s.h.**

This course deals with selected issues of topical concern in American politics. Issues may be "headlines" that are receiving current media attention (usually policy debates), or they may focus on more persistent problems of the kind that concern political scientists, e.g. the consequences of party decline, the role of media in elections, etc. This course may not be offered annually.

### **POSC 07.310: American Constitutional Law**

**3 s.h.**

*Prerequisites: POSC 07110*

An introduction to major concepts of constitutional law as reflected in landmark cases, this course considers such matters as judicial review, national supremacy, the separation of powers, constitutional federalism and the commerce clause as well as the impact of various judicial philosophies on the decisions of the Supreme Court.

### **POSC 07.311: Women and American Politics**

**3 s.h.**

This course examines the historical role of women in a variety of political movements, varied views of feminism and the impact of participation on the changing status of women in American society. This course may not be offered annually.

### **POSC 07.312: Freedom of Expression**

**3 s.h.**

This course considers the range of first amendment issues relating to speech, the press and the right to assemble. Issues of censorship and national security, obscene speech, commercial speech, and libel, among others, will be discussed. This course may not be offered annually.

## Courses

### **POSC 07.320: International Relations**

**3 s.h.**

*Prerequisites: POSC 07110*

This course studies the distribution of power among states in the international system, the effect of system change on national behavior, external and domestic sources of international influence and the relationship of capabilities and intentions in foreign policy decisions.

### **POSC 07.321: Contemporary World Problems**

**3 s.h.**

This course examines selected problems such as terrorism, world population and hunger, regional conflicts and arms control and disarmament.

### **POSC 07.323: Politics of Race, Poverty, and Welfare in the U.S.**

**3 s.h.**

This course studies the social structure of race and poverty in the United States and explores the constituencies for anti-poverty and anti-discrimination legislation. This course may not be offered annually.

### **POSC 07.324: Black Americans and American Politics**

**3 s.h.**

This course examines the role of Black Americans in the political system, the forms and changing nature of their participation and a review of judicial and administrative decisions affecting the political and social status of Black Americans. This course may not be offered annually.

### **POSC 07.330: Contemporary U.S. Foreign Policy**

**3 s.h.**

*Prerequisites: POSC 07110*

This course presents historical themes and patterns of U.S. foreign policy with special focus on the post-World War II period. It considers the sources of influence on policy-making and the major issues in contemporary policy. This course may not be offered annually.

### **POSC 07.340: Civil Rights and Civil Liberties**

**3 s.h.**

*Prerequisites: POSC 07110*

This course examines major trends and court decisions which have affected civil rights and civil liberties. Topics which may be raised include religion, speech, press, privacy, voting, equal protection, and due process.

### **POSC 07.341: Politics and Society in Russia and the C.I.S.**

**3 s.h.**

This course examines the emergence of Russia as the principle successor to the Soviet Union. Processes of political, economic and social change are studied with an eye on institutional, attitudinal, and behavioral adaptations to the new realities. This course may not be offered annually.

### **POSC 07.346: Politics and Society of Great Britain**

**3 s.h.**

This course studies the unique aspects of a political system which has functioned without a written constitution. It emphasizes the historic development of British constitutional notions, and the relationships between the major institutions of monarchy, the parliament, the cabinet and political parties. This course may not be offered annually.

### **POSC 07.350: Introduction to Asian Political Systems**

**3 s.h.**

This course focuses on the political systems and processes of major Asian nations: India, Pakistan, Sri Lanka, Indonesia, Japan and China. This course may not be offered annually.

### **POSC 07.351: Russian Foreign Policy**

**3 s.h.**

Students study the historical record of Soviet foreign policy since 1917, examining the relative importance of ideology and national interest and other domestic and external influences on Soviet policy-making. The course also discusses policy process and contemporary problems of policy. This course may not be offered annually.

### **POSC 07.360: Methodology and Statistics in Political Science Research**

**3 s.h.**

*Prerequisites: POSC07360 prerequisite General Requirements:*

This course considers the varied ways that political scientists study problems, with primary attention to scientific method and quantitative skills. Students are expected to become adept at using and interpreting forms of descriptive statistics commonly used in the social sciences.

### **POSC 07.370: Special Topics in Political Science**

**3 s.h.**

This course is a vehicle to allow visiting scholars to offer courses in their specialties which are not part of regular course offerings. This course may not be offered annually.

## Courses

### **POSC 07.375: Politics and the Judicial Process**

**3 s.h.**

*Prerequisites: POSC 07110*

This course describes and analyzes the American judicial process, with particular attention to the role of the judicial branch in developing public policy. Topics to be explored include jurisprudential theories of the law, the organization and staffing of courts, civil and criminal process, judicial selection methods, judicial behavior, the legal profession, law and social change and the political and social impact of court decisions.

### **POSC 07.400: American Political Thought**

**3 s.h.**

This course studies the development of American political thought from colonial times to the present through major thinkers. Ideas are considered in relation to political events and broader historical movements to which they are connected. This course may not be offered annually.

### **POSC 07.401: Contemporary Political Thought**

**3 s.h.**

This course considers major 19th and 20th century ideologies from the perspectives of thinkers who helped shape them. It considers socialism, fascism, liberalism and conservatism through the works of writers like Marx, Mill, Ortega and Burke. The course may also consider contemporary rethinking of contract theory (e.g. Rawls, Nozick). This course may not be offered annually.

### **POSC 07.410: Selected Problems in Constitutional Law**

**3 s.h.**

*Prerequisites: POSC 07310*

This course explores specific issues in recent Supreme Court decisions, and the process through which such issues are resolved, emphasizing one or two areas of current interest. This course may not be offered annually.

### **POSC 07.415: In-depth Study of the Current Supreme Court**

**3 s.h.**

Students spend three days hearing oral arguments at the Supreme Court. Prior research on an assigned case will culminate in a paper in which the student will predict the outcome of the Court's decision.

### **POSC 07.420: International Law**

**3 s.h.**

This course considers the role of law among nations, the source of international law in practice and convention and the national courts, international courts and other vehicles for adjudicating and enforcing international law. This course may not be offered annually.

### **POSC 07.421: International Organizations**

**3 s.h.**

This course studies the League of Nations, the United Nations and other international and regional organizations in relation to such functions as peace-keeping, conflict resolution, international consensus-building, etc. This course may not be offered annually.

### **POSC 07.489: Seminar in Political Science - WI**

**3 s.h.**

*Prerequisites: ENGL 01112 and POSC 07360*

This course stresses careful reading and research in primary and secondary material related to selected problems in political science. Primary emphasis will be on writing a critical and analytical paper.

### **POSC 07.490: Seminar in Political Science**

**3 s.h.**

(Open only to senior political science majors) This course stresses careful reading and research in primary and secondary material related to selected problems in political science. Primary emphasis will be on writing a critical and analytical paper.

### **POSC 07.491: Independent Study in Political Science**

**3 to 9 s.h.**

This course focuses on individual projects under the guidance of a faculty member; it cannot be used as a substitute for a course offered by the department. This course may not be offered annually.

## Psychology

### **PSY 01.100: Introduction to Psychology: Personal, Emotional, and Social Interactions**

**3 s.h.**

Students will be introduced to the study of psychology as it pertains to personal, emotional, and social interactions. This will include such topics as personality development and measurement, psychological disorders and treatment, emotional and social development, and social influences on behavior.

## Courses

### **PSY 01.103: Experiences in Humanistic Psychology**

**3 s.h.**

This course provides students with a formal approach to personal growth. Structured experiences, readings, and discussions enable students to become more aware and accepting of their behavior, aids them in becoming centered and integrated and teaches them methods of becoming more responsible, caring people. It draws theoretical content and applied techniques from Skinner, Perls, Freud, Jung, Rogers, Berne, Reich, Maslow and from eastern philosophy.

### **PSY 01.104: Introduction to Psychology: Brain, Mind, and Behavior**

**3 s.h.**

Students will be introduced to the study of psychology which focuses on the physiological mechanisms of behavior, conditioning of behavior, memory, cognitive development and skills, and prenatal development.

### **PSY 01.105: The Psychology of Ethnic Identity & Community in America**

**3 s.h.**

*Prerequisites: PSY 01100*

This course will facilitate students' development of knowledge and appreciation of racial/ethnic identity formations and their impact on intergroup relations and orientations toward community in America. Students will engage in a variety of individual and collaborative strategies for studying their own and others' racial/ethnic identities, interracial and interethnic relations and the prospects for constructing a sense of pluralistic and egalitarian communities.

### **PSY 01.200: Psychology of Women & Cultural Experience**

**3 s.h.**

*Prerequisites: PSY 01100 or PSY 01101*

This course explores the influence of gender, race, and class in the psychological development and experience of women in cultural contexts. Although it will primarily focus on the lives of women in the United States, an attempt will be made to provide linkage to women's experiences globally. Topics covered will include the role of gender bias in the history of psychology, female personality development, women in the workplace, women's psychosexual issues, and the role of gender in health and wellness.

### **PSY 01.202: Combatting Violence Against Children**

**3 s.h.**

In this course students study the causes and consequences of many types of child maltreatment. The course focuses on the family and societal conditions associated with child abuse and neglect, strategies for prevention, intervention and treatment of victims and the roles and responsibilities of New Jersey citizens in the reporting of suspected cases of child abuse.

### **PSY 01.230: Psychology of Personality**

**3 s.h.**

*Prerequisites: PSY 01100 or PSY 01101*

Students study major theories of personality and techniques for measuring personality. Personality is that field of psychology that investigates the predispositions or inherited characteristics and the acquired or learned qualities that affect an individual.

### **PSY 01.235: African American Psychology**

**3 s.h.**

*Prerequisites: PSY 01100 or PSY 01101*

This course introduces students to a critical analysis of the psychosocial development, behavior and relationships of Black people within the sociohistorical context of the United States. It facilitates students' examination of issues relating to methodology and assumptions underlying past and current research on the psychological study of African Americans. The course also enables students to examine theory and research on the effects of significant sociocultural factors on the lives of African Americans, with particular focus on physical development, language and communication styles, models of identity and social-emotional development, intellectual and academic development, sexual behavior and attitudes, health issues, and empowerment.

### **PSY 01.302: Research in Perception - WI**

**4 s.h.**

*Prerequisites: PSY 01104 and PSY 07210 or PSY 01104 and PSY 07312*

This course provides an overview of how the study of perception integrates psychophysics, sensory and physiological psychology, and neuropsychology in an attempt to understand the principles guiding the way in which humans obtain information about the world. Topics include the scientific study of the sensory systems, classical and contemporary psychophysical methods, principles of perceptual organization, aftereffects, perceptual illusions, and the real-world implications of these phenomena. This course contains a laboratory component that emphasizes the use of scientific methodologies in Perception. Only matriculated psychology majors may register for this course.

### **PSY 01.305: Psychology and Law**

**3 s.h.**

*Prerequisites: PSY 01100 or PSY 01101*

A course in the relationship of psychology and law, this course studies how the law has used psychological concepts and data. It examines legal issues of significance for psychologists and examines psychological research as it relates to the legal process.

## Courses

### **PSY 01.310: Psychology of Racism and Ethnocentrism: Causes, Development, Consequences, Solutions** **3 s.h.**

*Prerequisites: PSY 01100 or PSY 01101*

This course provides an opportunity for students to develop critical understanding of psychological perspectives regarding the root causes, complex patterns, and the individual, group, and societal consequences of racism and ethnocentrism in the United States of America. The course will draw upon comparative data regarding the psychological factors involved in historic or contemporary race and ethnic relations within selected international contexts to explore parallel and unique cross-cultural phenomena.

### **PSY 01.315: Research in Child Development- WI** **4 s.h.**

*Prerequisites: PSY 01100 and PSY 07210 or PSY 01100 and PSY 07312*

The content of this course includes the physical, cognitive, perceptual, linguistic, emotional, and social development of the child. Both the stages of development (biological and/or sociocultural) are emphasized. A laboratory component is appended to the course, but does not fulfill General Education laboratory requirements.

### **PSY 01.316: Behavioral Assessment and Measurement** **3 s.h.**

*Prerequisites: PSY 01104*

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 01.326: Perception** **3 s.h.**

*Prerequisites: PSY 01100 or PSY 01104*

This course involves the study of sensation and perception. Topics include the scientific study of sensory systems, classical and contemporary psychophysical methods, principles of perceptual organization, aftereffects, illusions and space perception.

### **PSY 01.327: Cognitive Psychology** **3 s.h.**

*Prerequisites: PSY 01100 or PSY 01104*

This course involves the study of information processing. Its topics may include the history and methods of cognitive psychology, selection and processing of sensory information, pattern recognition, memory processes, language acquisition and cognition.

### **PSY 01.419: Independent Study in Psychology** **1 to 6 s.h.**

Individual educational and research projects including independent study are offered. Student must have approval of faculty instructor before registering for this course. Regular meetings with faculty instructor are required.

### **PSY 01.420: Advanced Research** **3 s.h.**

Students must have completed Statistics and Research Methods in Psychology. Students must have substantial preparation in the area in which the research is to be done. A formal research paper and a pre-enrollment consultation with the instructor are required.

### **PSY 01.422: Field Experiences in Psychology** **3 to 6 s.h.**

*Prerequisites: PSY 01104 and PSY 01100 or PSY 01104 and PSY 01101*

Because of the limited enrollment in this course, priority is given to psychology majors. It is suggested that the student have a minimum of 60 hours of college credit which should include at least 15 hours in psychology. Students are assigned placements in supervised settings such as community mental health centers, drug rehabilitation centers, crisis intervention facilities and schools.

### **PSY 01.423: Seminar in Psychology: Topics** **3 to 6 s.h.**

*Prerequisites: PSY 01104 and PSY 01100 or PSY 01104 and PSY 01101*

This course enables the faculty to offer substantive courses in speciality areas which are not offered on a regular basis. Students should have substantive preparation in the speciality area of the course.

### **PSY 01.429: History & Systems in Psychology** **3 s.h.**

*Prerequisites: PSY 01104 and PSY 01100 or PSY 01104 and PSY 01101*

This course presents the history of psychology, giving a comprehensive treatment of theories and systems in psychology. The student should have a substantial background in psychology before taking this course.

## Courses

### **PSY 02.305: Applied Behavior Analysis**

**3 s.h.**

*Prerequisites: PSY 01100 or PSY 01104*

This course deals with the principles, procedures and utility of behavior modification in normal and clinical settings.

### **PSY 02.306: Research in Adolescent Development - WI**

**4 s.h.**

*Prerequisites: ENGL 01112 and PSY 01100 and PSY 07210 or ENGL 01112 and PSY 01100 and PSY 07210*

This course provides an overview of the physical, cognitive, social, moral, and sexual development of adolescents. Topics may include Piaget's stages of cognitive development, Kohlberg's theory of moral development, self concept and self-esteem, gender roles, and problems adolescents face. This course contains a laboratory component which emphasizes the use of the scientific method in adolescent development. Only matriculated psychology majors may register for this course.

### **PSY 02.307: Research in Cognitive Psychology - WI**

**4 s.h.**

*Prerequisites: PSY 01104 and PSY 07210 or PSY 01104 and PSY 07312*

This course involves the study of information processing. Its topics may include the history and methods of cognitive psychology, selection and processing of sensory information pattern recognition, memory processes, language acquisition and cognition. A laboratory component is appended to the course, but does not fulfill General Education laboratory requirements.

### **PSY 02.308: Research in Learning and Behavior**

**4 s.h.**

*Prerequisites: PSY 01104 and PSY 07312 or PSY 01104 and PSY 07210*

This course provides an overview of theories of learning and the experimental analysis of behavior. Topics may include classical conditioning, operant conditioning, and schedules of reinforcement. This course contains a laboratory component which emphasizes the use of the scientific method in learning and the experimental analysis of behavior. Only matriculated psychology majors may register for this course.

### **PSY 02.309: Research in Social Psychology - WI**

**4 s.h.**

*Prerequisites: PSY 01100 and PSY 07210 or PSY 01100 and PSY 07312*

This course provides an overview of how individuals affect the thoughts and behaviors of other individuals. It examines social behavior from a multicultural perspective which emphasizes the effects of gender, race, and ethnicity on social interaction. Topics may include social cognition, attitude change, affiliation, conformity, intergroup conflict and cooperation. This course contains a laboratory component which emphasizes the use of the scientific method in social psychology. Only matriculated psychology majors may register for this course.

### **PSY 02.310: Learning and Behavior**

**3 s.h.**

*Prerequisites: PSY 01104*

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 03.200: Abnormal Psychology**

**3 s.h.**

*Prerequisites: PSY 01100 or PSY 01101 or PSY 01104*

Abnormal Psychology is a division of the science of psychology that investigates disordered behaviors, deficiencies in behavior capacities, and the persons exhibiting them. This course of Abnormal Psychology is concerned with the application of the methods, concepts, principles and findings of psychological research to deviant behavior. It is also concerned with perception, learning, development and social factors as related to disturbed behavior and experiences of individuals.

### **PSY 03.205: Intake and Interviewing Skills in Psychology**

**3 s.h.**

*Prerequisites: PSY 01100 or PSY 01101*

This course is designed to prepare undergraduates to be able to perform an initial interview or intake in an entry level, human service position. Topics include basic skill development, understanding of content and process in interviewing, family interviews, use of standard intake procedures, and ethical considerations in interviewing.

### **PSY 05.125: Introduction to Psychological Study of Alcoholism/Drug Abuse**

**3 s.h.**

This introductory course is designed to provide the student with basic alcoholism/drug abuse knowledge. Information covered will concern alcoholism/drug use community resources and social agency networks, legal and ethical issues in treatment and research, and prevention programming. The course is designed to provide the foundation for the consideration in the other four courses of family and life stage issues in addiction, and psychological treatment and counseling strategies. The course is designed to provide an overview of psychological issues underlying addiction. It is assumed that the information conveyed in this course would be pertinent to parents of adolescents, citizens who wish to combat alcoholism/drug abuse, and undergraduates who wish to enter helping professions.

## Courses

### **PSY 05.205: Environmental Psychology**

**3 s.h.**

*Prerequisites: PSY 01100 or PSY 01101 or PSY 01104*

This course involves the study of people and their physical setting. Its topics include environmental perception and cognition, social processes and the environment, individual development and the environment, contrast between natural and built environment and city and urban design.

### **PSY 05.206: Social Psychology**

**3 s.h.**

*Prerequisites: PSY 01100 or PSY 01101*

This course examines the psychological, social and cultural factors that shape the social behavior of the individual. It investigates such topics as affiliation, conformity, leadership, group processes; attitude formation and change; intergroup cooperation and conflict. The primary focus is on the individual in social context.

### **PSY 05.215: The Psychology of the Adolescent Alcoholic/Drug Abuser**

**3 s.h.**

*Prerequisites: PSY 05125*

This course is designed to focus particular attention on the adolescent addict. General recognition of adolescence as a critical period for drug involvement has developed among most helping professions. Special knowledge of the issues raised by adolescent addiction is critical for appropriate prevention and intervention with this age group. Underlying this course is the assumption that adolescent drug abuse is a significant social and psychological problem calling for careful and thorough study by helping professionals and concerned citizens. Adolescent drug use is discussed in the context of underlying developmental needs and stage-specific tasks.

### **PSY 05.217: The Psychology of Gender and Alcoholism/Drug Abuse**

**3 s.h.**

Issues addressed in this course include differential patterns of male and female drug/alcohol use and abuse, the role of gender and addiction in family dysfunction, the psychological consequences of addiction specific to gender roles and behavior, the role of drug/alcohol abuse in dating and domestic violence, and gender issues in alcohol and/or drug addiction treatment and prevention.

### **PSY 05.250: Psychopharmacology**

**4 s.h.**

*Prerequisites: PSY 01100 or PSY 01104*

Topics covered in this course include the nature of drugs, interaction effects, attitudes toward drugs, their definition, legal categories, consequences of drug interactions for impact of drugs on body systems. Drugs covered would include both legal and illegal.

### **PSY 05.302: Attitude and Attitude Change**

**3 s.h.**

*Prerequisites: PSY 05206 and PSY 01100 or PSY 05206 and PSY 01101*

This course examines the psychological theories and research techniques concerning the development of attitudes. Students study the relationships among attitudes, values and behavior.

### **PSY 05.310: Psychology of Human Sexuality**

**3 s.h.**

*Prerequisites: PSY 01100 or PSY 01101 or PSY 01104*

This course provides an overview of the current scientific knowledge concerning human sexuality. It examines data from national surveys and controlled laboratory studies.

### **PSY 05.350: Psychological Treatment and Counseling of the Alcoholic/Drug Abuser**

**3 s.h.**

*Prerequisites: PSY 05125*

This course provides an overview of fundamental issues in the psychological treatment and counseling of the alcoholic/drug abuser. Topics covered include ethical issues in counseling, information concerning the theory and practice of individual group and family therapy with substance abusers, treatment planning and case management, gender, race and class issues in counseling the addicted client, and the role of resistance and denial in recovery. The course will be taught by a treatment professional who will focus upon basic counseling issues and skills. Students will be repeatedly informed that completion of this course does not qualify one to practice as a psychologist or therapist. The course constitutes a careful, systematic introduction to the concepts and skills that must be mastered in order to be an effective drug abuse counselor.

### **PSY 05.402: Psychology of Conflict and Conflict Resolution**

**3 s.h.**

*Prerequisites: PSY 01104 or PSY 01100*

Students investigate the basis for conflict in social and personal situations. The course attempts to isolate a number of contributive variables and explores possible alternatives to destructive conflict. It employs different research approaches and attempts to help interested students examine and develop innovative approaches to use in the resolution of conflict within social relationships.

## Courses

### **PSY 05.410: Community Psychology**

**3 s.h.**

*Prerequisites: PSY 05206 and PSY 01101 or PSY 05206 and PSY 01100*

This course provides an overview of the field of community psychology. Its topics will include preventive approaches to mental health, crisis intervention, community-based treatment approaches, systems theory, community mental health centers, organization theory, paraprofessionals, the use of self-help groups and community psychology in the schools and criminal justice system. The course provides a conceptual framework for community psychology.

### **PSY 05.425: Family Psychology and Alcoholism/Drug Abuse**

**3 s.h.**

*Prerequisites: PSY 05125*

This course is designed to place the problem of substance abuse in a family context. Family systems theory is used to describe interpersonal dynamics underlying addiction. Gender, race and class issues as they apply to both family systems theory and family therapy are raised in order to place addiction in a social and historical framework. This course stresses the interaction between family psychodynamics and the dynamics of alcoholic/drug abusing behavior. Different family patterns of addiction are identified which require specific family therapy interventions. Techniques from several distinct schools of family therapy are described as they are adopted for the treatment of addicted families. The use of therapy for individual family members is discussed in relation to family dynamics. This course is designed to facilitate the student's understanding of the ways in which families can inhibit and/or encourage change in the addictive behavior of their members.

### **PSY 06.200: Computer Application in Psychology**

**3 s.h.**

Statistics should be completed before or concurrently with this course. This course studies machine data reduction (statistics) by use of programs. Data to be student-collected. Students will become proficient in selection, processing and interpretation of programs. Pre-registration student/teacher consultation desirable.

### **PSY 06.300: Psychological Tests and Measurements**

**3 s.h.**

This course examines the nature and use of psychological tests and the social and ethical implications of testing. It emphasizes principles of test construction: reliability, validity and item analysis. Statistics should be completed before or concurrently with this course.

### **PSY 06.317: Survey Methods in Psychology**

**3 s.h.**

*Prerequisites: PSY 01101 or PSY 01100 or PSY 01104*

Students construct and administer surveys, collecting and analyzing data then making formal written reports on the results. Pre-registration consultation with instructor is required.

### **PSY 07.210: Statistics and Research Methods in Psychology**

**6 s.h.**

*Prerequisites: PSY 01100 or PSY 01101 or PSY 01104*

This course focuses on the appropriate methods of data collection and analysis used in psychological research. Observation, correlation, and experimental techniques are examined. Research strategies from simple two sample designs to multivariate procedures are covered. Topics include data description and hypothesis testing for enumerative, rank order, and numeric measurement, regression and correlation, analysis of variance, and chi-square. The social psychology and ethical problems of psychological research are considered.

### **PSY 08.215: Consumer Psychology**

**3 s.h.**

*Prerequisites: PSY 01100 or PSY 01101*

This course introduces behavioral science research and methods in consumer behaviors. It emphasizes the processes of learning, perception, motivation, and social behavior and their effect on consumer attitude, buying behavior, advertising and effective mass persuasion. The course also includes product design and evaluation and consumer protection and awareness.

### **PSY 08.220: Personnel Psychology**

**3 s.h.**

*Prerequisites: PSY 01100 or PSY 01101*

This course introduces the application of psychological principals and research findings in the personnel systems of organizations. Its topics include personnel testing and selection; instrument development; job analysis and evaluation; performance appraisal; training systems, and the models for human resource utilization.

### **PSY 08.305: Human Factors Psychology**

**3 s.h.**

*Prerequisites: PSY 01100 or PSY 01104*

This course outlines the basic capabilities and limitations of the human being as the central component in person-machine-environment systems. The course discusses the following topics and others are discussed: job and equipment design; work place layout; work methods; work environment and safety.

## Courses

### **PSY 08.310: Industrial/Organizational Psychology**

**3 s.h.**

*Prerequisites: PSY 01100 or PSY 01101*

This course studies application of psychological theories, methods, principles and findings to various problems of industrial, business and public organizations. It covers personnel selection, testing, and training; organizational behavior; safety, equipment and systems design, and consumer behavior.

### **PSY 09.205: Psychology of Adult Processes**

**3 s.h.**

*Prerequisites: PSY 01100 or PSY 01101 or PSY 01104*

This life-span developmental psychology course studies the social, cognitive, emotional, moral and personality development of adults.

### **PSY 09.209: 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 mechanisms underlying development are emphasized.

### **PSY 09.210: 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 level skills in selection and use of evaluative techniques and in the use of activities appropriate to the various levels of adolescent development.

### **PSY 09.305: Developmental Psychopathology**

**3 s.h.**

*Prerequisites: PSY 01100 and PSY 09209 or PSY 01100 and PSY 09210*

Using a developmental framework, the student will examine normal and abnormal behavior from infancy through adolescence. Students will learn about the pathways to normal and abnormal behavior, explore the factors that place children at risk for problems as well as the factors that protect children from adversity. Topics will include autism, depression, anxiety, aggression, attentional difficulties, developmental delay, and physical illness.

### **PSY 10.315: Physiological Psychology**

**3 s.h.**

*Prerequisites: PSY 01100 or PSY 01104*

An introductory course in physiological psychology designed to give the student an understanding of the neural processes mediating behavior. A study of advances in such areas as the neural coding of memory and learning; control of human behavior and emotions through physiological changes; the environment as it affects the nervous system; psychobiology of sex; psychosomatic illness; and instrumentation and techniques for investigating problems in physiological psychology.

### **PSY 22.215: Educational Psychology**

**3 s.h.**

*Prerequisites: PSY 01100 or PSY 01104*

This course considers the fundamental principles of learning and the implications of these principles for the understanding of human behavior. It covers empirical and theoretical issues in learning through examination of laboratory data and their extension to life situations.

### **PSY 22.320: Theories of Learning**

**3 s.h.**

*Prerequisites: PSY 01100 or PSY 01104*

This course deals with several major learning theorists and their work. Students critically describe, explain and integrate research findings. This course is generally recommended by graduate schools.

## Public Relations

### **PR 06.301: Basic Public Relations Writing**

**3 s.h.**

*Prerequisites: PR 06350*

Basic Public Relations Writing introduces the student to the tasks of writing and editing required in a public relations position. They 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.

## Courses

### **PR 06.305: Advanced Public Relations Writing**

**3 s.h.**

*Prerequisites: PR 06301*

Advanced Public Relations Writing polishes writing and editing skills students need for a professional public relations position. Students will learn how to write persuasive copy for both internal and external audiences, produce written marketing support products, and prepare speeches and advanced editorial copy for business and organizations. Students will also learn advanced copy preparation techniques.

### **PR 06.310: Introduction to Public Relations/Advertising Research**

**3 s.h.**

*Prerequisites: 60 hour*

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 06.350: Introduction to Public Relations**

**3 s.h.**

*Prerequisites: CMS 01203 or CMS 01205*

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 06.353: Case Studies in Public Relations - WI**

**3 s.h.**

*Prerequisites: PR 06305 and ENGL 01112*

This course reviews and predicts how organizations solve their public relations challenges. Students write case statements, position papers and solutions involving publicity demands, special events, promotions, image problems and other challenges. Students role-play key personnel, working through problems in seminar simulations. Writing, speaking, thinking and presenting ideas are emphasized.

### **PR 06.354: Impact of Public Relations on the News**

**3 s.h.**

*Prerequisites: PR 06301 or JRN 02310*

The course is a semester-long journey into the information management world where the professions of journalism and public relations often find strong parallels but equally as often are locked in competition over how important local, national and world events and issues will be reported and explained to the public.

### **PR 06.359: Public Relations Practicum**

**1 to 3 s.h.**

*Prerequisites: 75 hour prerequisite*

Public relations practicum allows students to apply their skills and knowledge by working on-campus with department faculty on a variety of technical, creative, or research-related assignments. Students can earn 1 credit for every 40 hours of work, with most practica implemented for 3 credit hours. Students can earn credit for working for PRAction, Rowan University's in-house agency for its Public Relations Student Society of America Chapter. Students keep a detailed log of working hours, prepare an extensive portfolio, write an analytical critique of the practicum and submit the work to the faculty supervisor for grading.

### **PR 06.360: Public Relations/Advertising Field Experience I**

**3 s.h.**

*Prerequisites: PR 06350 and PR 06301 and PR 06305 or ADV 04330 and ADV 04331 and ADV 04430*

Under professional supervision in the field, students practice theories and skills learned in the classroom. Students earn 3 credits for 120 hours of work. Students keep a detailed log of working hours, prepare an extensive portfolio, write an analytical critique of the practicum, and are evaluated by their faculty supervisor.

### **PR 06.362: Public Relations/Advertising Field Experience II**

**3 s.h.**

*Prerequisites: PR 06350 and PR 06301 and PR 06305 or ADV 04330 and ADV 04331 and ADV 04430*

Under professional supervision in the field, students practice theories and skills learned in the classroom. Students earn 3 credits for 120 hours of work. Students keep a detailed log of working hours, prepare an extensive portfolio, write an analytical critique of the practicum, and are evaluated by their faculty supervisor. Field Experience II is offered to students who successfully completed Field Experience I and who seek to get an additional 3 credits of internship experience.

### **PR 06.364: Public Relations/Advertising Field Experience III**

**6 s.h.**

*Prerequisites: PR 06350 and PR 06301 and PR 06305 or ADV 04330 and ADV 04331 and ADV 04430*

Under professional supervision in the field, students practice theories and skills learned in the classroom. Students earn 6 credits for 240 hours of work. Students keep a detailed log of working hours, prepare an extensive portfolio, write an analytical critique of the practicum, and are evaluated by their faculty supervisor. Field Experience III is reserved for students who wish to complete all 6 credit hours of their internship experience with the same sponsor at one consecutive 240 hour time.

## Courses

### **PR 06.454: Public Relations Planning - WI**

**3 s.h.**

*Prerequisites: PR 06353 and ENGL 01112*

This course introduces students to the components of a comprehensive public relations campaign: research, audience identification, message construction, channel selection and evaluation. Working with clients, students create and write an entire program for a variety of challenges, including image change, new product or service introduction, information, recruitment, crisis management, employee relations, persuasion and others. Students practice a complete PR plan.

### **PR 99.462: Public Opinion**

**3 s.h.**

This course includes the nature and role of public opinion, the dynamics of public opinion processes and the numerous factors which shape or influence opinions. 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, censorship and propaganda.

## Radio/Television/Film

### **RTF 03.205: TV History and Appreciation**

**3 s.h.**

*Prerequisites: ENGL 01112*

TV History and Appreciation explores 50 years of the art and impact of one of the most persuasive, pervasive information delivery systems ever invented. By viewing and discussing a wide array of clips and full episodes of programming (many from the earliest days of the medium), students will develop an appreciation of the foundation of all entertainment and informational programming. As well, students examine how television has affected American society and how American society has affected television.

### **RTF 03.220: The Television Industry**

**3 s.h.**

*Prerequisites: ENGL 01111 and ENGL 01112 or ENGL 01105 and ENGL 01112*

Designed to provide students with an understanding of the contemporary American commercial television industry, this course analyzes the interrelationships among broadcast and non-broadcast delivery systems, stations, networks, programming, advertising, audiences and the federal government.

### **RTF 03.221: The Radio Industry**

**3 s.h.**

*Prerequisites: ENGL 01111 and ENGL 01112 or ENGL 01105 and ENGL 01112*

This course introduces students to the principles and techniques of commercial radio broadcasting. Students learn about licensing, sales, research, programming, and federal regulations. Students get hands-on experience with up-to-date broadcast equipment while learning audio console operation.

### **RTF 03.222: Television Production I**

**3 s.h.**

*Prerequisites: Required Credits: 45.000*

The course introduces students to the principles and techniques of TV production. Students work in production teams within a professional television studio setting. Students gain experience in all phases of production, including conception of ideas, scripting, directing, and operation of equipment to produce various types of programs. Programming includes newscasts and talk shows. Students also learn to edit 30-second commercials and PSAs.

### **RTF 03.224: Sound Communication**

**3 s.h.**

*Prerequisites: ENGL 01112 or COMP 01112 or ENGR 01201 and Required Credits: 30.000*

This course introduces students to the production process through the medium of sound. Topics include the history, physics, and function of sound recording as it relates to radio, television, and film media. Students will be introduced to basic storytelling concepts and will write, create, and edit projects that incorporate sound as a primary communication tool.

### **RTF 03.270: Film History and Appreciation I**

**3 s.h.**

*Prerequisites: 30 hour prerequisite*

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.

## Courses

### **RTF 03.271: Film History and Appreciation II**

**3 s.h.**

*Prerequisites: 30 hour prerequisite*

This course is a continuation of RTF03.270 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 03.272: Images of Women in Film**

**3 s.h.**

*Prerequisites: 30 hour prerequisite*

This course uses the medium of motion pictures to study cultural perspectives on women at various times through history and in differing cultural environments. Students discuss a wide range of film treatments to examine women's changing role, as well as social attitudes toward women as expressed by representative works of a cultural era and by writers, directors and actors.

### **RTF 03.275: Applied Media Aesthetics: Sight, Sound and Story**

**3 s.h.**

*Prerequisites: ENGL 01112 or COMP 01112 and Required Credits: 30.000*

This course offers students an introduction to the aesthetic concepts as applied directly to the 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 03.280: African American Film History**

**3 s.h.**

*Prerequisites: COMP 01112 or ENGL 01112*

This course offers students an introduction to the little-known yet important area of African American Film History, beginning with the development of Race Movies by such directors as Oscar Micheaux, and continuing to the present day. Through lectures, screenings and reports students will study, discuss and analyze the historical and cultural significance of these films and their influence on society.

### **RTF 03.321: Television Production II**

**3 s.h.**

*Prerequisites: RTF 03222*

This hands-on course provides experience in advanced television production. Students work in production teams which create, research, script, shoot, and edit one minute promotional pieces and a 30-minute magazine program. All programming airs on Rowan's cable network, channel 5. Students will shoot in the studio and in the field, learning to use digital production equipment in preparation for professional career work in television. All projects are edited on Avid editing systems.

### **RTF 03.331: Radio Broadcasting II**

**3 s.h.**

*Prerequisites: RTF 03220 and RTF 03221*

Radio Broadcasting II is designed to develop the skills obtained in Radio I by increasing the knowledge about various audio devices. Shows developed in Radio II will be scheduled as a regular part of the WGLS-FM programming. Topics covered will further enhance the students' understanding of audio production and the associated equipment and develop announcing skills vital not only to radio, but to all forms of audio/visual presentation.

### **RTF 03.335: A/V Production Systems**

**3 s.h.**

*Prerequisites: RTF 03221 or RTF 03222*

The course expands the student's knowledge of audio and video production equipment and its specific application in production and post-production facilities. Students learn the principles of audio and video measurement, editing requirements and equipment interfacing. Students will understand future trends and the impact of A/V Technology on industry economics. Demonstrations are applied to classroom experiences. This course may not be offered annually.

### **RTF 03.340: RTF Research & Criticism**

**3 s.h.**

*Prerequisites: CMS 06202 and COMP 01112 Required Credits: 75.000*

This course studies the range and importance of research and criticism in the Radio, Television and Motion Picture industries. Academic models of research and criticism are investigated as are industry practices like demographics and ratings. Students inform their perspective of RTF as professionals and members of electronic media and cinema's global audience.

## Courses

### **RTF 03.350: RTF Practicum**

**3 s.h.**

*Prerequisites: 75 hour prerequisite*

RTF Practicum gives the student the opportunity to test out their skills and knowledge of the field while working on-campus with department faculty and professional staff on a variety of technical, creative and/or research related assignments. Students can earn 3 credit hours for 120 hours of work on Practicum related assignments.

### **RTF 03.351: RTF Field Experience I (Fall)**

**3 s.h.**

*Prerequisites: 75 hour prerequisite*

Students earn 3 credit hours for 120 hours of field experience on-the-job in a Radio, Television or Film professional setting. The students will fulfill a wide range of duties described by the on-site supervisor and agreed to by both the student and the on-campus faculty supervisor. Students may take up to 6 credit hours of field experience.

### **RTF 03.352: RTF Field Experience II (Spring)**

**3 s.h.**

*Prerequisites: 75 hour prerequisite*

Students earn 3 credit hours for 120 hours of field experience on-the-job in a Radio, Television or Film professional setting. The students will fulfill a wide range of duties described by the on-site supervisor and agreed to by both the student and the on-campus faculty supervisor. Students may take up to 6 credit hours of field experience.

### **RTF 03.353: RTF Field Experience III (Summer)**

**6 s.h.**

*Prerequisites: 75 hour prerequisite*

Students earn 6 credit hours for 240 hours of field experience on-the-job in a Radio, Television or Film professional setting. The students will fulfill a wide range of duties described by the on-site supervisor and agreed to by both the student and the on-campus faculty supervisor. Students may take up to 6 credit hours of field experience.

### **RTF 03.370: Film Production I**

**3 s.h.**

*Prerequisites: 45 hour prerequisite*

This course is an introductory non synch-sound film production course. Students make a series of short 16mm films designed to familiarize them with camera operation, exposure and composition. The course covers the basic optics, mechanics and chemistry of motion picture technology, small crew organizational practices and digital editing techniques.

### **RTF 03.371: Film Production II**

**3 s.h.**

*Prerequisites: RTF 10370 or RTF 03370*

This is an intermediate synch-sound 16mm production course which emphasizes studio production techniques. Students work in crews on short dialogue scenes designed to familiarize them with directing, script analysis, art direction, color cinematography, lighting, and synch-sound digital editing.

### **RTF 03.372: American Film Directors**

**3 s.h.**

*Prerequisites: 45 hour prerequisite*

Through historical perspective and criticism, this course provides an in-depth study of films by American directors. This course may not be offered annually.

### **RTF 03.380: Acting for the Camera**

**3 s.h.**

*Prerequisites: COMP 01112 and RTF 03370 or COMP 01112 and RTF 03222*

This course is a basic introduction to acting in front of film and television cameras. Students will study acting styles, techniques, and theory. Each student is expected to act in at least three separate scenes that will be videotaped and critiqued.

### **RTF 03.393: Film Scenario Writing**

**3 s.h.**

*Prerequisites: 45 hour prerequisite*

The course covers the basic technical requirements for writing movie scripts, 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 03.420: Current Issues in Electronic Media**

**3 s.h.**

*Prerequisites: RTF 03220 and ENGL 01112*

This course analyzes and discusses the impact that current trends in media technology, economics, regulation, and management have on content development, distribution, acquisition and consumer use.

## Courses

### **RTF 03.433: Television Program Packaging**

**3 s.h.**

*Prerequisites: RTF 03220*

This research and writing course focuses on the specialized field of TV program creation. Students study the structure and content of a wide variety of TV programs, analyzing target audiences, and examining the marketing structure of program selling and distribution. Students prepare a complete, original television program proposal as a required activity.

### **RTF 03.450: Television Documentary and Field Production**

**3 s.h.**

*Prerequisites: RTF 03222 and RTF 03321*

This advanced production course combines extensive research and scriptwriting skills with sophisticated field production techniques. Students select subjects of local interest to feature in high-quality, 20-minute documentaries involving pre-production planning, actual videotaping and post-production editing. Field production includes use of single and multiple camera units.

### **RTF 03.470: Advanced Film Production**

**3 s.h.**

*Prerequisites: RTF 10371*

This is an advanced synch-sound 16 mm production course which emphasizes professional production practices. Students participate in the planning, shooting and editing of a longer form narrative synch-sound film project designed to familiarize them with pre-production planning, production scheduling, large crew management, and post-production supervision.

### **RTF 03.471: Techniques of Documentary Film Production**

**3 s.h.**

*Prerequisites: RTF 03220 or RTF 10370*

This course introduces students to the study of documentary form and techniques of production. It provides students with an understanding of the styles and methods of the documentary, giving them a powerful tool for film expression. Students will create a researched proposal for their own documentary.

## Reading

### **READ 17.100: Improving Personal Reading Skills**

**3 s.h.**

This basic skills course helps students whose reading skills need improvement in order to cope with the demands of college course work. Instruction in the full semester course emphasizes vocabulary, comprehension and study skills. This course is not counted toward graduation. It is a required course for entering students who do not pass the Rowan University Basic Skills competency requirement in Reading.

### **READ 30.120: 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 30.280: Teaching Literacy**

**3 s.h.**

*Prerequisites: READ 30120 and EDUC 01272 or PHED 35286 or EDUC 01282 or EDUC 01284*

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 30.301: Foundations of Reading**

**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 instruction in the elementary school, ranging from emergent literacy to comprehension of narrative and expository discourse are covered. There is an emphasis on strategies for teaching word recognition skills, vocabulary and guided reading lessons. The importance of literature-enrichment activities and making curricular connections is highlighted.

### **READ 30.310: Teaching Reading in the Content Areas**

**3 s.h.**

This course helps students integrate reading methods and strategies into subject matter instruction. Students learn a basic format for lesson planning. They acquire an understanding of the reading process and examine a variety of instructional techniques for assessing pupil abilities, selecting suitable materials, and fostering language, comprehension, and study skills needed for mastery of academic subjects.

## Courses

### **READ 30.319: Pedagogy II: Teaching Reading in the Content Areas (For Secondary Education Majors)** 3 s.h.

*Prerequisites: SECD 03201*

This course helps students integrate reading methods and strategies into subject matter instruction. Students learn a basic format for lesson planning. They acquire an understanding of the reading process and examine a variety of instructional techniques for assessing pupil abilities, selecting suitable materials, and fostering language, comprehension, and study skills needed for mastery of academic subject.

### **READ 30.320: Language Development, Emergent Literacy, and Reading in Young Children** 4 s.h.

*Corequisites: ECED 23320 Prerequisites: ECED 23221*

Students will develop an understanding of five phases of Literacy: Awareness and Exploration; Experimental Reading and Writing; Early Reading and Writing; Transitional Reading and Writing; Independent and Productive 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, the students will be able to recognize the impact of cultural, linguistic, and other diversities that have the potential to affect engagement in literacy learning by identifying and utilizing strategies for inclusion. In addition, students will also identify strategies to expose children to other languages through the use of functional phrases for social interaction and inclusiveness. This course will require frequent field visits in a variety of settings.

### **READ 30.322: Teaching Reading to Children with Special Needs - Writing Intensive** 3 s.h.

*Prerequisites: COMP 01112 and READ 30301 or READ 30319 or READ 30310*

This course prepares students to teach reading/writing to learners with special needs. Major topics include adaptation of formal and informal assessment procedures as well as instructional techniques and materials. There is an emphasis on professional writing through ongoing technical writing, analytic writing and reflective writing.

### **READ 30.347: 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 30.350: 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 30.351: Differentiated Literacy Instruction** 2 s.h.

*Corequisites: ELEM 02338*

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 30.421: School Reading Problems-Writing Intensive** 3 s.h.

*Prerequisites: READ 30351 and 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.

## Courses

### **READ 30.451: 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 30.495: Workshop in Reading**

**3 s.h.**

This course examines current developments related to reading instruction. It is suitable for students who have experience working in a school. Emphasis is given to effective practices related to teaching reading. Specific topics are selected by the instructor and students. Examples include: reading in vocational programs, interrelating language arts instruction, evaluating software, managing reading instruction, etc. This course may not be offered annually.

## Sociology

### **SOC 08.120: Introduction to Sociology**

**3 s.h.**

This course analyzes the characteristics of social organization and focuses on the study of social relationships and interaction. It examines the social basis of behavior patterns, the nature of social problems and the possibilities for social change. (Required for Sociology majors)

### **SOC 08.220: The Sociology of the Family**

**3 s.h.**

This course examines the relationships between the family and other societal institutions as well as the related interaction patterns within the family, both from an historical and a cross-cultural perspective. The course also includes such specific topics as gender roles, women's movement, sexuality and social class differences.

### **SOC 08.221: Social Problems**

**3 s.h.**

This course examines major social problems in the society as a part of the ongoing social process, with particular reference to their economic, political and other social roots. Topics covered can include such areas as mental illness, poverty, structured inequality, various forms of addiction, war, racism and crime.

### **SOC 08.223: The Sociology of Social Welfare**

**3 s.h.**

*Prerequisites: SOC 08120*

This course examines the socio-historical development of social welfare, focusing upon changes in the theory and practice of social welfare in American and other societies. This course may not be offered annually.

### **SOC 08.230: The Sociology of Minority Groups**

**3 s.h.**

*Prerequisites: SOC 08120*

This course analyzes the nature of the relationships among ethnic, racial and other groupings in our society. It examines and tests sociological theories by the study of specific past and present minority group situations.

### **SOC 08.269: Self and Society**

**3 s.h.**

This introductory course in the study of behavior in everyday life examines the sociology of the familiar, looking at the socialization processes, the effect of social interaction and re-socialization. The course focuses on the individual as a social interacting organism.

### **SOC 08.320: Urban Sociology**

**3 s.h.**

*Prerequisites: SOC 08120*

This course examines the process, conditions and problems of urbanization. It emphasizes the social phenomena of the contemporary urban scene, the problems of mass society and their possible solution, mass organization, mass communication and regional interdependence.

### **SOC 08.322: The Sociology of Religion**

**3 s.h.**

*Prerequisites: SOC 08120*

This course studies sociological theories of the origin and nature of religion. It includes the relationship of religion to family life, sexuality, ethnic identity, economic inequality and political power. Students also study conservative and radical religious movements in contemporary society and secularization and secular substitutes for religion. This course may not be offered annually.

## Courses

### **SOC 08.323: The Sociology of Social Work**

**3 s.h.**

*Prerequisites: SOC 08120 and SOC 08223*

This course examines the socio-historical development of social work, giving attention to the processes of casework, group work and community organization as well as aspects of social work as a profession. This course may not be offered annually.

### **SOC 08.325: Deviant Behavior and Social Control - WI**

**3 s.h.**

*Prerequisites: ENGL 01112*

This course explores the major theoretical and research issues in the study of deviant behavior. Then, drawing on a wide variety of types of deviant behavior, the course studies three levels of social reality: the interpersonal, the organizational and the structural. The course seeks to place deviant behavior within the context of traditional social processes and structures.

### **SOC 08.326: The Socialization of The Child Through Adolescence - WI**

**3 s.h.**

*Prerequisites: ENGL 01112*

This course focuses upon the processes and social forces which facilitate the ways in which individuals are prepared to enter various groups within the life cycle.

### **SOC 08.327: Comparative Education in Sociological Perspective**

**3 s.h.**

*Prerequisites: SOC 08120*

This course compares the educational systems of different societies and their relationships to other social institutions in their societies. Such features as the overall purposes and goals of education, its accessibility to different social strata, gender differences, services to special populations in the society, and the teaching profession are compared. In each case study studied, both unique characteristics of the educational system are highlighted as well as those similar to other societies, with the focus on social forces which influence the makeup and functioning of different educational systems.

### **SOC 08.330: Social Stratification**

**3 s.h.**

*Prerequisites: SOC 08120*

This course examines the major classic and modern theories of social stratification and analyzes the forms and functions of social inequality in contemporary societies. It stresses the influence of class membership on individual behavior and examines the implications of institutionalized inequalities for democratic societies.

### **SOC 08.331: Classical Sociological Theory**

**3 s.h.**

*Prerequisites: SOC 08120*

This course studies the historical and conceptual development of the major schools of thought within the "sociological tradition." It emphasizes an understanding of the nature of theory and systems of theory, the application of theory, the problems inherent in theorizing about society and social life and the relations between sociological theory and research. (Required for sociology majors)

### **SOC 08.332: Contemporary Sociological Theory**

**3 s.h.**

Contemporary Sociological Theory is one of two core courses that starts with the classical period and culminates with this course covering theory in recent times. Contemporary Sociological Theory examines the state of the field in the twentieth century, focusing on theoretical issues and frameworks that have come to define Sociology, its research and methods. It will include consideration of the Parsonian structural functionalism of the 1950s, the critique of Positivism that emerged during the 1960s, and the fragmentation of the field into the many perspectives and approaches there are today.

### **SOC 08.333: Sociology of Work**

**3 s.h.**

*Prerequisites: SOC 08120*

This course uses sociological propositions of bureaucracy, professionalization, delegation, goal distortions and informal organization to evaluate critically various management philosophies. It examines interdependence of structure, status, leadership and motivation.

### **SOC 08.336: Sociology of Education**

**3 s.h.**

*Prerequisites: SOC 08120*

The purpose of this course is to study education as a social institution and its interrelationships with other social institutions. It focuses on how education is affected by social forces such as demographic changes, governmental policy, and mass media; and how education itself impacts on the rest of society, such as perpetuating social inequalities.

## Courses

### **SOC 08.339: Sociological Practice**

**3 s.h.**

*Prerequisites: SOC 08120*

This course focuses on using sociological theories and concepts, research methods, and ethical decision-making processes to solve problems. Sociological practice occurs at all levels from the individual to societal. The course links the student to a variety of career pathways and occupational settings, including mental health, rehabilitation, work in prisons, and youth and family services.

### **SOC 08.351: Political Sociology**

**3 s.h.**

*Prerequisites: SOC 08120*

This course analyzes the interplay between society and politics, using both classical and contemporary perspectives. Course topics may include: power, elites, conflict, ideology, political systems, political behavior, political organization, political institutions and political processes and change.

### **SOC 08.353: The Sociology of Complex Organizations**

**3 s.h.**

*Prerequisites: SOC 08120*

This course discusses the major theories and research in complex and formal organizations, giving special attention to a variety of organizational types, including industrial, service and non-profit. It emphasizes examining varying organization types with respect to their size, structure, environments and their dynamics of innovation and change.

### **SOC 08.370: The Sociology of Women in Society**

**3 s.h.**

*Prerequisites: SOC 08120 or SOC 08220*

This course investigates the role of women in society. Course topics include: Women and the Economy, Women and the Law, Socialization into Female Sex Roles, Women and Religion and Women in Academia.

### **SOC 08.375: Sociological Research Methods**

**3 s.h.**

*Prerequisites: SOC 08120*

This course introduces the student to the scientific methods used in the social sciences, the relationship between sociological theory and methodologies of data collection and analysis, the rudimentaries of basic types of data analysis and interpretation. Students will learn to read and summarize basic scientific reports, to critically analyze and evaluate reported research findings in the social sciences, and to recognize ethical concerns associated with sociological research. (Required for Sociology majors)

### **SOC 08.376: Social Statistics**

**3 s.h.**

*Prerequisites: SOC 08120*

This course familiarizes the student with the basics in elementary statistical methods used in the social sciences and the uses and misuses of statistice for various purposes. The student will learn to calculate and understand the proper use of basic statistics commonly used in the social sciences. (Required for Sociology majors)

### **SOC 08.399: Sociology of the Holocaust - WI**

**3 s.h.**

*Prerequisites: ENGL 01112 or COMP 01112*

This course primarily deals with structural and experiential dimensions of the genocidal process affecting the European Jews, their ethnicity, culture and religious communality after 1933. Gypsies, Jehovah's Witnesses, prisoners of conscience, Russian prisoners of war, the Polish intelligentsia, who with the Jews, became a subject of Nazi persecution are also among those remembered. The Holocaust or shoah will provide a model for compassionate insight into the experience of other persecuted ethnic and religious minorities or any who suffer disadvantage due to long-standing discrimination, such as women and homosexuals. Special emphasis will be given to understanding the interpersonal processes which are part of survival and transcendence of situations where we find society against the self.

### **SOC 08.400: Environment, Policy and Society**

**3 s.h.**

*Prerequisites: SOC 08120*

This course emphasizes the interaction between the social and ecological environments including: technological mechanisms by which societies shape their environments; cultural values that cause people to use the environment in particular ways; and policy implications that may result in social consensus or conflict concerning manipulation of the natural environment.

### **SOC 08.401: Human Service Organizations**

**3 s.h.**

*Prerequisites: SOC 08120*

This course will focus on the micro and macro aspects of human service organizations of various kinds; for example, hospitals, courts, nursing homes, public agencies, schools, and the like. These organizations will be examined in terms of their structure, delivery of services, their function of "processing" human beings, the internal and external environments in which they operate, and the policy implications for delivery of services and organizational change.

## Courses

### **SOC 08.425: Senior Seminar in Sociology**

**3 s.h.**

*Prerequisites: SOC 08331 and SOC 08375 and SOC 08376 or SOC 08331 and SOC 08421*

This seminar is a capstone experience designed to help students integrate what they have learned as sociology majors in a liberal arts setting. Students will engage in oral discussions and presentations as well as written exercises and essays to demonstrate an understanding of the sociological perspective, theoretical approaches and methods. The substantive focus of the seminar will vary by instructor.

### **SOC 08.431: Social Psychology of City Life**

**3 s.h.**

*Prerequisites: SOC 08120*

The advanced course studies everyday behavior in the city. It examines the ways people experience and give meaning to urban life, using different social-psychological conceptions and methodologies.

### **SOC 08.436: Sociology of Medicine**

**3 s.h.**

*Prerequisites: SOC 08120*

This course analyzes medicine as a major institution in American society. It covers concepts of health and illness, attributes of a profession, the hospital, national health care, ethical issues and biomedical research.

### **SOC 08.440: Selected Topics in Sociology**

**3 s.h.**

*Prerequisites: SOC 08120*

This course provides a seminar experience in areas of sociology that are not a part of the recurring course offerings. Enrollment is limited, and student participation is maximized. Consult the Master Schedule each semester for specific topics being offered. This course may not be offered annually.

### **SOC 08.491: Independent Study in Sociology**

**1 to 4 s.h.**

*Prerequisites: SOC 08120*

This course gives students an opportunity to pursue individual, specialized research under guidance of a staff member. This course may not be used as a substitute for any course offered by the department. Entrance is only with the permission of the instructor and the chairperson of the department. This course may not be offered annually.

### **SOC 08.493: Seminar on Gender Roles**

**3 s.h.**

*Prerequisites: SOC 08220*

Students develop and present a major seminar paper in the area of the role of men and/or women in society. The range of topics covered in any semester depends upon the interests of the enrolled students. Students will read all class papers prior to presentation.

### **SOC 08.494: Field Experience Seminar in Sociology - WI**

**3 to 6 s.h.**

*Prerequisites: ENGL 01112 or COMP 01112*

This seminar provides the opportunity for students to be engaged in a field experience which will contribute to their sociological development. Students interact with their instructor and the other students in the seminar in the development, supervision and completion of individual projects. Areas of interest may include sociological research, analysis of social agencies and the development of affirmative social action programs. \*(Entrance to this course is with the permission of the instructor and the enrollment is limited. This course may be taken for 3 or 6 s.h., however, only 3 s.h. will apply toward the 33 s.h. needed for a sociology major).

### **SOC 09.323: The Sociology of Crime and Criminal Law**

**3 s.h.**

*Prerequisites: SOC 08120*

This course analyzes crime and criminal law, emphasizing the nature and extent of crime within the context of the nature and functions of criminal law. It stresses problems of sociological theory and research in the area.

### **SOC 09.333: The Sociology of Punishment and Correction**

**3 s.h.**

*Prerequisites: SOC 08120*

This course examines historical and contemporary theories of punishment within a sociological framework. It gives a critical survey of the structure, goals and problems of the American criminal justice system.

### **SOC 15.322: The Sociology of Population**

**3 s.h.**

*Prerequisites: SOC 08120*

This course analyzes population growth and change, especially the American population. It emphasizes urban, rural, ethnic, racial, religious and social class differences. It also examines population variables and population theories. This course may not be offered annually.

## Courses

## Special Education

### **SNUR 92.430: 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 92.433: Health Assessment for School Nurses** 3 s.h.

This course assists nurses in developing and refining skills in health assessment of school-age children. It emphasizes developing a data base, interviewing, assessing the physical status of the school-age child, and formulating health care plans for the school setting.

### **SNUR 92.437: School and Community Nursing** 3 s.h.

This course consists of a study of the historical background and current trends in public health nursing. It includes consideration of the community as client, legislation influencing school and community health services, the role of health agencies, and current health problems and their effect on individuals, families, schools and communities. It emphasizes methods and means of health referrals and follow-up.

### **SNUR 92.444: Practicum in School Nursing** 5 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 experienced, certified school nurse. The student will have the opportunity to observe and participate in the various roles, functions, and activities of the school nurse. A college supervisor will visit the student in the field placement situation. Meetings of all students enrolled in the Practicum are held periodically at the college. Pre-registration consultation with instructor is required one semester prior.

### **SNUR 92.445: Internship in Health Teaching for School Nursing** 5 s.h.

*Corequisites: SNUR 92448 Prerequisites: SNUR 92430 and SNUR 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 92.448: Health Teaching Methods for School Nursing Seminar** 2 s.h.

*Corequisites: SNUR 92445 Prerequisites: SNUR 92430 and SNUR 92466*

This senior level seminar is to be taken with Internship in Health Teaching for School Nursing (SNUR92.445). The seminar will focus on four major areas: issues in health education, instructional strategies and classroom management, analysis and assessment of the Internship in Health Teaching for School Nursing experience, and preparation for school nurse employment.

### **SNUR 92.466: School Health Services** 3 s.h.

This senior level seminar is to be taken with Internship in Health Teaching for School Nursing (SNUR92.445). The seminar will focus on four major areas: issues in health education, instructional strategies and classroom management, analysis and assessment of the Internship in Health Teaching for School Nursing experience, and preparation for school nurse employment.

### **SPED 08.130: 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 08.307: 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.

## Courses

### **SPED 08.308: 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 08.316: Differentiated Instruction in the Inclusive Classroom**

**2 s.h.**

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 08.330: Workshop in Special Education**

**3 s.h.**

This course provides instruction in current issues and topics related to the field of special education which are compatible with the student's prerequisites and interest. The course can be designed to meet the in-service needs of agencies and/or local school systems. Number of credits will be determined by course content each time the course is offered. Students should consult current registration booklet for the topic and the specific number of credits to be offered.

### **SPED 08.360: Positive Behavioral Support Systems for Students with Exceptional Learning Needs**

**3 s.h.**

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 08.415: Specialized Instruction for Students with Exceptional Learning Needs I (K to Grade 5)**

**3 s.h.**

*Prerequisites: SPED 08316*

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 08.416: Specialized Instruction for Students with Exceptional Learning Needs II (K to Grade 12)**

**5 s.h.**

*Prerequisites: SPED 08316*

This senior-level course enhances the systematic progression of skills initiated during the earlier stages of the Teacher of Disabilities Program. The course prepares candidates with Subject Area Specialization to teach children from Kindergarten thru 12th grade with exceptional learning needs, covering instructional methods and strategies to teach self-help, motor, reading, math, language, study skills, science, and social studies. The course also emphasizes supporting students with exceptional learning needs in inclusive classrooms. There is a required, supervised field experience component with this course.

### **SPED 08.445: Clinical Seminar in Special Education**

**1 s.h.**

*Prerequisites: SPED 08415 or SPED 08416*

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.

## Courses

### **SPED 08.450: 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 19.410: Cerebral Palsy: Its Individual and Community Problems**

**3 s.h.**

*Prerequisites: SPED 08326*

This course presents a focus on a comprehensive multidisciplinary approach to the diagnosis and habilitation of the cerebral palsied individual. It covers the roles of the medical, psychological, therapeutic, social work and rehabilitation professions to assist teachers to provide appropriate instructional programs.

## Subject Matter Education

### **SECD 03.330: 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, Teaching and Learning Foreign Language A, Teaching and Learning Science A, or Teaching and Learning Business 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 03.332: 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, Teaching and Learning Foreign Language B, Teaching and Learning Science, or Teaching and Learning Business B. The course will consist of a general opening session, a general closing session, sessions at a cooperating public high school, and visits to governmental agencies, commercial sites, community sites, campus-based laboratories (when appropriate) and/or museums.

### **SECD 03.350: Teaching Students of Linguistic and Cultural Diversity**

**1 s.h.**

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.

### **SECD 03.435: Clinical Practice in Subject Matter Education**

**10 s.h.**

*Corequisites: SECD 03350 and SECD 03436*

This capstone seminar is designed to provide pre-service K-12 subject matter teacher candidates with a supportive atmosphere that builds relationships with peers and mentors while offering an opportunity to synthesize the pre-service components of their academic preparation with actual experience and emerging issues in the field of education and their transition into the profession. Teacher candidates develop a holistic concept of their philosophy of teaching; gather and present evidence of their comprehensive knowledge, skills, and dispositions expected of the profession; and demonstrate knowledge of current critical and contemporary issues facing educators and those who have a stake in K-12 subject matter education. Interviewing skills and a professional portfolio will be developed during this course. A co-requisite field internship is required.

### **SECD 03.436: Subject Matter Clinical Seminar**

**1 s.h.**

*Corequisites: SECD 03435*

This capstone seminar is designed to provide pre-service elementary teachers with a supportive atmosphere that builds relationships with peers and mentors while offering an opportunity to synthesize the pre-service components of their academic preparation with actual experience, emerging issues in the field of education, and their transition into the profession. Students develop a holistic concept of their dispositions expected of the profession; and demonstrate knowledge of current critical and contemporary issues facing educators and those who hold stake in elementary education. Interviewing skills and professional portfolio will be developed during this course. A co-requisite field internship is required.

## Courses

### **SECD 03.490: Seminar in Secondary Teaching**

**1 s.h.**

*Corequisites: SECD 03481 Prerequisites:*

This one-credit capstone course is a required supplement to the student teaching experience. The course is intended to assist our students to develop the knowledge and skills necessary to become effective classroom teachers and reflective decision makers. This course is further intended to prepare our students to become members of a community of learners within a diverse global society. (Implemented Spring 2004)

## Theatre & Dance

### **THD 07.103: Speech for the Stage**

**3 s.h.**

*Prerequisites: THD 07105*

This course is an intense study of Voice and Articulation with specific application of these principles to the needs of the stage actor.

### **THD 07.105: Introduction to Acting**

**3 s.h.**

This is designed as a first course in acting for theatre majors. It will stress basic techniques and fundamentals of stage geography, stage movement and oral interpretation. Theatre games, mime and scene study will be used to help students explore the ethics and etiquette of stage performance. This course lays the groundwork for Acting I and advanced study.

### **THD 07.106: Voice and Articulation**

**3 s.h.**

This course introduces use of the vocal instrument. Students study the physical elements of correct breathing, resonance and articulation to aid them in the development of personal vocal ability. Phonetics are used as a descriptive tool for a better understanding of speech patterns. The course focuses upon improvement of students individual vocal effectiveness.

### **THD 07.111: Colloquium in Theatre I**

**.5 s.h.**

These courses will provide a core experience for all majors. Through an on-going series of lectures, discussions, demonstrations and seminars, students will explore various aspects of Theatre Art and evaluate career options available to the theatre graduate. A maximum of 3 s.h. credit can be earned in colloquium, but not more than .5 s.h. in any one term.

### **THD 07.112: Colloquium in Theatre II**

**.5 s.h.**

These courses will provide a core experience for all majors. Through an on-going series of lectures, discussions, demonstrations and seminars, students will explore various aspects of Theatre Art and evaluate career options available to the theatre graduate. A maximum of 3 s.h. credit can be earned in colloquium, but not more than .5 s.h. in any one term.

### **THD 07.113: Colloquium in Theatre III**

**.5 s.h.**

These courses will provide a core experience for all majors. Through an on-going series of lectures, discussions, demonstrations and seminars, students will explore various aspects of Theatre Art and evaluate career options available to the theatre graduate. A maximum of 3 s.h. credit can be earned in colloquium, but not more than .5 s.h. in any one term.

### **THD 07.114: Colloquium in Theatre IV**

**.5 s.h.**

These courses will provide a core experience for all majors. Through an on-going series of lectures, discussions, demonstrations and seminars, students will explore various aspects of Theatre Art and evaluate career options available to the theatre graduate. A maximum of 3 s.h. credit can be earned in colloquium, but not more than .5 s.h. in any one term.

### **THD 07.115: Colloquium in Theatre V**

**.5 s.h.**

These courses will provide a core experience for all majors. Through an on-going series of lectures, discussions, demonstrations and seminars, students will explore various aspects of Theatre Art and evaluate career options available to the theatre graduate. A maximum of 3 s.h. credit can be earned in colloquium, but not more than .5 s.h. in any one term.

### **THD 07.116: Colloquium in Theatre VI**

**.5 s.h.**

These courses will provide a core experience for all majors. Through an on-going series of lectures, discussions, demonstrations and seminars, students will explore various aspects of Theatre Art and evaluate career options available to the theatre graduate. A maximum of 3 s.h. credit can be earned in colloquium, but not more than .5 s.h. in any one term.

## Courses

### **THD 07.130: The Living Theatre**

**3 s.h.**

This course helps students develop critical appreciation of the various dramatic media (stage, films, television, radio). By introducing them to aims and techniques as well as significant products, the course gives students insight into theatrical art, thereby enriching their enjoyment and sharpening aesthetic judgment.

### **THD 07.135: Oral Interpretation of Literature**

**3 s.h.**

This course studies the basic principles of vocal control applied to oral communication of various forms of literature. It emphasizes such vocal techniques as stress, pause, rate, etc. and these are coordinated with body and facial expression to achieve clarity of meaning and mood.

### **THD 07.195: Exploring Social Issues through Theatre**

**3 s.h.**

The student will study theatrical styles as a response to the problems of society. Issues like sexism, racism, aging, intercultural conflicts and the AIDS crisis will be explored as they appear in theatrical forms such as the problem play, comedy and the epic theatre.

### **THD 07.201: Introduction to Theatre**

**3 s.h.**

Students study principal dramatic types from ancient to modern with emphasis on the distinguishing characteristics of form (tragedy, melodrama, comedy, etc.) and on basic elements of structure (classic, neo-classic, contemporary, etc.). The course stresses the fundamentals of play analysis, essential to advanced work in performance, design and history/criticism.

### **THD 07.203: Costuming I**

**1.5 s.h.**

This course will present techniques by which stage costumes are constructed. Students will also be given an outline of the development of fitted clothing. A series of costuming projects will give students a basic understanding of costume design for the theatre.

### **THD 07.205: Costuming II**

**1.5 s.h.**

*Prerequisites: THD 07203*

This is a continuation of the study begun in Costuming I.

### **THD 07.215: Experiencing Acting**

**3 s.h.**

This course is for non-major students interested in exploring their talents. Through the use of improvisation, theatre games and scene projects, students examine how actors strengthen and use imagination, awareness and creativity, and how they analyze, prepare and perform a role.

### **THD 07.230: Stagecraft I (Fall)**

**1.5 s.h.**

Students study technical areas in the preparation of a play. Course areas include script analysis for production, production organization and planning crew organization, fundamentals of technical drawing, introduction to shop tools and processes. Students complete a production book as one of the course requirements as well as fulfill assigned responsibilities for actual theatrical productions.

### **THD 07.231: Stagecraft II (Spring)**

**1.5 s.h.**

Stagecraft II is a continuation of the study begun in Stagecraft I.

### **THD 07.232: Stagecraft III (Fall)**

**1.5 s.h.**

*Prerequisites: THD 07230 and THD 07231*

These courses concentrate on developing advanced skills in the various stagecrafts including carpentry, property construction and the development of electrics, sound and elevational drawings. Students fulfill assigned responsibilities for actual theatrical productions.

### **THD 07.233: Stagecraft IV (Spring)**

**1.5 s.h.**

*Prerequisites: THD 07230 and THD 07231*

This course is a continuation of the study begun in Stagecraft III.

### **THD 07.235: Acting I (Majors Only)**

**3 s.h.**

*Prerequisites: THD 07103*

This course covers elementary actor-training, designed to aid the student actor in identifying both strengths and weaknesses. Actor training exercises are designed to awaken the student actor's sensibilities to creative expression (such as improvisations, theatre games, sensitivity exercises, characterization exercises and performance projects). Open to Theatre majors only; others by permission.

## Courses

### **THD 07.236: Acting II**

**3 s.h.**

*Prerequisites: THD 07235*

An intermediate level acting course, Acting II deepens and extends the basic skills acquired in Acting I. Focusing mainly on improvisation and its application to character creation and role development, the course stresses the relationship between the creativity and spontaneity inherent in improvisation and the discipline and design necessary for the creation of a role from printed scripts.

### **THD 07.240: Practicum - Performance Ensemble**

**0 to .5 s.h.**

Under the supervision of Theatre/Dance performance faculty students participate as performers or directorial/choreographic assistants in department productions. The learning experience and work of the learning community is credited through this course. May be repeated for credit up to an accumulation of 3 s.h. Effective Fall 2002

### **THD 07.241: Practicum - Production Ensemble**

**0 to .5 s.h.**

Under the supervision of Theatre/Dance technical and design faculty students participate in department productions in technical and design capacities. The learning experience and work of the learning community is credited through this course. May be repeated for credit up to an accumulation of 3 s.h.

### **THD 07.245: Stage Makeup**

**1 s.h.**

This course studies the techniques and styles of makeup for the theatre, through demonstration and laboratory work. Students are required to purchase an inexpensive student makeup kit.

### **THD 07.250: Children's Theatre**

**3 s.h.**

In this course, students study the techniques of producing plays with children and adult-produced plays for child audiences. It considers such topics as play and audience analysis, directing methods, technical production and techniques of working with and for children.

### **THD 07.270: Theatre Study Off-Campus**

**1 to 6 s.h.**

This course studies drama at important theatrical centers in the United States or abroad, supervised by faculty. It includes attendance at productions, discussions with practitioners, tours and specialized workshops, investigation of historical and cultural sites. Costs vary according to the center being studied and are borne by the student. May be repeated under a different subtitle.

### **THD 07.275: Children's Theatre Workshop**

**3 s.h.**

This course concentrates on the presentation of a children's show to be mounted and acted by Rowan students for South Jersey elementary school children. The college students will be involved in all phases of the production, including a "mini-tour" of the show following the production at Rowan University. This course may be repeated with consent of instructor. This course may not be offered annually.

### **THD 07.300: Drawing and Rendering for the Theatre**

**3 s.h.**

*Prerequisites: THD 07232*

This course introduces students to methods of presenting theatrical design ideas in two-dimensional formats. Students will learn such skills as perspective drawing, rendering in watercolor, gouache pencil or marker and/or using computer-aided drawing and painting. In addition, students will complete a portfolio to illustrate the skills learned.

### **THD 07.301: African, African-American Theatre: Intercultural Definitions**

**3 s.h.**

Explores the commonality, or difference of styles and visions, in African and African American Theatre, with works by contemporary African and African American playwrights, such as August Wilson, Wole Soyinks, Imamu Amiri Baraka, Susan Lori Parks, Efua Sutherland and Femi Osofisan. It will also examine the influences of play directors, actors and musicians (Hip-Hop, Jazz, Blues, etc.) who contribute to that aesthetic continuum. The practices, issues and achievements of these playwrights and their unique forms of theater shall be used to project a future for African American theatre in twenty-first century America. These works shall be used as signposts of stylistic and critical commentary. This is a lecture cum performance course in which students will be writing, making and performing their own Theatres of the future as final projects.

### **THD 07.305: Drafting and Modelmaking for the Theatre**

**3 s.h.**

*Prerequisites: THD 07232*

The course provides students with advanced opportunities to practice drafting skills in the preparation of designer's elevations and detail drawings in the production of working drawings for the scenic and electric shops. Students will use traditional drafting methods and tools as well as CAD techniques and machinery. This course may not be offered annually.

## Courses

### **THD 07.310: Foundations of Theatrical Design**

**3 s.h.**

*Prerequisites: THD 07232*

In this course, students study the elements that lay the foundation for a successful design career in the theatre. Beginning with an examination of the place of design in the theatre process, students then study the principles of visual composition and elements of design, and study playscripts in order to formulate an appropriate design. Students will also be introduced to the study of historical periods and styles of decor and get exposure to basic sketching and drafting of theatrical designs.

### **THD 07.315: Reader's Theatre Workshop**

**3 s.h.**

*Prerequisites: CMS 06135*

In this course, students study the creative and adaptive processes involved in preparing and presenting literature on stage in a reader's theatre situation. Performances of the manuscripts compiled in the course also help develop the students' own interpretive skills beyond those which they acquired in the introductory course (Oral Interpretation of Literature). This course may not be offered annually.

### **THD 07.335: Advanced Acting**

**3 s.h.**

*Prerequisites: THD 07236*

This course makes an intensified study of characterization, while continuing developmental work in bodily and vocal control. It covers approaches to role study as well as the techniques of period acting styles. It combines theory and practice, including class and public performance. This course may not be offered annually.

### **THD 07.338: Touring the Theatre Production**

**3 s.h.**

Students study procedures in touring theatre or dance productions off campus. Students learn sets, properties, costume design and construction, lighting and sound, staging and performance consistency and ways of adapting to a variety of facilities and audiences. Students study promotion, organization and administration of tours. Open to students selected for the cast and crew of the production. May be repeated. This course may not be offered annually.

### **THD 07.339: History of the Theatre to 1700**

**3 s.h.**

This course studies the important works and writers for the stage, together with the development of theatrical modes of presentation and their influences upon the drama of each period, from the beginnings of theatre in ancient Greece to 1700. Relationships are drawn between the developing theatre and the political and social history of the times.

### **THD 07.340: History of the Theatre 1700 to 1956**

**3 s.h.**

This course is a continuation of THD07.339, bringing the study of theatre and drama from 1700 to the beginning of the modern period with Ibsen, Chekhov, Strindberg and Shaw, then following with German Expressionism, the emergence of American Theatre in the 1920's, the despair of the Great Depression, and the World War II era. (THD07.339 is not a prerequisite for this course.)

### **THD 07.345: Rehearsal and Performance**

**.5 s.h.**

*Prerequisites: THD 07236*

This course prepares students for a role for public performance. Once cast, students will study production preparation from initial concept through the rehearsal process into performance, including the improvement of vocal and physical technique and its application to characterization. The course may be repeated one time.

### **THD 07.350: Scene Design Studio**

**3 s.h.**

*Prerequisites: THD 07231*

This course studies the relationship of the space/time arts to the nature and function of scenic design. Theory is combined and tested through practical renderings of various plans of the designer. This course may not be offered annually.

### **THD 07.353: Stage Lighting Design and Practice**

**3 s.h.**

*Prerequisites: THD 07231*

In this course, students become familiar with the essential elements of color theory, the physics of light, basic electricity, the characteristics of specific stage lighting instruments and dimming control equipment and procedure for designing lighting for a production. Practical experience is included through various types of design problems and work on college theatrical presentations. This course may not be offered annually.

### **THD 07.356: Costume Design**

**3 s.h.**

This course emphasizes the design of costume for the theatre. Costume and its relation to the character and the play are examined. Through a series of costumes projects, students explore the elements of design, figure drawing and costume history. This course may not be offered annually.

## Courses

### **THD 07.360: Musical Theatre**

**3 s.h.**

This course studies the history of musical theatre, the contributions of artists who have contributed to the mature theatre and concludes with an analysis of musical theatre elements. It covers the origins of musical theatre, contributions of major practitioners of the form, current status of musical theatre and critical evaluation. This course may not be offered annually.

### **THD 07.365: Theatre Management**

**3 s.h.**

This course is an introduction to the economic and administrative function of commercial, repertory, educational and community theatre in the United States. Students study the role of the producer/manager in policy making, budgeting and operations, focusing on legal regulations, personnel, facilities, financing, scheduling, public relations and promotion. Non-theatre majors should have THD07.130 or permission of the instructor. This course may not be offered annually.

### **THD 07.370: Independent Study**

**1 to 6 s.h.**

This course allows students to pursue an independent project, as determined by student and adviser. It is open to speech majors and minors and to others in related arts by consent of the instructor.

### **THD 07.375: Theatre Workshop**

**3 s.h.**

This workshop studies the theoretical and practical aspect of theatre arts through supervision of problems in performance, set design, construction, lighting, costuming and makeup, business management and directing. By permission of Department only. (May be repeated once; maximum of 6 hrs.)

### **THD 07.380: Technical Production and Organization**

**3 s.h.**

*Prerequisites: THD 07232 and THD 07233*

This course is an advanced study of Technical Production. It introduces the process, tools and skills needed to organize and run a production from the upper management level of the Technical Director. Topics covered are structural design, building procedures, the proper and safe use of building materials, personnel management and organizational skills. The class will consist of a variety of theoretical and practical projects.

### **THD 07.390: Technical Supervision I**

**.5 s.h.**

*Prerequisites: THD 07230 and THD 07231 and THD 07232 and THD 07233*

Students learn the artistic and administrative responsibilities of technical staff supervisors on a theatre production team. Positions studied include assistant technical director, stage manager, master carpenter, master electrician, sound engineer properties master, and wardrobe supervisor, with equal emphasis placed upon understanding a job's responsibilities and the techniques of supervising subordinate personnel. Students will be required to function successfully in one assigned supervisory capacity for a mainstage production.

### **THD 07.391: Technical Supervision II**

**.5 s.h.**

Further training and experience in supervising technical production work. Students will be working on a different production and in a different capacity than in Technical Supervision I. These two courses may be taken in either order.

### **THD 07.405: Seminar in Theatre**

**3 s.h.**

Restricted to Theatre and Dance majors, this course offers students a choice of specialized study of a particular interest area in theatre or dance.

### **THD 07.410: Internship in Theatre**

**3 to 15 s.h.**

A semester's field experience offers the advanced student opportunities to develop theatre skills in supervised on-the-job situations. Students are placed in an appropriate theatre to obtain practical training. By department permission only. Students apply to the department the beginning of the semester prior to the internship. Fall/Spring internships are 15 s.h.; Summer internships, 12 s.h.

### **THD 07.430: Directing I**

**3 s.h.**

*Prerequisites: THD 07231*

This course studies theories and techniques of script analysis and its translation into dramatic action and dramatic sound on the stage, including such concepts as composition, movement, pacing and the development of basic acting ability. Practical directing experience will be utilized.

## Courses

### **THD 07.431: Directing II**

**3 s.h.**

*Prerequisites: THD 07430*

This course is a continuation of Directing I in which the skills studied in that course are deepened and extended. In addition to studying techniques of script analysis and staging in greater detail, students investigate various production styles and methodologies. A major portion of time is devoted to a workshop situation in which students stage scenes and submit them to class critique. This course may not be offered annually.

### **THD 07.435: Creative Dramatics**

**3 s.h.**

This course covers the philosophy underlying speech and dramatic activities for children. Methods and materials for creative drama, story telling, role playing, word games, listening and pantomime are studied and analyzed. Students participate in demonstrations in the classroom.

### **THD 07.440: Contemporary World Theatre - WI**

**3 s.h.**

*Prerequisites: ENGL 01112*

Designed to examine significant developments in world theatre and drama since 1956, this course focuses on writers, actors and groups who have influenced theatre in the last half century. Starting with the angry young men and women of England in the 1950s, the course moves through the work of the absurdists, the Civil Rights Movement, Vietnam and the Age of Protest (the Rock revolution). It delves into environmental theatre, the Women's Movement, gay and lesbian theatre, the Aids epidemic, and considers postmodern theatre practice throughout the world.

### **THD 07.460: Senior Project in Theatre Arts**

**0 s.h.**

Designed as a capstone experience for Theatre Arts. Selecting a project within a theatre specialty (Performance, Design/Technical, History/Criticism), and working with a faculty adviser, the student will conceive, research and execute a specially devised work for public showing or local publication.

### **THD 08.126: Movement for the Actor**

**3 s.h.**

*Prerequisites: THD 08135*

Students study the fundamentals of movement as applied to stage movements, communication and characterization. The course covers physical discipline, relaxation, shaping, movement, exploring space, movement in ensemble, emotion and the body, gesture and communication, and physical characterization. Individual and group exercises assist students in developing a physical technique for the actor in action. This course may not be offered annually.

### **THD 08.135: Elements of Dance**

**3 s.h.**

This course provides training at the elementary level of technique in ballet, jazz and modern dance. It explores movement in time, space and energy relationships, emphasizing individual and group creative experiences through improvisations.

### **THD 08.140: Dance Improvisation I**

**1.5 s.h.**

The course explores the creation of spontaneous movement experiences with the purpose of increasing body awareness, movement invention and movement creativity. This course is offered once annually. Effective Fall 2003.

### **THD 08.141: Dance Improvisation II**

**1.5 s.h.**

*Prerequisites: THD 08140*

The course continues and further develops skills in the creation of spontaneous movement experiences with the purpose of increasing body awareness, movement invention and movement creativity. This course is offered once annually. Effective Fall 2003.

### **THD 08.146: World Dance Forms**

**3 s.h.**

This is a movement course which introduces students to a broad spectrum of dances from Asia, Europe, the Middle East, Africa, and the Americas. Emphasis is placed upon learning and performing dances from various countries throughout the world. The socio-historical context within which each dance form evolved is also examined. No previous training in dance is required.

### **THD 08.151: Ethnic and Character Dance**

**3 s.h.**

*Prerequisites: THD 08135*

This course studies dance, music, customs and other cultural manifestations of special ethnic regions. It emphasizes the application of the folk art forms for theatre use. Among the dance forms studied are Scandinavian, Central European, African, Latin American, Mediterranean. Each semester focuses on two or more of these dance forms.

## Courses

### **THD 08.190: Ballroom Dance**

**3 s.h.**

This movement course introduces the student to Ballroom Dance and its various forms: foxtrot, waltz, swing, jitterbug, disco, club, samba, merengue, rumba, cha cha, and tango. Emphasis is placed upon basic steps, body placement, style, musicality, choreography, and the fundamentals of partnering. Observing, critiquing, and researching ballroom dance are also included within the course.

### **THD 08.202: Tap Dance I**

**3 s.h.**

This introductory course covers the fundamentals of tap dance, an indigenous American art form with African, Irish, and English roots. Emphasis will be placed on technique, musicality, and style. The course introduces barre work, center floor exercises, traveling patterns, and a variety of steps and combinations. Opportunities will be provided to observe and perform tap dance, as well as research history.

### **THD 08.203: Tap Dance II**

**3 s.h.**

*Prerequisites: THD 08135 and THD 08202*

This course continues the study of tap on an intermediate level.

### **THD 08.222: Dance for the Musical Theatre**

**3 s.h.**

*Prerequisites: THD 08135*

This course is an intermediate level experience of technical training in stylized jazz dances used in Broadway musical shows. Students have the opportunity to mount excerpts of dance routines from various eras and to perform them for the university community.

### **THD 08.225: Dance Composition I**

**3 s.h.**

This course provides a working knowledge and understanding of the fundamental elements involved in the craft of composing a dance. It emphasizes space, time and dynamics. Short solo and group pieces are presented in an informal setting. This course may not be offered annually.

### **THD 08.226: Dance Composition II**

**3 s.h.**

*Prerequisites: THD 08326*

This course provides in-depth compositional theory, methods, and conceptual approaches to traditional and non-literal choreography. It emphasizes the relationship between form, content, technique and projection of the dance image. The student will work both with solo and group forms in order to create choreography to be presented in an informal setting. Sound/music is introduced at this state of creative study. This course is offered annually. Effective Fall 2003.

### **THD 08.236: Modern Dance I**

**3 s.h.**

*Prerequisites: THD 08135*

This course is designed for the student interested in beginning to master the discipline of modern dance technique. The course draws from the repertoires of recognized modern dance artists who have established a specific movement vocabulary. Students have an opportunity to analyze various techniques for personal development and the expansion of an articulate movement vocabulary.

### **THD 08.237: Modern Dance II**

**3 s.h.**

*Prerequisites: THD 08236*

This course continues the technical development of students on an intermediate level; it focuses on the theory and practical application in the principles of Modern Dance.

### **THD 08.246: Ballet I**

**3 s.h.**

*Prerequisites: THD 08135*

Students are introduced to the vocabulary and techniques of ballet movement with emphasis on body alignment and effective methods for gaining strength and flexibility necessary for proper ballet deportment. It includes barre (bar), centre floor and the basic elements of classical ballet vocabulary.

### **THD 08.247: Ballet II**

**3 s.h.**

*Prerequisites: THD 08246*

An intermediate level of technique designed for students with sufficient technical training in Ballet I to continue technical development, this course includes barre (bar) and centre floor and continues to build on the elements of classical ballet.

### **THD 08.256: Jazz Dance I**

**3 s.h.**

*Prerequisites: THD 08135*

An introduction to a cross-section of jazz techniques derived from pioneer jazz dancers, this course emphasizes movement styles and jazz rhythms.

## Courses

### **THD 08.257: Jazz Dance II**

**3 s.h.**

*Prerequisites: THD 08256*

This course is designed for students interested in mastering an intermediate level of movement skill in jazz. It emphasizes theoretical and practical understanding of the jazz form.

### **THD 08.270: Lecture/Demonstration Production**

**3 s.h.**

*Prerequisites: THD 08237*

This course offers students an opportunity to experiment with improvisation and a variety of choreographic approaches using the elements of dance. It provides students with the performing experiences necessary for choreographing and producing short dance pieces. Resultant productions are performed as lecture/demonstrations throughout public and private schools of South Jersey. This course may not be offered annually.

### **THD 08.311: African Influences in American Dance**

**3 s.h.**

This is a movement and theory course which surveys various dance forms indigenous to African and African-American cultures. Emphasis is placed upon the evolution and contribution of African-derived dance forms within America. The richness and complexity of African aesthetics as embodied within dance in America are highlighted. No previous dance training is required.

### **THD 08.315: Creative Dance for Children**

**3 s.h.**

*Prerequisites: THD 08135*

Utilizing functional movement experiences, this course emphasizes creative expression and its relationship to the aesthetic development of the young child. Students examine and analyze pertinent research materials in addition to the laboratory experiences. This provides a basis for students to relate creative inventiveness to young children. This course may not be offered annually.

### **THD 08.330: Dance Notation**

**3 s.h.**

*Prerequisites: THD 08236 and THD 08246*

This course introduces students to a study and practice of reading and recording dance movements by means of symbols. It offers an opportunity to interpret dance notation scores of simple ballet, folk, and modern dance. This course may not be offered annually.

### **THD 08.337: Choreography**

**3 s.h.**

*Prerequisites: THD 08326*

This course provides application of the principles of dance composition to choreographic projects by exploring, analyzing and experimenting with problems in dance performance and production. It emphasizes individual and group improvisation and the use of different styles. This course acts as a foundation for field experience. This course may not be offered annually.

### **THD 08.346: Ballet III**

**3 s.h.**

*Prerequisites: THD 08247*

An advanced level of ballet techniques for the further development and expansion of the ballet movement vocabulary, this course includes adagio and allegro. Partnering may be included depending upon male enrollment. This course may not be offered annually.

### **THD 08.355: Introduction to Dance Therapy**

**3 s.h.**

*Prerequisites: THD 08135*

An introductory course for students who are interested in the field of dance therapy, the course demonstrates dance as a therapeutic and educational growth process that integrates the areas of cognitive, social-emotional and physical development. Part of the course is presented in a clinical setting, offering students an opportunity to apply what has been learned. This course may not be offered annually.

### **THD 08.360: Jazz Dance III**

**3 s.h.**

*Prerequisites: THD 08257*

This course is designed for students interested in mastering an advanced level of movement skill in jazz dance. It includes a historical perspective on the evolution of jazz dance. Emphasis will be placed on jazz technique, rhythms, terminology, style and performance. This course may not be offered annually.

### **THD 08.377: Modern Dance III**

**3 s.h.**

*Prerequisites: THD 08237*

This course is designed for students seeking an advanced level of technical training. It includes analysis and development of the styles and techniques of contemporary dance masters. It focuses on technique, musicality, style and performance. This course may not be offered annually.

## Courses

### **THD 08.378: Modern Dance IV**

**1.5 s.h.**

*Prerequisites: THD 08377*

This course is designed for students interested in mastering the discipline of modern dance technique. This course emphasizes alignment, somatic release and the application of movement concepts as applied to advanced level dance technique. This course is offered annually.

### **THD 08.436: Dance History**

**3 s.h.**

*Prerequisites: THD 08135*

This course studies the vital role dance has in cultural development from prehistoric times to the contemporary period and the relation of dance to music and other art forms throughout history. It stresses individuals and events whose influences shaped the development of dance. This course may not be offered annually.

### **THD 08.465: Dynamics of Human Movement**

**3 s.h.**

This course offers students a working knowledge of the body from the standpoint of dynamics, spatial orientation, kinesthetic awareness, and alignment principles. It focuses on systems of movement description and analysis and introduces corrective measures to deal with movement habits and patterns that interfere with body performance. This course may not be offered annually.

## Writing Arts

### **COMP 01.100: Improving Personal Writing Skills**

**3 s.h.**

This developmental writing course helps students eliminate major writing problems with essay organization, support, and mechanics. The course improves students' writing prior to enrollment in College Composition I. Students' progress is evaluated on the basis of a portfolio of their semester's work. A writing test determines student placement.

### **COMP 01.101: Writing Lab Experience**

**3 s.h.**

Students who have failed College Composition I or Integrated College Composition I may be referred to a 3-credit course called Writing Lab Experience. These students receive an Incomplete grade for Freshman Composition on their transcript. Students who successfully complete Writing Lab Experience are awarded a Pass for WLE, and the incomplete in the CCI or Integrated course is replaced with a grade. Writing Lab Experience credits do not count towards graduation or General Education requirements. The course is restricted to students in the First-Year Writing Program.

### **COMP 01.105: Integrated College Composition**

**4 s.h.**

This 4 credit intensive writing course provides work in essay organization, support, and mechanics. The course emphasizes the writing process and the development of writing skills. Students read and analyze the writing of professionals and peers. Completing this course fulfills the College Composition I writing requirement.

### **COMP 01.111: College Composition I**

**3 s.h.**

This course teaches students to write competent expository prose. It emphasizes the writing process, including prewriting, drafting and rewriting skills. Students write frequently, both in and out of class. Students also read and analyze the work of professionals and peers.

### **COMP 01.112: College Composition II**

**3 s.h.**

*Prerequisites: ENGL 01111 or ENGL 01105 or COMP 01111 or COMP 01105*

College Composition II emphasizes critical thinking, reading, and writing as they relate to research and argumentation. Evaluation of information as well as exercises in critical thinking and research design build upon skills achieved in College Composition I. A major activity involves writing and documenting a research paper.

### **CRWR 07.290: Creative Writing I**

**3 s.h.**

*Prerequisites: ENGL 01111 or COMP 01111 or COMP 01105 or ENGL 01105 or ENGR 01101*

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.

## Courses

### **CRWR 07.291: Creative Writing II**

**3 s.h.**

*Prerequisites: 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.

### **CRWR 07.309: Writing Children's Stories**

**3 s.h.**

*Prerequisites: 30 hour prerequisite*

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.

### **CRWR 07.391: 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.

### **CRWR 07.395: Writing Poetry**

**3 s.h.**

*Prerequisites: 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.

### **ESL 08.110: English as a Second Language I**

**3 s.h.**

Developed for students whose native language is not English, this course places emphasis on listening and speaking while developing skills through practice of reading and writing in English. The course includes cultural topics to facilitate students' adaptation to the American educational environment. This course may not be offered annually.

### **ESL 08.111: English as a Second Language II**

**3 s.h.**

This is a mid-level course for students learning English as a second language. It helps students acquire increased skill in English usage, particularly written English. The course focuses on sentence structure and other grammatical concerns such as verb formation and pronoun reference. There is also some emphasis on spoken English. Students continue to discuss cultural topics while improving their ability to read and write in the target language of English.

### **ESL 08.112: English as a Second Language III**

**3 s.h.**

This course helps non-native students succeed in college by developing increased competence in the use of English. Students read and write in English, discussing differences between native languages and English. They also discuss writing formats generally encountered in college. The course offers further examination of English syntax and stresses building an English vocabulary.

### **ESL 08.115: Basics in Academic English**

**9 s.h.**

This developmental course will introduce English language learners to the academic English skills needed to succeed in college. Using an integrated skills language approach, students will improve in all language skills as students learn to write various genres of essays while also offering further examination of English syntax and vocabulary building.

### **ESL 08.120: Advanced Academic English for Non-Native Speakers of English**

**9 s.h.**

This course is designed to further develop academic English Skills for English language learners so that they are prepared to succeed in college. While exploring cross-cultural topics of interest, students will focus on developing a more complex understanding and use of academic writing. With the emphasis on writing skills, students will hone their library and information literacy skills needed for college.

## Courses

### **WA 01.301: Writing, Research & Technology**

**3 s.h.**

*Prerequisites: ENGL 01112 or COMP 01112*

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 01.302: 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 01.304: Writing with Style**

**3 s.h.**

*Prerequisites: COMP 01112 Required Credits: 45.000*

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 01.320: Field Experience in Writing Arts**

**3 to 6 s.h.**

Under professional supervision in the field, students practice theories and skills learned in the classroom.

### **WA 01.400: Writing for the Workplace-WI**

**3 s.h.**

*Prerequisites: 75 hour prerequisite*

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 01.401: The Writer's Mind**

**3 s.h.**

*Prerequisites: COMP 01112 . Required Credits: 45.000*

The Writer's Mind examines the principles and practices that guide how writers think and develop creative, expository, and argumentative writing. This class addresses the connections and interdependencies between thinking about a complex topic and writing intelligibly. Students will examine how writing errors often reflect thinking errors, how writer's block develops, as well as strategies to overcome it, how metaphor functions in writing to structure thought, and how a writer's thought process matures over time.

### **WA 01.405: Evaluating Writing**

**3 s.h.**

*Prerequisites: ENGL 01112 or COMP 01112*

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 01.408: Writing as Managers**

**3 s.h.**

*Prerequisites: COMP 01112 and Required Credits: 45.000 .*

This course provides Management students with extensive practice in preparing the written materials required by common management activities. Assignments include preparing the written materials required for OSHA compliance, in disciplinary situations, in alleged sexual harassment situations, and customer service. Other specific topical assignments will be developed to respond to changes in the education needed by Management students.

### **WA 01.410: Independent Study in Writing Arts Program**

**3 to 6 s.h.**

This course provides students with an opportunity to work independently on specialized topics under the guidance of a faculty member. Generally, this course can not be substituted for any course offered by a department in the College of Communication. Permissions are needed from the Department Chair and the Dean.

## **Courses**

### **WA 07.200: Introduction to Writing Arts**

**3 s.h.**

Introduction to Writing Arts familiarizes students with the disciplinary underpinnings of Writing Arts, providing a background in the history of writing, current writing theories, writing as technology, and the writing professions. The course covers these issues within the context of the Writing Arts major, enabling students to situate themselves in a community of writers and language professionals and preparing them for upper-level coursework.

### **WA 07.410: Tutorial Writing**

**3 s.h.**

This course provides students theory and practice in tutoring writing at all educational levels. It covers the writing process, the particulars of the tutorial relationship and issues of working with writers from a variety of backgrounds and abilities. It is recommended for students who are presently engaged in the tutoring of writing and those who may teach writing in one-on-one or small-group settings in the future

# Faculty List

## Accounting and Finance

<b>Bao, Da-Hsien</b> <i>B.S., Fu Jen Catholic University; M.B.A., Ph.D., University of Southern California</i>	<b>Professor</b>
<b>Chung, Shifei</b> <i>B.S., National Taiwan University; M.S., University of Wisconsin-Madison; CPA; Ph.D., University of Memphis</i>	<b>Associate Professor</b>
<b>Hughes, Diane</b> <i>B.A., Rutgers College; M.B.A., Long Island University; J.D., Rutgers University</i>	<b>Associate Professor</b>
<b>Isik, Ihsan</b> <i>B.S., Middle East Technical University; M.S., Texas Tech University, M.A., Ph.D., University of New Orleans</i>	<b>Associate Professor</b>
<b>Kyj, Larissa</b> <i>B.A., Fordham; M.A., Ph.D., Columbia University; CPA; CMA</i>	<b>Professor</b>
<b>Marmon, Richard</b> <i>B.S., Glassboro State College (Rowan); M.B.A., LaSalle University; J.D., Widener University; CPA; CMA</i>	<b>Associate Professor</b>
<b>Meric, Gulser</b> <i>B.A., Ankara University; M.S., Ph.D., Lehigh University</i>	<b>Professor</b>
<b>Pritchard, Robert</b> <i>B.S., M.B.A., Drexel University; M.A., Ed.D., University of Pennsylvania</i>	<b>Professor</b>
<b>Romeo, George</b> <i>B.S., Rider College; M.S., Loyola College; Ph.D., Drexel University; CPA</i>	<b>Professor</b>
<b>Weidman, Stephanie M.</b> <i>B.S., University of Delaware; M.B.A., Duke; Ph.D., Drexel University; CMA</i>	<b>Associate Professor</b>
<b>Welsh, Carol</b> <i>B.S., M.B.A., Drexel University; Ed.D., University of Delaware; CPA, CIA</i>	<b>Associate Professor</b>

## Art

<b>Adelson, Fred</b> <i>B.A., Univ. of Massachusetts; M.A., M.Phil., Ph.D., Columbia University</i>	<b>Professor</b>
<b>Appelson, Herbert</b> <i>B.A., Brooklyn College; M.S., M.F.A., Univ. of Wisconsin; Ed.D., Columbia University</i>	<b>Professor</b>
<b>Bowman, Susan</b> <i>B.F.A., San Francisco Art Institute; M.F.A., Rutgers University</i>	<b>Assistant Professor</b>
<b>Chard, Daniel</b> <i>B.F.A., Univ. of South Dakota; M.A., Northern State College; Ed.D., Columbia University</i>	<b>Professor</b>
<b>Gallinelli, John</b> <i>B.Ed., Keene State College; Ph.D., University of Maryland</i>	<b>Professor</b>
<b>Graziano, Jane E.</b> <i>B.S., University of Illinois; M.A., Rowan College; Ed.D., Teachers College, Columbia University</i>	<b>Assistant Professor</b>
<b>Hottle, Andrew D</b> <i>B.A., M.A., Ohio State University; Ph.D., Temple University Tyler School of the Arts</i>	<b>Assistant Professor</b>

## Faculty List

**Mitzen, Nancy** Assistant Professor  
*B.A., Columbia College; M.A. New York Institute of Technology; M.F.A., Temple University*

**Ohanian, Nancy L.** Professor  
*B.F.A., Layton School of Art and Design; M.F.A., Pratt Institute*

**Passmore, Kaye Leissner** Assistant Professor  
*B.A., M.A., Texas Tech University; Ed. D. Boston University*

**Thomas, Skeffington N.** Associate Professor  
*B.A., Lewis and Clark College; M.F.A., Southern Illinois University*

**Vaccaro, David E.** Assistant Professor  
*B.F.A. Edinboro State University; M.F.A. University of Tennessee*

### Biological Sciences

**Crumrine, Patrick** Assistant Professor  
*B.S., Plattsburgh State University; Ph.D., University of Kentucky*

**Farish, Donald J.** Professor  
*B.Sc., University of British Columbia; M.S., North Carolina State University; Ph.D., Harvard University; J.D., University of Missouri*

**Grove, Michael W.** Assistant Professor  
*B.S., The Ohio State University; Ph.D., University of South Carolina*

**Hecht, Gregory B.** Associate Professor  
*B.S., University of Rochester; M.A., Ph.D., Princeton University*

**Holbrook, Luke T.** Associate Professor  
*B.S., Fordham University; M.S., Ph.D., University of Massachusetts*

**Hough, Gerald** Assistant Professor  
*B.S., Purdue University; M.S., Ph.D., The Ohio State University*

**Iftode, Cristina** Assistant Professor  
*B.S., M.S., University of Bucharest; M.S., Ph.D., New York University-Medical Center*

**Krufka, Alison** Assistant Professor  
*B.S., College of William and Mary; Ph.D., University of Wisconsin-Madison*

**Meagher, Richard** Professor  
*B.S., M.S., Fairleigh Dickinson University; Ph.D., St. Bonaventure University*

**Mosto, Patricia** Professor  
*National Teacher Certification, Teachers College N6; Licenciada in Biology (M.S.), University of Buenos Aires; M.A. equivalent, The University of Texas at Austin; M.S., Drexel University; Ph.D., University of Buenos Aires*

**O'Brien, Terry** Assistant Professor  
*B.S., M.S., University of Iowa; Ph.D. University of California - Berkeley*

**Prieto, Andrew** Professor  
*B.A., Rutgers University; M.S., New Mexico State University; Ph.D., University of Missouri*

**Richmond, Courtney E.** Assistant Professor  
*B.A., Swarthmore College; Ph.D., University of South Carolina*

## Faculty List

**Scott, Joanne** **Associate Professor**  
*B.S., Bucknell University; M.A., Lehigh University; M.S., Bucknell University; Ph.D., University of Texas, Medical Branch at Galveston*

**Tahamont, Maria** **Professor**  
*B.A., Rowan University; M.S.Ed., Southern Illinois University; Ph.D., Southern Illinois University*

**Wilson, Virginia** **Assistant Professor**  
*B.S.N., University of Hawaii; M.S.N., Widener University*

### Chemical Engineering

**Dahm, Kevin D.** **Associate Professor**  
*B.S., Worcester Polytechnic; Ph.D., Massachusetts Institute of Technology*

**Dorland, Dianne** **Dean/Professor**  
*B.S., M.S., South Dakota School of Mines and Technology; Ph.D., West Virginia University*

**Farrell, Stephanie** **Associate Professor**  
*B.S., University of Pennsylvania; M.S., Stevens Institute of Technology; Ph.D., New Jersey Institute of Technology*

**Gephardt, Zenaida Otero** **Associate Professor**  
*B.S., Northwestern University; M.S., Ph.D., University of Delaware*

**Hesketh, Robert P.** **Professor**  
*B.S., University of Illinois, Champaign-Urbana; Ph.D., University of Delaware*

**Lefebvre, Brian** **Assistant Professor**  
*B.Ch.E., University of Minnesota; Ph.D., University of Delaware*

**Newell, James** **Professor**  
*B.S., Carnegie-Mellon University; M.S., Penn State University; Ph.D., Clemson University*

**Savelski, Mariano J.** **Associate Professor**  
*B.S., University of Buenos Aires; M.S., University of Tulsa; Ph.D., University of Oklahoma*

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<b>Chen, John C.</b> <i>B.S., University of Virginia; M.S., Ph.D., Stanford University</i>	<b>Associate Professor</b>

## Faculty List

<b>Constans, Eric W.</b> <i>B.S., University of Washington; M.S., Ph.D., Pennsylvania State University</i>	<b>Associate Professor</b>
<b>Kadowec, Jennifer A.</b> <i>B.S., Baldwin-Wallace College; M.S., Ph.D., University of Michigan</i>	<b>Associate Professor</b>
<b>Marchese, Anthony J.</b> <i>B.S., M.S., Rensselaer Polytechnic Institute; Ph.D., Princeton University</i>	<b>Associate Professor</b>
<b>Von Lockette, Paris R.</b> <i>B.S., Trinity University; M.S., Ph.D., University of Michigan</i>	<b>Associate Professor</b>
<b>Zhang, Hong</b> <i>B.S., Tsinghua University, China; M.S., Ph.D., University of Pennsylvania</i>	<b>Assistant Professor</b>
<b>Music</b>	
<b>Appleby-Wineberg, Bryan K</b> <i>B.M., Oberlin College; M.M., Cleveland Institute; D.M.A., Rutgers University</i>	<b>Assistant Professor</b>
<b>Cart, Jon</b> <i>B.M., DePauw University; M.M., Indiana University; D.M.A., University of Maryland</i>	<b>Associate Professor</b>
<b>Dammers, Richard</b> <i>B.M., Northwestern University; M.M., University of Illinois; Ph.D., University of Illinois</i>	<b>Assistant Professor</b>
<b>Depasquale, Lawrence</b> <i>(Music Education Coordinator) B.A., M.A., Glassboro State College (Rowan)</i>	<b>Academic Advisor</b>
<b>DiBlasio, Denis</b> <i>B.A., Glassboro State College; M.M., University of Miami</i>	<b>Professor</b>
<b>Gephardt, Donald L.</b> <i>B.M.E., Drake University; B.S., M.S., The Juilliard School; Ed.D., Washington University</i>	<b>Professor</b>
<b>Granite, Bonita</b> <i>B.M.E., M.M.E., Indiana University</i>	<b>Associate Professor</b>
<b>Greenspan, Bertram</b> <i>B.M., American Conservatory of Music; M.M., D.M., Indiana University</i>	<b>Professor</b>
<b>Levinowitz, Lili</b> <i>B.M., Westminster Choir College; M.M., Ph.D., Temple University</i>	<b>Professor</b>
<b>Mapp, Douglas</b> <i>B.M., Philadelphia College of the Performing Arts; M.M., Temple University</i>	<b>Assistant Professor</b>
<b>Mayes, Joseph</b> <i>B.A., Edison College; M.M., Shenendoah University</i>	<b>Professor</b>
<b>Oliver, Harold</b> <i>B.M., Peabody Conservatory; M.M., Yale Univ.; Ph.D., Princeton University</i>	<b>Professor</b>
<b>Pastin, John R.</b> <i>B.S., University of the State of New York; M.M., Northwestern University</i>	<b>Professor</b>
<b>Plant, Lourin</b> <i>B.M.E., Wittenberg University; M.M., D.M.A., College Conservatory of Music, University of Cincinnati</i>	<b>Assistant Professor</b>

## Faculty List

<b>Rawlins, Robert</b> <i>B.A., Glassboro State College; M.A., California State University; M.A., Rowan University; M.A., Ph.D., Rutgers University</i>	<b>Professor</b>
<b>Scarpa, Sal</b> <i>B.A., Glassboro State College; M.M., Eastman School of Music</i>	<b>Assistant Professor</b>
<b>Stewart, Larry</b> <i>B.S., Ball State University; M.M., Northwestern University; D.M.A., Univ. of Michigan</i>	<b>Professor</b>
<b>Stieber, Marian</b> <i>B.M., M.M., Temple University</i>	<b>Associate Professor</b>
<b>Stroope, Z. Randall</b> <i>B.M.E., O. Roberts University; M.M., Univeristy of Colorado; D.M.A., Arixona State University</i>	<b>Assistant Professor</b>
<b>Tomasone, Adeline</b> <i>B.M., Curtis Institute of Music; M.A., Rutgers University; M.M., Rowan University</i>	<b>Assistant Professor</b>
<b>Wade, Thomas</b> <i>B.M., Oberlin College; M.M., University of Connecticut</i>	<b>Assistant Professor</b>
<b>Witten, Dean</b> <i>B.M., Eastman School of Music; M.A., Trinity University</i>	<b>Professor</b>
<b>Zuponicic, Veda</b> <i>B.M., M.M., Indiana University</i>	<b>Professor</b>

### Philosophy and Religion

<b>Ashton, Dianne</b> <i>B.A., Adelphi University; M.A., Temple University; Ph.D., Temple University</i>	<b>Professor</b>
<b>Clowney, David</b> <i>B.A., Calvin College; M.A., Wayne State University; M.Div., Westminster Theological Seminary; Ph.D., Temple University</i>	<b>Associate Professor</b>
<b>Lund, Matthew</b> <i>B.S., University of Minnesota; M.A., Ph.D., University of Illinois at Chicago</i>	<b>Assistant Professor</b>
<b>Miller, Ellen M.</b> <i>B.A., Rutgers University, M.A. York University, Ph.D. York University</i>	<b>Assistant Professor</b>
<b>Wang, Youru</b> <i>B.A., Fudan University, China; Ph.D., Temple University</i>	<b>Associate Professor</b>
<b>Witonsky, Abraham</b> <i>B.A., University of Pennsylvania; M.A., Temple University; Ph.D., Temple University</i>	<b>Instructor</b>

### Physics and Astronomy

<b>Farnelli, Donald</b> <i>B.S., Glassboro State College; M.Ed., Temple University; Ph.D., Union Graduate School</i>	<b>Associate Professor</b>
<b>Flores, Eduardo</b> <i>B.S., New York Polytechnic; M.S., Ph.D., University of Michigan</i>	<b>Associate Professor</b>
<b>Guerra, Erick J.</b> <i>B.S., University of California, Berkeley; M.A., Ph.D., Princeton University</i>	<b>Associate Professor</b>

## Faculty List

<b>Hettinger, Jeffrey D.</b> <i>B.A., Mansfield University; M.A., Ph.D., Boston University</i>	<b>Professor</b>
<b>Klassen, David R.</b> <i>B.S., University of Minnesota; Ph.D., University of Wyoming</i>	<b>Associate Professor</b>
<b>Knoesel, Ernst</b> <i>B.S., Technical University; Ph.D., Free University, Berlin</i>	<b>Assistant Professor</b>
<b>Lim, Michael Jay Young</b> <i>A.B., Harvard College; Ph.D., University of Michigan</i>	<b>Assistant Professor</b>
<b>Ling, Hong</b> <i>B.S., Jiaxin Teacher's College; M.S., Xian Institute of Optics and Fine Mechanics; Ph.D., Drexel University</i>	<b>Professor</b>
<b>Lofland, Samuel E.</b> <i>B.S., M.S., Ph.D., University of Maryland</i>	<b>Professor</b>
<b>Magee-Sauer, Karen P.</b> <i>B.S., University of Virginia; M.S., Ph.D., University of Wisconsin-Madison</i>	<b>Professor</b>

### Political Science

<b>Bragg, Belinda</b> <i>B.A., University of Melbourne, Australia; Ph.D., Texas A&amp;M University</i>	<b>Assistant Professor</b>
<b>Butler, R. Lawrence</b> <i>B.A., Washington and Lee University; M.A., George Mason University; M.A. George Washington University; Ph. D., Princeton University</i>	<b>Assistant Professor</b>
<b>Caswell, Bruce E.</b> <i>B.A., University of Chicago; M.C.P., University of Pennsylvania; Ph.D., Rutgers University</i>	<b>Associate Professor</b>
<b>Rashiduzzaman, Mohammad</b> <i>B.A., M.A., Dacca University, India; Ph.D., Durham University, England.</i>	<b>Associate Professor</b>
<b>Weatherford, Bernadyne</b> <i>B.A., M.A., Texas Tech University; Ph.D., University of New Mexico</i>	<b>Associate Professor</b>

### Psychology

<b>Angelone, Bonnie</b> <i>B.A., University of Tulsa; M.A., Ph.D., Kent State University</i>	<b>Assistant Professor</b>
<b>Blanding, Zenola Benjamin</b> <i>B.S., South Carolina State College; M.A., Rider College; M.M.A.S., United States Army Command &amp; General Staff College; Psy.D., Florida Institute of Technology</i>	<b>Associate Professor</b>
<b>Cahill, Janet</b> <i>B.S., State University of New York at Oneonta; Ph.D., Temple University</i>	<b>Professor</b>
<b>Chapell, Mark S.</b> <i>B.A., Cheyney University of PA; Ph.D., Temple University</i>	<b>Assistant Professor</b>
<b>Davis-LaMastro, Valerie</b> <i>-B.S., Douglass College, Rutgers University; M.S., Villanova University; Ph.D., University of Delaware</i>	<b>Assistant Professor</b>
<b>Dihoff, Roberta</b> <i>-B.A., Rutgers University; M.S., University of Wisconsin at Madison; Ph.D., University of Wisconsin at Madison</i>	<b>Associate Professor</b>

# Faculty List

<b>Ennis, Michele</b> <i>B.A., Rollins Colleg; A.B.D., Temple University</i>	<b>Assistant Professor</b>
<b>Gaer, Eleanor</b> <i>-B.S., University of Wisconsin at Milwaukee; M.S., University of Wisconsin at Madison; Ph.D., University of Illinois; J.D., Rutgers-Camden</i>	<b>Associate Professor</b>
<b>Greco, Monica A.</b> <i>B.S., Albright College; M.A., Temple University; Ph.D., Temple University</i>	<b>Associate Professor</b>
<b>Harper, Jay A.</b> <i>B.S., City College, City University of New York; Ph.D., State University of New York at Stony Brook</i>	<b>Dean/Professor</b>
<b>Haugh, Jim</b> <i>B.A., Baldwin-Wallace College; M.S., Saint Louis University; Ph.D., Saint Louis University</i>	<b>Assistant Professor</b>
<b>Hough, Gerald</b> <i>B.S., Purdue University; M.S., Ph.D., The Ohio State University</i>	<b>Assistant Professor</b>
<b>Jeffrey, Linda</b> <i>-B.A., University of Nebraska; M.A., Teacher's College Columbia University; M.A., University of Chicago; Ph.D., Rutgers University</i>	<b>Professor</b>
<b>Kerwin, Mary Louise E.</b> <i>B.A., M.A., Ph.D., University of Notre Dame</i>	<b>Associate Professor</b>
<b>McElwee, Rory</b> <i>B.A., Drew University; Ph.D., Cornell University</i>	<b>Assistant Professor</b>
<b>Okorodudu, Corann</b> <i>B.A., Cuttington College, Liberia; M.Ed., Ed.D., Harvard University</i>	<b>Professor</b>
<b>Stoeckig, Keiko</b> <i>B.A., Bemidji State University; Ph.D., Dartmouth College</i>	<b>Assistant Professor</b>
<b>Strauss, Lois</b> <i>B.S., Ed., M.Ed., Ed.D., Temple University</i>	<b>Associate Professor</b>
<b>Williams, Leonard J.</b> <i>B.A., University of Delaware; M.A., McMaster University, Hamilton, Ont.; Ph.D., University of South Carolina</i>	<b>Associate Professor</b>
<b>Yurak, Tricia J.</b> <i>B.S., Northern Kentucky University; M.S., Ohio University; Ph.D., Ohio University</i>	<b>Assistant Professor</b>
<b>Public Relations/Advertising</b>	
<b>Basso, Joseph</b> <i>B.A., M.A., Glassboro State College; Ph.D., Texas A &amp; M University</i>	<b>Assistant Professor</b>
<b>Earl, Richard L</b> <i>B.A., M.A., Rutgers University</i>	<b>Instructor</b>
<b>Farbman, Jacob</b> <i>B.A., Rowan University; M.A., Rowan University</i>	<b>Assistant Professor</b>
<b>FitzGerald, Suzanne Sparks</b> <i>B.A., Eastern University; M.S., Drexel University; Ph.D., Temple University; APR; Fellow PRSA</i>	<b>Professor</b>

## Faculty List

**Fulginiti, Anthony** Professor  
*B.A., Laurel Hill College; M.A., Villanova University; M.A., Glassboro State College; APR Fellow PRSA*

**Holtzman, Diane M** Instructor  
*B.A., University of Detroit; M.A., Rowan University*

**Litwin, Larry** Associate Professor  
*B.A., Parsons College; M.A., Glassboro State College*

**Moore, Edward** Associate Professor  
*B.A., M.A., Glassboro State College (Rowan University)*

**Nia-Schoenstein, Asi** Assistant Professor  
*B.A., Clark University; M.S., Boston University*

**Volpe, Charles** Assistant Professor  
*B.A., Brooklyn College; M.A., Rowan University*

### Radio/Television/Film

**Bierman, Joseph** Associate Professor  
*B.A., Rowan University; M.F.A., New York University; Ph.D., Regent University*

**Biesen, Sheri Chinen** Associate Professor  
*B.A., M.A., University of Southern California; Ph.D., The University of Texas*

**Brand, Keith M.** Assistant Professor  
*B.F.A., West Virginia University; M.Ed., Temple University*

**Donovan, Mike** Professor  
*B.A., Jersey City State College; M.A., New York University*

**Eckhardt, Edgar C.** Professor  
*B.A., Colgate University, M.A., Case Western Reserve University*

**Grupenhoff, Richard** Professor  
*B.A., Xavier University; M.A., Purdue University; Ph.D., Ohio State University*

**Kaleta, Kenneth** Professor  
*B.A., M.A., Villanova University; Ph.D., New York University*

**Lancioni, Judith** Associate Professor  
*B.A., College of New Rochelle; M.A., Ohio University; Ph.D., Temple University*

**Nicolae, Diana** Assistant Professor  
*B.A., Bucharest University; M.F.A., University of North Carolina - Greens Borough*

**Vallath, Chandrasekhar** Assistant Professor  
*B. TECH.; Banaras Hindu University, India; M.A., Bowling Green State University; Ph.D., Indiana University*

### Reading

**Browne, Susan** Assistant Professor  
*B.A., Temple University; M.A., Cheyney University; Ed.D., University of Pennsylvania*

**Chen, Xiufang** Assistant Professor  
*B.A., Qufu Normal University; M.A., Beijing Normal University; Ph.D., Texas Tech University*

# Faculty List

<b>Diobilda, Nicholas</b> <i>B.S., West Chester University; M.Ed., Univ. of Delaware; Ph.D., Ohio State University</i>	<b>Professor</b>
<b>Ganske, Kathy A.</b> <i>B.A., University of Iowa; M.Ed., Ph.D., University of Virginia</i>	<b>Professor</b>
<b>Hasit, Cindi</b> <i>B.A., M.S., Ph.D., University of Pennsylvania</i>	<b>Professor</b>
<b>Lee, Valarie</b> <i>B.A., M.A., Ph.D., University of Northern Colorado</i>	<b>Assistant Professor</b>
<b>Leftwich, Stacey E.</b> <i>B.A., Glassboro State College.; M.Ed., Temple University; Ph.D., State University of New York, Albany</i>	<b>Associate Professor</b>
<b>Madden, Marjorie</b> <i>B.A., College of William and Mary; M.A., Glassboro State College; Ph.D., University of Pennsylvania</i>	<b>Assistant Professor</b>
<b>Marker, Elaine S.</b> <i>B.S., Chestnut Hill College; M.Ed., Ed.D., Widener University</i>	<b>Assistant Professor</b>

## Sociology

<b>Abbott, James R.</b> <i>B.A., University of San Diego; M.A., Ph.D., University of Pennsylvania</i>	<b>Associate Professor</b>
<b>Carter, Allison</b> <i>B.A., University of Pennsylvania; M.A., The New School for Social Research</i>	<b>Instructor</b>
<b>Chaskes, Jay</b> <i>B.A., University of Toledo; M.A., Ph.D., Temple University</i>	<b>Professor</b>
<b>Gallant, Mary J.</b> <i>B.A., M.A., University of Missouri; Ph.D., University of Minnesota</i>	<b>Associate Professor</b>
<b>Hartman, Harriet J.</b> <i>B.A., University of California at Los Angeles; M.A., University of Michigan; Ph.D., Hebrew University of Jerusalem</i>	<b>Professor</b>
<b>Hutter, Mark</b> <i>B.A., M.A., Brooklyn College; Ph.D., University of Minnesota</i>	<b>Professor</b>
<b>Jones, Sandra J.</b> <i>B.A., Christopher Newport University; M.S.W., Norfolk State University; M.A., Ph.D., Temple University</i>	<b>Assistant Professor</b>
<b>Li, Yuhui</b> <i>B.A., Sichuan Foreign Languages Institute, China; M.A., Ohio University; Ph.D., Ohio State University</i>	<b>Associate Professor</b>
<b>Miller, DeMond S.</b> <i>B.A., Northeast Louisiana University; M.S., Ph.D., Mississippi State University</i>	<b>Associate Professor</b>
<b>Myers, John</b> <i>B.S., Drexel University; M.A., Ph.D., Fordham University</i>	<b>Professor</b>
<b>Sommo, Anthony J.</b> <i>B.A., M.A., Ph.D., University of Connecticut; M.S.W., Syracuse University</i>	<b>Assistant Professor</b>
<b>Zake, Ieva</b> <i>B.A., University of Latvia; M.A., Ohio State University; Ph.D., University of Massachusetts</i>	<b>Assistant Professor</b>

# Faculty List

## Special Education Services/Instruction Department

<b>Bianco, Sharon Davis</b> <i>B.A., Trenton State College; M.Ed., University of Delaware; Ed.D., Temple University</i>	<b>Professor</b>
<b>Cammarota, Marie</b> <i>B.A., M.A., Glassboro State College; Ed.D., Nova Southeastern University</i>	<b>Associate Professor</b>
<b>Epifanio, Frank</b> <i>B.A., M.A., Rowan University; Ph.D., Temple University</i>	<b>Assistant Professor</b>
<b>Finch, Joan</b> <i>B.A., University of Pennsylvania; M.S., Southern Connecticut State College; Ph.D., Temple University</i>	<b>Assistant Professor</b>
<b>Fitch, Paul James</b> <i>B.A., Rutgers College; Ed.M., Ed.D., Rutgers Graduate School of Education</i>	<b>Assistant Professor</b>
<b>Hamlet,Carolynn</b> <i>B.S., University of Tennessee; M.Ed., Memphis State University; Ph.D., Temple University</i>	<b>Assistant Professor</b>
<b>Hathaway Cook, Donna</b> <i>B.A., M.A., Glassboro State College; Ed.D., Lehigh University</i>	<b>Professor</b>
<b>Ihunnah, Anthony</b> <i>B.A., M.A., Marshall University; Ed.D., Virginia Polytechnic Institute and State</i>	<b>Assistant Professor</b>
<b>Kuder, Sidney Jay</b> <i>B.A. Trinity College; M.Ed., Temple University; Ed.D., Boston University</i>	<b>Professor</b>
<b>McHenry, Sandra L.</b> <i>R.N., Helene Fuld School of Nursing; B.A., Rowan College of NJ; M.S., University of Delaware; D.N.Sc., Widener University</i>	<b>Associate Professor</b>
<b>Ognibene, Gerald</b> <i>B.A., Niagara University; M.S., Canisius College; Ph.D., Ohio State University</i>	<b>Professor</b>
<b>Quint, Walter C.</b> <i>B.S., Shippensburg State College; M.A., Glassboro State College; Ed.D., Temple University</i>	<b>Assistant Professor</b>
<b>Rios, Hector M.</b> <i>B.A., University of Puerto Rico; M.S., State University of New York; Ph.D., Temple University</i>	<b>Associate Professor</b>
<b>Rosenberg, Jerome J.</b> <i>B.A., Oswego State Teachers College; M.A., Columbia University; Ed.D., Temple University; Ph.D., Heed University, West</i>	<b>Associate Professor</b>
<b>Santangelo, Tanya Schmidt</b> <i>B.A., American University; M.A., University of Maryland; Ph.D., University of Maryland</i>	<b>Assistant Professor</b>
<b>Shontz, Marilyn L.</b> <i>A.B., Heidelberg College (Ohio); M.S. in L.S., Case Western Reserve University; Ph.D., Florida State University</i>	<b>Associate Professor</b>
<b>Shuff, Margaret</b> <i>B.A., M.A., Glassboro State College; Ph.D., University of Delaware</i>	<b>Associate Professor</b>
<b>Willett, Holly G.</b> <i>B.A., San Francisco State College; M.L.S., University of California, Berkeley; M.A., Simmons College; Ph.D., University of North Carolina</i>	<b>Associate Professor</b>

# Faculty List

<b>Williams, Barbara Bole</b> <i>B.A., Muskingum College; M.A., M.A., Glassboro State College; Ph.D., Temple University</i>	<b>Assistant Professor</b>
<b>Xin, Joy F.</b> <i>B.A., Tsitsihar Teachers College, China; M.Ed., Ed.D., Peabody College of Vanderbilt University</i>	<b>Professor</b>
<b>Teacher Education (Early Childhood, Elementary Education, Subject Matter)</b>	
<b>Bae-Suh, Soyoun</b> <i>B.A., Ewha Women's University; M.Ed., University of Pittsburgh; Ph.D., University of Illinois</i>	<b>Assistant Professor</b>
<b>Benevento, Jacqueline D.</b> <i>B.A., Montclair State; M.A., Middlebury College; Ed.D., Temple University</i>	<b>Assistant Professor</b>
<b>Bivans, Maurita W</b> <i>B.A., M.Ed., Ed.D., Rutgers University</i>	<b>Assistant Professor</b>
<b>Bornstein, Jodi</b> <i>B.A., Temple University; M.A., Cheyney University; Ed.D., University of Pennsylvania</i>	<b>Assistant Professor</b>
<b>Faison, Christy</b> <i>B.S., Hampton Institute; M.A., The Ohio State University; Ed.D., Temple University</i>	<b>Professor</b>
<b>Jorgensen, Donna W.</b> <i>B.S., West Chester University; M.A. Villanova University; Ed.D., Widener University</i>	<b>Assistant Professor</b>
<b>Levinowitz, Lili - Coordinate Appointment</b> <i>B.M., Westminster Choir College; M.M., Ph.D., Temple University</i>	<b>Professor</b>
<b>McBee, Robin H.</b> <i>B.A., University Without Walls/Providence; M.Ed., Lesley College; Ph.D., Virginia Commonwealth University</i>	<b>Associate Professor</b>
<b>Meredith, Corine</b> <i>B.S., Bloomsburg University; M.A., M.Ed., University of Virginia</i>	<b>Assistant Professor</b>
<b>Meyers, David M.</b> <i>B.A., M.Ed., Ph.D., University of Florida</i>	<b>Associate Professor</b>
<b>Moss, Janet G.</b> <i>B.S., Northwestern University; Ed.M., Harvard University; Ed.D., U.C.L.A.</i>	<b>Associate Professor</b>
<b>Perry, Jill Ann</b> <i>B.S., M.Ed., University of Florida; Ph.D., University of Central Florida</i>	<b>Assistant Professor</b>
<b>Robinson, Randall</b> <i>B.S., Ohio State University; M.S., University of Pennsylvania; Ed.D., Temple University</i>	<b>Associate Professor</b>
<b>Rodriguez, Yvonne</b> <i>B.A., Rutgers University; M.A., Glassboro State College; Ed.D., Temple University</i>	<b>Professor</b>
<b>Sharp, Carol</b> <i>B.A., Glassboro State College; M.A., William Paterson College; Ph.D., Penn State University</i>	<b>Dean/Professor</b>
<b>Sjostrom, Barbara R.</b> <i>B.A., M.S., Ph.D., State University of New York</i>	<b>Professor</b>
<b>Sorrentino, Carmela</b> <i>B.S., West Chester State College; M.Ed., Temple University</i>	<b>Assistant Professor</b>

## Faculty List

<b>Sudeck, Maria R</b> <i>B.S., Trenton State College; M.Ed., Ph.D., Temple University</i>	<b>Assistant Professor</b>
<b>Taber, Susan B.</b> <i>B.A., M.A., Stanford University; Ph.D., University of Delaware</i>	<b>Associate Professor</b>
<b>Tener, Morton</b> <i>B.S., Rider College; M.S., University of Pennsylvania; M.S., Ed.D., Temple University</i>	<b>Professor</b>
<b>Washington, Judy</b> <i>B.A., Brooklyn College; M.Ed., Ed.D., Temple University</i>	<b>Associate Professor</b>
<b>Wassell, Beth</b> <i>B.A., Rowan University; M.A., University of Central Florida; Ph.D., University of Pennsylvania</i>	<b>Assistant Professor</b>
<b>Westcott, Patrick</b> <i>B.A., University of Minnesota; M.A., University of Connecticut; M.A., Fairleigh Dickinson University; Ed.D., Columbia University</i>	<b>Assistant Professor</b>

### Theatre and Dance

<b>Elkins, Leslie A.</b> <i>B.A., Columbia College; M.Ed., Temple University</i>	<b>Assistant Professor</b>
<b>Fusco, Thomas A.</b> <i>B.A., University of Massachusetts; M.F.A., Boston University</i>	<b>Assistant Professor</b>
<b>Graneto, Phillip</b> <i>B.A., Catholic University; M.F.A., Carnegie-Mellon University</i>	<b>Associate Professor</b>
<b>Healy, Bartholomew</b> <i>B.A., College of the Holy Cross; M.F.A., New York University</i>	<b>Associate Professor</b>
<b>Hostetter, Elisabeth</b> <i>B.F.A., Virginia Commonwealth University; M.A., University of Texas; Ph.D., University of Missouri</i>	<b>Assistant Professor</b>
<b>Stewart, Melanie</b> <i>B.A., Webster College; M.F.A., Temple University</i>	<b>Professor</b>
<b>Sullivan, David</b> <i>B.A., Providence College; M.A., Brown University; M.A.T., M.F.A., Boston University</i>	<b>Assistant Professor</b>
<b>Turner, Paule Lawrence</b> <i>B.F.A., Virginia Commonwealth University; M.F.A., Temple University</i>	<b>Assistant Professor</b>

### Writing Arts

<b>Block, Ronald</b> <i>B.A., University of Nebraska; M.A., M.S., Syracuse University;</i>	<b>Assistant Professor</b>
<b>Chang, Julia</b> <i>B.A., Stonehill College; M.S.J., Columbia University; M.A., Temple University</i>	<b>Associate Professor</b>
<b>Courtney, Jennifer</b> <i>B.A., Duquesne University; M.A., Western Michigan; Ph.D., Purdue</i>	<b>Assistant Professor</b>
<b>Donahue, Mary Lee</b> <i>B.A., University of Tennessee; M.A., University of Connecticut</i>	<b>Instructor</b>

# Faculty List

<b>Fell, Loriann</b> <i>B.A. and M.A., Rutgers University;</i>	<b>Instructor</b>
<b>Gess, Denise</b> <i>B.S., Lasalle University; M.A., Rutgers University</i>	<b>Assistant Professor</b>
<b>Giampalmi, Joseph J</b> <i>B.A., M.Ed., Widener University, Ed.D Temple University</i>	<b>Assistant Professor</b>
<b>Han, Aiguo</b> <i>B.A., Xian Foreign Language University; M.A., Ph.D., Indiana University of Pennsylvania</i>	<b>Associate Professor</b>
<b>Harvey, Roberta K</b> <i>B.A., M.A., Univ. of North Dakota; Ph.D., Univ. Wisconsin-Milwaukee</i>	<b>Assistant Professor</b>
<b>Herberg, Erin V.</b> <i>B.S., B.A., Western Carolina University; M.A., Ph.D., Georgia State University</i>	<b>Assistant Professor</b>
<b>Itzkowitz, Martin</b> <i>B.A., Brooklyn College; M.A., Ph.D., New York University</i>	<b>Associate Professor</b>
<b>Johnson, Frances S.</b> <i>B.A., Christopher Newport University; M.A. Old Dominion; Ph.D., Univ. of Oklahoma</i>	<b>Associate Professor</b>
<b>Mannion, Susan</b> <i>B.A., College of New Jersey; M.A. Rowan University</i>	<b>Instructor</b>
<b>Martin, Deb</b> <i>B.S., Western Michigan University; M.A., Ph.D., Texas Woman's University</i>	<b>Assistant Professor</b>
<b>Maxson, Jeffrey N.</b> <i>B.A., Yale University; M.A., Ph.D., University of California at Berkeley</i>	<b>Associate Professor</b>
<b>Penrod, Diane</b> <i>B.S., Medaille College; M.A., Ph.D., Syracuse University</i>	<b>Professor</b>
<b>Reavey, Roberta A.</b> <i>B.A., Westfield College; M.A.T.</i>	<b>Instructor</b>
<b>Rowan, Janice</b> <i>B.A., Rutgers University; M.A., University of Michigan</i>	<b>Professor</b>
<b>Smith, Sandra R</b> <i>B.A., University of Redlands; M.A., Rutgers University</i>	<b>Instructor</b>
<b>Stoll, Donald</b> <i>B.A., Valparaiso University; M.F.A., University of Texas at Austin; Ph.D., Indiana University</i>	<b>Associate Professor</b>
<b>Tweedie, Sanford M.</b> <i>B.A., University of Michigan; M.A., Eastern Michigan University; Ph.D., University of Wisconsin-Milwaukee</i>	<b>Professor</b>
<b>Wolff, William</b> <i>B.A., Union College; M.A., University of Cincinnati; Ph.d., University of Texas</i>	<b>Assistant Professor</b>
<b>Wood, Joyce</b> <i>B.S., Millersville University; M.A., New York University</i>	<b>Instructor</b>
<b>Zehner, Roberta</b> <i>A.B., Rosemont College; M.A., Glassboro State College (Rowan)</i>	<b>Instructor</b>

# Organization of the University

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# Administration of the University

Donald J. Farish.....	President
Ali A. Houshmand.....	Provost
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Mary R. McRae.....	Vice President for University Advancement
Thomas J. Gallia.....	Vice President for University Relations and President's Chief of Staff
James Newell.....	Interim Associate Provost for Academic Affairs
Robert A. Zazzali.....	Associate Provost for Faculty Affairs
Anthony Mordosky.....	Associate Provost for Information Resources
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George Brelsford.....	Associate Vice President for Student Affairs and Dean of Students
Joseph F. Scully, Jr.....	Associate Vice President for Fiscal Affairs and Controller
Jon Robert Cart.....	Dean, College of Fine and Performing Arts
Eric B. Clark.....	Dean, Rowan University at Camden
Dianne Dorland.....	Dean, College of Engineering
Jay A. Harper.....	Dean, College of Liberal Arts and Sciences
Craig Monroe.....	Dean, College of Communication
Edward Schoen.....	Dean, College of Business
Carol Sharp.....	Dean, College of Education
Horacio Sosa.....	Dean, College of Professional and Continuing Education
Bruce A. Whitham.....	Dean, Library Services

# EXECUTIVE ADMINISTRATION AND SENIOR PROFESSIONAL STAFF

- ACCIANI, MARY (2000)** Acting Director of Construction & Capital Projects  
*B.S., M.E., Rutgers University*
- AMORESANO, FRANK (1988)** Director of Internal Audit  
*B.S., Temple University*
- ARNOTT, MELISSA (2003)** Director of Academic Success Center  
*B.A., Neumann College; M.S., West Chester University; Ed.D., University of Sarasota*
- AU, VALERIE (1998)** Director of Development Information Systems  
*B.A., University of Hong Kong; M.A.M.C., University of Florida*
- AYRES, SALLY (1982)** President's Managing Administrative Assistant  
*A.A., Wesley College*
- BASANTIS, MELANIE (1998)** Director of Outreach for the College of Engineering  
*B.S., Penn State University; M.B.A., Widener University*
- BETTS, ALBERT (1994)** Director in Admissions  
*B.A., M.A., Indiana University of Pennsylvania*
- BLANDING, Z. BENJAMIN (1992)** Assistant Vice President of Student Development and Director  
*B.A., South Carolina State University; M.A., Rider University; Psy.D., Florida Institute of Technology*
- BLOCK, LORI A. (1992)** Advisor for Early Childhood Education  
*B.S., University of Scranton; M.P.A., Kutztown University; PHR*
- BRELSFORD, GEORGE (1987)** Associate Vice President for Student Affairs/Dean of Students  
*B.S., Davis & Elkins College; M.Ed., Pennsylvania State University*
- BREWER, GLENN (1978)** Director of Facilities Operations and Maintenance  
*B.S., Rowan University*
- BRUNER, RONALD (1999)** Lab Coordinator for Physics and Astronomy  
*B.A., Rutgers College; M.A., Temple University*
- BUTCHER, RONALD (1991)** Executive Director in Professional and Continuing Education  
*B.S., Western Michigan University; M.A., Eastern Michigan University; Ph.D., University of Michigan*
- CARBONARO-DAVEY, MARGUERITE (1977)** Managing Administrative Assistant in Administration & Finance
- CARDONA, JOSE (1995)** Director of the University Media & Public Relations  
*B.A., M.A., Rowan University*
- CART, JON ROBERT (2006)** Dean of the College of Fine & Performing Arts  
*B.M., DePauw University; M.M., Indiana University; D.M.A., University of Maryland*
- CHIN, STEVEN H. (1997)** Associate Dean of the College of Engineering  
*B.S., Rutgers University; M.S., The John Hopkins University; Ph.D., Rutgers University*
- CLARK, ERIC (1970)** Dean of the Camden Campus  
*B.S., Tufts University; M.A., King School of Social Change, Crozier Theological Seminary; M.A., Ph.D., University of Delaware*
- CLARKE, WILLIAM, III (2000)** Advisor for Subject Matter Education  
*B.S., M.A., Glassboro State College (Rowan); Ed.D., Temple University*
- CUCINOTTA, MARTY (1986)** Provost's Managing Administrative Assistant
- D'AUGUSTINE, ROBERT (2000)** Director of Contract Administration & Risk Management  
*B.A., M.A., University of Pennsylvania; M.B.A., Rutgers University; J.D., Rutgers School of Law*
- DAMMINGER, JOANNE (1997)** Executive Assistant to the Vice President of Student Affairs  
*B.A., M.A., Ed.D., Rowan University*

# EXECUTIVE ADMINISTRATION AND SENIOR PROFESSIONAL STAFF

<b>DEASE, PATRICIA (1980)</b> <i>B.A., M.A., Glassboro State College (Rowan)</i>	<b>Director of the Child Care Center</b>
<b>DEEHAN, CHRISTINE (1999)</b> <i>B.S., M.A., Rowan University</i>	<b>Director of University Events</b>
<b>DORLAND, DIANNE (2000)</b> <i>B.S., M.S., South Dakota School of Mines and Technology; Ph.D., West Virginia University</i>	<b>Dean of the College of Engineering</b>
<b>DUKE, H. KEITH (2001)</b> <i>B.S., Rutgers University</i>	<b>Purchasing Agent</b>
<b>DePASQUALE, LAWRENCE (1983)</b> <i>B.A., M.A., Glassboro State College (Rowan)</i>	<b>Administrative Assistant for Music</b>
<b>EIGENBROT, CAROL (1996)</b> <i>B.S., Springfield College; M.A., Rowan University</i>	<b>Associate Director in Career and Academic Planning Center</b>
<b>EIGENBROT, EDWIN (1993)</b> <i>B.S., M.Ed., Springfield College</i>	<b>Director of Student Information Services</b>
<b>FARISH, DONALD J. (1998)</b> <i>B.Sc., University of British Columbia; M.S., North Carolina State University; Ph.D., Harvard University; J.D., University of Missouri</i>	<b>The President</b>
<b>FISHER, BENJAMIN (1970)</b> <i>B.J., University of Texas; M.A., American University; M.A., Glassboro State College (Rowan); Ph.D., Rutgers University</i>	<b>Public Services Librarian</b>
<b>FISHER, JOANNE (1987)</b> <i>B.A., Rutgers University</i>	<b>Associate Director in Financial Aid</b>
<b>FOGLEIN, JOHATHAN (1996)</b> <i>B.S., University of New Brunswick; M.S., Queens University</i>	<b>Instrument Coordinator and Safety Officer for Chemistry and Biochemistry</b>
<b>FRIERSON, MURIEL (1990)</b> <i>B.A., Chestnut Hill College; M.S., Drexel University</i>	<b>The Registrar</b>
<b>GALLIA, DONNA (2004)</b> <i>B.A., M.A., Rowan University (Glassboro)</i>	<b>Director of the Schaub Instructional Materials Center</b>
<b>GALLIA, THOMAS J. (1970)</b> <i>B.A., M.A., M.A., Glassboro State College; Ed.D., Rutgers University</i>	<b>Vice President for University Relations/President's Chief of Staff</b>
<b>GAYMON, JAMES (1997)</b> <i>B.A., Rowan University; M.A., Rutgers University-Newark</i>	<b>Director of Civic and Governmental Relations</b>
<b>GILCHRIST, DORIE (1978)</b> <i>B.A., Penn State University; M.Ed., Temple University</i>	<b>Director of Graduate Admissions</b>
<b>GIUNTA, KAREN (1986)</b>	<b>Provost's Managing Administrative Assistant</b>
<b>HAGAN, ANNE (1997)</b> <i>B.A., Indiana University; M.S., Drexel University</i>	<b>Director, Major Gifts &amp; Planned Giving</b>
<b>HALE, RICHARD (2005)</b> <i>B.A., Brown University; J.D., Vanderbilt University</i>	<b>Vice-President of Administration and Finance</b>
<b>HARPER, JAY (1999)</b> <i>B.S., City College, City University of New York; Ph.D., State University of NY at Stony Brook</i>	<b>Dean of the College of Liberal Arts and Sciences</b>
<b>HENDERSON, JAMES (1989)</b> <i>B.A., Furman University</i>	<b>Director of Enterprise Information Services</b>

# EXECUTIVE ADMINISTRATION AND SENIOR PROFESSIONAL STAFF

<b>HOGAN, FRANK (1991)</b> <i>A.A.S., Cleveland Institute; Certified Professional Broadcast Engineer, S.B.E.</i>	<b>General Manager of WGLS</b>
<b>HOLLOWAY, KATHY (1987)</b> <i>B.S., Glassboro State College (Rowan)</i>	<b>Director in Human Resources for Administration Services</b>
<b>HOLMES, JUDITH (1988)</b> <i>B.A., Marymount College; M.A., Glassboro State College (Rowan)</i>	<b>Head Reference Librarian</b>
<b>HOUSHMAND, ALI (2006)</b> <i>B.A., M.A., University of Essex, United Kingdom; M.S., Ph.D., University of Michigan</i>	<b>The Provost</b>
<b>IMPERATORE, JOHN (2000)</b> <i>B.S., M.E., Drexel University</i>	<b>Director of Facilities Resource Management</b>
<b>JACKSON, PATRICIA (2000)</b>	<b>Laboratory Technician for Chemistry and Biochemistry</b>
<b>JORDAN-COX, CARMEN (2007)</b> <i>A.B., Indiana University; M.Ed., Pennsylvania State University; Ph.D. Boston College</i>	<b>Vice-President of Student Affairs</b>
<b>KATZ, CRAIG (2001)</b> <i>B.A., Rutgers University; Ed.M., Temple University</i>	<b>Director of International Student Service</b>
<b>KLEIN, BRUCE (1992)</b> <i>B.S., Glassboro State College (Rowan)</i>	<b>Director of Network and System Services</b>
<b>KLOSKEY, THOMAS (1977)</b> <i>B.A., M.A., Temple University</i>	<b>Director in College of Communication</b>
<b>KORDEN, MARY (1988)</b> <i>B.A., Glassboro State College (Rowan)</i>	<b>Director of Preschool at Camden Campus</b>
<b>KUDER, SIDNEY JAY (1984)</b> <i>B.A., Trinity College; M.Ed., Temple University; Ed.D., Boston University</i>	<b>Associate Provost for Research/Dean of Graduate School</b>
<b>KUERZI, KEN (1994)</b> <i>B.S., J.D., Florida State University</i>	<b>Director of Employee/Labor Relations</b>
<b>KUHLEN, JOHN (1987)</b> <i>B.A., M.B.A., Glassboro State College (Rowan)</i>	<b>Director of Facilities Business Services</b>
<b>LAW, FRANCES (1986)</b> <i>B.A., Rowan University</i>	<b>Managing Administrative Assistant in University Advancement</b>
<b>LIPARTITO, ROBERT (2001)</b> <i>B.M., Glassboro State College; M.M., Manhattan School of Music; M.L.S., Queens College (CUNY)</i>	<b>Music Librarian in the College of Fine and Performing Arts</b>
<b>LOVEGROVE, JAMES (1982)</b> <i>B.S., Glassboro State College (Rowan)</i>	<b>Associate Director for Accounts Payable/Long Range Planning</b>
<b>LYNCH, CINDY (1980)</b> <i>B.A., M.A., Glassboro State College (Rowan)</i>	<b>Assistant Dean of the College of Liberal Arts and Sciences</b>
<b>MARGOLIS, JEFFREY (2002)</b> <i>B.S., Temple University; M.A., Rowan University</i>	<b>Advisor for Elementary Education</b>
<b>MARSHALL, LORI (1992)</b> <i>B.S., Evangel College; M.A., Rowan University</i>	<b>Director of University Publications</b>
<b>MAZZEI, DIANE (2003)</b> <i>B.A., M.A., Rowan University</i>	<b>Director in Beginning Teachers Induction Center</b>

# EXECUTIVE ADMINISTRATION AND SENIOR PROFESSIONAL STAFF

<b>MEREDITH, PHYLLIS (1987)</b> <i>B.A., Fayetteville State University; M.L.S., Atlanta University</i>	<b>Public Services Librarian</b>
<b>MICHENER, TIMOTHY (2002)</b> <i>B.S., Kutztown State University; M.S., West Chester State; Ph.D., Walden University</i>	<b>Director of Public Safety</b>
<b>MILLER, DEMOND S. (1997)</b> <i>B.A., Northeast Louisiana University; M.S., Ph.D., Mississippi State University</i>	<b>Director of Liberal Arts and Sciences Institute</b>
<b>MILLIGAN, CAROLYN (2005)</b> <i>B.S., Rutgers University</i>	<b>Director of Payroll</b>
<b>MILLS, JOHN T. (1992)</b> <i>B.S., M.A., Glassboro State College (Rowan)</i>	<b>Director of EOF/MAP</b>
<b>MONROE, CRAIG (2003)</b> <i>B.A., University of Central Oklahoma; M.S., Emporia Kansas State University; Ph.D., University of Nebraska</i>	<b>Dean of the College of Communication</b>
<b>MORAN, EILEEN (1995)</b> <i>B.A., St. Michael's College; M.S., Worcester State College</i>	<b>Director in Development</b>
<b>MORDOSKY, ANTHONY (2000)</b> <i>B.S., Kutztown State University; B.S., Millersville State College; M.B.A., Temple University</i>	<b>Associate Provost for Information Resources</b>
<b>MORRIS, MARJORIE (1975)</b> <i>B.A., University of Pennsylvania; M.S., Drexel University</i>	<b>Head of Music Branch Library</b>
<b>MORROW, EILEEN (1992)</b> <i>B.A., Wilkes College; M.A., Bucknell University; CSP</i>	<b>Director of University Bookstore</b>
<b>MULLENS, CYNTHIA (1980)</b> <i>B.A., Belmont College; M.L.S., George Peabody College for Teachers</i>	<b>Librarian</b>
<b>MULLIGAN, JOSEPH (2004)</b> <i>B.A., M.A., West Chester University</i>	<b>Assistant Dean of Students</b>
<b>MUMMERT, ESTHER (1989)</b> <i>B.S., East Stroudsburg University; M.A., Shippensburg University</i>	<b>Coordinator for College of Communication Academic Advising</b>
<b>McCAFFERTY, JACQUELINE (2003)</b> <i>B.A., Ithaca College; M.S.Ed., Temple University; CELTA Teaching Certificate, Cambridge University</i>	<b>Director of ESL and Basic Skills</b>
<b>McCALL, SALLY (1977)</b> <i>B.S., Drexel University</i>	<b>Director of Budget</b>
<b>McGEE, STUART (1975)</b> <i>B.A., University of Pennsylvania; M.F.A., Temple University</i>	<b>Theatre Arts Manager</b>
<b>McRAE, MARY R.</b> <i>B.S., Villanova University</i>	<b>Vice President for Advancement</b>
<b>NEWELL, JAMES</b> <i>B.S., Carnegie-Mellon University; M.S., Penn State University; Ph.D., Clemson University</i>	<b>Interim Associate Provost for Academic Affairs</b>
<b>NORTON, RICHARD (1997)</b> <i>B.S., Rowan University; M.S., University of Maryland</i>	<b>Laboratory Technician for Chemistry and Biochemistry</b>
<b>NURKOWSKI, LUCIA (1977)</b> <i>B.A., M.Ed., Boston College; Ed.D., Widener University</i>	<b>Associate Director in Admissions</b>
<b>ORLINS, JOSEPH (1999)</b> <i>B.S., University of Washington; M.S., Ph.D., University of Minnesota</i>	<b>Assistant Vice-President for Facilities</b>

# EXECUTIVE ADMINISTRATION AND SENIOR PROFESSIONAL STAFF

- PERRY, JILL (2001)** Interim Associate Dean for College of Education  
*B.S., M.Ed., University of Florida; Ph.D., University of Central Florida*
- PINDER, ANNE (2003)** Assistant Director of Enterprise Information Systems (EIS)  
*B.S., Rowan University; M.A., Certification Information Management, Stevens Institute of Technology*
- PINOCCHI, TINA (1992)** Assistant Vice President of Student Life  
*B.S., M.Ed., Frostburg State College*
- PONTES, NANCY (2003)** Director of Student Health Center  
*B.S.N., Pensacola Christian College, M.S.N., University of Florida; D.N.Sc., Columbia University*
- POTTER, GREGORY (1969)** Associate Dean of Campbell Library  
*B.A., University of Pennsylvania; M.S.L.S., Villanova University; M.A., Glassboro State College (Rowan); Ed.D., Rutgers University; Certified Public Manager, State of New Jersey*
- REEVE, JULIA (1988)** President's Managing Administrative Assistant
- ROBINSON, FAYE (2000)** Public Services Librarian  
*B.A., Glassboro State College (Rowan); M.A., Rowan University*
- ROSENBERGER, ROMINE (1999)** Public Services and Business Librarian  
*B.S., Longwood College; M.S., Virginia Commonwealth University; M.A., Rowan University*
- ROZANSKI, KATHY (1990)** Director of Alumni Relations  
*B.A., Glassboro State College (Rowan)*
- SAHM, GEORGETTE (1999)** Courseware Development Specialist for Instructional Technology  
*B.A., Rowan University; M.A., Philadelphia University*
- SCHMELZ, NICHOLAS (1974)** Advisor in Elementary Education  
*B.A., Bloomfield College; M.A., Seton Hall University*
- SCHOEN, EDWARD J. (1999)** Dean of the Rohrer College of Business  
*B.S., LaSalle University; J.D., Georgetown University Law Center*
- SCHOEN, MARGARET (2003)** Director of Government Grants & Sponsored Research  
*B.S., King's College; M.S., College of Misericordia*
- SCOTT, EILEEN (1977)** Director in Human Resources  
*B.S., Rowan University*
- SCULLY, JOSEPH F., JR. (2000)** Associate Vice President for Fiscal Affairs and Controller  
*B.S., M.B.A., LaSalle University; CPA*
- SHARP, CAROL (1987)** Dean of the College of Education  
*B.A., Glassboro State College; M.A., William Paterson College; Ph.D., Penn State University*
- SIEFRING, KAREN (1983)** Assistant to the Dean of the Rohrer College of Business for Student Advisement  
*B.A., Douglass College; M.A., Glassboro State College (Rowan)*
- SMALL, KATHLEEN (1977)** Advisor in Elementary Education  
*B.A., M.A., Glassboro State College (Rowan)*
- SNYDER, RICHARD (1979)** Director of Accounting Services  
*B.S., Glassboro State College (Rowan); M.B.A., Rowan University*
- SOLOMEN, JOY (1986)** Athletic Director  
*B.A., M.A., Glassboro State College (Rowan)*
- SOSA, HORACIO (2006)** Dean of the College of Professional and Continuing Education  
*B.S., UNLP, Argentina; M.S., Stanford University; Ph.D., Stanford University,*

# EXECUTIVE ADMINISTRATION AND SENIOR PROFESSIONAL STAFF

<b>SPENCER, JEROME (1997)</b> <i>B.S., University of North Carolina at Chapel Hill; M.B.A., Cornell University</i>	<b>Lab Coordinator for Computer Science</b>
<b>STEVENSON, SHEILA (1985)</b> <i>B.A., Rochester Institute of Technology</i>	<b>Director of Sports Information</b>
<b>STOLL, PATRICIA ALEXY (1984)</b> <i>B.A., M.A., Glassboro State College (Rowan); Ed.D., Widener University</i>	<b>MIS/Certification Specialist for the College of Education</b>
<b>STRATTIS, ELLA (1993)</b> <i>B.A., Niagara College; M.L.S., Drexel University</i>	<b>Government Documents Librarian</b>
<b>SULLIVAN-WILLIAMS, LIZZIEL (1976)</b> <i>B.A., Glassboro State College (Rowan); M.A., Antioch University</i>	<b>Director of Career and Academic Planning Center</b>
<b>SWEETEN, LINDA C. (1992)</b> <i>B.A., Trenton State College; M.Ed., University of Delaware</i>	<b>Assistant Dean of the College of Communication</b>
<b>TARTAGLIONE, PHILIP (1972)</b> <i>B.S., LaSalle University</i>	<b>Bursar</b>
<b>TAVAREZ, LUIS (1998)</b> <i>B.A., Glassboro State College (Rowan); M.A., Thomas Edison State College</i>	<b>Director of Financial Aid</b>
<b>TIEMANN, MARIE (2006)</b> <i>B.S., Rutgers University; M.Ed., Ph.D., Temple University</i>	<b>Executive Director of Human Resources</b>
<b>TOPORSKI, NEIL (2003)</b> <i>B.S., University of Wisconsin-Madison; M.S., Clarion University; Ed.D., Lehigh University</i>	<b>Director of Instructional Technology</b>
<b>TURNER, VANETTA (2000)</b> <i>B.A., Penn State University; M.S. Central Michigan University</i>	<b>Associate Director for Pensions and Benefits</b>
<b>VAN BRUNT, MARGARET (1995)</b> <i>B.S., Rutgers University; CPA</i>	<b>Assistant Dean of the Rohrer College of Business</b>
<b>VEACOCK, PEGGY (1983)</b> <i>B.A., Rowan University</i>	<b>Executive Assistant to the Vice-President of University Advancement</b>
<b>VELEZ-YELIN, JOHANNA (1990)</b> <i>B.A., InterAmerican Univ., San Juan, Puerto Rico; M.A., Glassboro State College (Rowan); Ed.D., Widener University</i>	<b>Acting Director of Affirmative Action</b>
<b>WADLEIGH, RICHARD (1988)</b> <i>B.G.S., University of Nebraska</i>	<b>Associate Director of Public Safety</b>
<b>WAGENER, MARK (1988)</b> <i>B.A., B.S., M.B.A., Glassboro State College (Rowan)</i>	<b>Director of Housing and Business Services</b>
<b>WAGNER, FRANK J. (1997)</b> <i>B.S., Kean College; M.S., Thomas Jefferson Medical College</i>	<b>Laboratory Director for Biological Sciences</b>
<b>WENRICH, KEITH (1996)</b> <i>B.S., Susquehanna University; M.S., University of Southern Mississippi</i>	<b>Director of Student Recreation Center</b>
<b>WHITHAM, BRUCE ALAN (2006)</b> <i>B.A., M.L.I.S., University of Western Ontario; M.E.S., York University</i>	<b>Dean of Campbell Library</b>
<b>WILLIAMS, RICHARD A. (1984)</b> <i>B.A., Lincoln University; M.Ed., Trenton State College</i>	<b>Director of EEO/Affirmative Action /Diversity</b>
<b>ZAZZALI, ROBERT (1973)</b> <i>B.A., M.A., Glassboro State College (Rowan); M.A., Rutgers University</i>	<b>Associate Provost for Faculty Affairs</b>

# EXECUTIVE ADMINISTRATION AND SENIOR PROFESSIONAL STAFF

**ZIEGLER, EDWARD (1972)**  
*B.A., Trenton State College; M.A., Glassboro State College (Rowan)*

**Director of University Marketing**

## The Emeriti

<b>ADAMS, ETHEL M. (1968-1984)</b> <i>Psychology</i> <i>B.A., Eastern Michigan Univ.; M.A. Univ. of Michigan; Ed.D., Univ. of Pennsylvania</i>	<b>Professor</b>
<b>ADDISON, CAROLYN (1967-1991)</b> <i>Health &amp; Physical Education</i> <i>B.S., James Madison Univ.; M.A. New York Univ.; Ed.D., Temple University</i>	<b>Professor</b>
<b>ALVINO, ESTHER (1966-1987)</b> <i>Elementary Education</i> <i>B.A., M.A., Glassboro State College</i>	<b>Assistant Professor</b>
<b>AMBACHER, JR. , RICHARD J. (1967-2000)</b> <i>Communication Studies</i> <i>B.A., Glassboro State College; M.F.A., Yale University</i>	<b>Professor</b>
<b>AMME, LINDA (1968-1990)</b> <i>Special Ed. Serv./Instuction</i> <i>B.A., M.A., Glassboro State College</i>	<b>Assistant Professor</b>
<b>ANDERSEN, DONALD (1970-1998)</b> <i>Special Ed. Serv/Instruction</i> <i>B.A., M.Ed., Rutgers University</i>	<b>Assistant Professor</b>
<b>AVRIL, EDWIN (1959-1982)</b> <i>Music</i> <i>B.A., San Francisco State College; M.A., Ed.D., Teachers College, Columbia University</i>	<b>Professor</b>
<b>BARTELT, PEARL W. (1972-1999)</b> <i>Sociology and Dean</i> <i>B.S., M.A., Ph.D., Ohio State University</i>	<b>Professor</b>
<b>BENDER, AARON (1964-1991)</b> <i>History</i> <i>B.A., Brooklyn College; M.A., Ph.D., New York University</i>	<b>Professor</b>
<b>BENNETT, RENEE (1963-1983)</b> <i>Elementary Education</i> <i>B.S., Rider College; M.A., Glassboro State College</i>	<b>Assistant Professor</b>
<b>BEVERLY, LEAH (1958-1984)</b> <i>Health and Physical Education</i> <i>B.S., Southwestern Louisiana College; M.A., N.Y.U.; Ed.D., Univ. of So. Mississippi</i>	<b>Professor</b>
<b>BIANCHI, JOHN (1967-1990)</b> <i>B.S., Villanova Univ.; M.Ed., Rutgers Univ.; Ed.D., Temple University</i>	<b>Education and Coordinator of Research</b>
<b>BISAZZA, GAETANO R. (1966-2000)</b> <i>Biological Sciences</i> <i>B.S., LaSalle College; M.S. Villanova University</i>	<b>Assistant Professor</b>
<b>BLANKEN, MAURICE (1957-1982)</b> <i>Economics and Political Science</i> <i>B.A., Drew University; M.A., Columbia University</i>	<b>Associate Professor</b>

## The Emeriti

<b>BLOUGH, ROBERT (1963-1995)</b> <i>Elementary Education</i> <i>B.S., Juniata College; M.Ed., Temple University; Ed.D., University of Pennsylvania</i>	<b>Professor</b>
<b>BORGEN, EVELYN (1965-1991)</b> <i>Elementary/Early Childhood Education</i> <i>B.S., Monmouth College; M.A., Glassboro State College; Ed.D., Fairleigh Dickinson Univ.</i>	<b>Professor</b>
<b>BOROWEC, ALEXANDER (1956-1988)</b> <i>Physical Sciences</i> <i>B.S., Trenton State College; M.S., Univ. of Pennsylvania; Ed.D., Temple University</i>	<b>Professor</b>
<b>BRENT, GEORGE (1971-2003)</b> <i>Elementary/Early Childhood Education</i> <i>B.A., Ed.M., Boston University; Ed.D., University of Massachusetts</i>	<b>Professor</b>
<b>BRESLIN, FREDERICK (1960-1991)</b> <i>Psychology</i> <i>B.A., Queens College; M.A., Ph.D., New York University</i>	<b>Professor</b>
<b>BRINKER, BEULAH (1960-1984)</b> <i>Elementary Education</i> <i>B.S., Glassboro State College; M.A., New York University</i>	<b>Assistant Professor</b>
<b>BRITTON, PEARL E. (1968-1977)</b> <i>Health and Physical Education</i> <i>B.S., Cortland State College; M.Ed., Ed.D., University of Buffalo</i>	<b>Professor</b>
<b>BROOKS, ELLAIN (1965-1983)</b> <i>Math/Computer Science</i> <i>B.S., North Carolina State; M.A., Columbia University</i>	<b>Assistant Professor</b>
<b>BROWN, ESTELLE (1962-1992)</b> <i>Reading/Speech Correction</i> <i>B.S., M.A., Glassboro State College; Ed.D., Temple University</i>	<b>Professor</b>
<b>BUZASH, GABRIEL (1964-1981)</b> <i>Elementary Education</i> <i>B.S., Slipper Rock State College; M.S., Westminster College; Ed.D. Penn State University</i>	<b>Professor</b>
<b>BYRER, JOSEPH (1968-1995)</b> <i>Technology</i> <i>B.S., M.S., Indiana State University</i>	<b>Assistant Professor</b>
<b>CALLIARI, CARL (1968-2004)</b> <i>Education</i> <i>B.A., M.A., Glassboro State College; Ed.D., Temple University</i>	<b>Professor</b>
<b>CELL, HOWARD R. (1967-2000)</b> <i>Philosophy/Religion</i> <i>B.S., University of Wisconsin; M.A., San Jose University; Ph.D., Temple University</i>	<b>Professor</b>
<b>CHAMBERLAIN, MARK M. (1969-2000)</b> <i>B.S., Franklin and Marshall College; Ph.D., University of Illinois</i>	<b>President Emeritis</b>

## The Emeriti

<b>CIMPRICH, JACK R. (1973-1998)</b> <i>Computer Science</i> <i>B.A., Boston College; M.S. Eng., University of Pennsylvania</i>	<b>Associate Professor</b>
<b>CLAPP, ROBERT A. (1969-2000)</b> <i>Theatre and Dance</i> <i>B.A., Pennsylvania State University; M.A., Syracuse University</i>	<b>Assistant Professor</b>
<b>CLAY, KENNETH (1965-1991)</b> <i>Technology/Dean of Academic Administration</i> <i>B.S., Millersville State College; M.A., Ball State Univ.; Ed.D., Michigan State University</i>	<b>Professor</b>
<b>COHEN, STANLEY (1961-1984)</b> <i>Educational Administration</i> <i>B.S., Rutgers University; M.Ed., Ed.D., Temple University</i>	<b>Professor</b>
<b>COLLINS, JOHN (1963-1994)</b> <i>Communications</i> <i>B.S., West Chester State College; M.A., Penn State University; Ed.D., Temple University</i>	<b>Professor</b>
<b>COLLINS, JOHN J. (1969-1999)</b> <i>Educational Leadership</i> <i>B.A., M.A., Glassboro State College; J.D., Rutgers University</i>	<b>Professor</b>
<b>COMBS, ETHEL (1967-1995)</b> <i>Reading/Speech Correction</i> <i>B.A., Douglass College; M.A., Glassboro State College; Ph.D., Temple University</i>	<b>Associate Professor</b>
<b>CONRAD, GEORGE (1958-1979)</b> <i>Art</i> <i>B.S., New York University; M.A., Ed.D., Columbia University</i>	<b>Professor</b>
<b>COVI, ADELYNE (1964-1984)</b> <i>Elementary Education</i> <i>B.S., Washington University; M.A., Glassboro State College</i>	<b>Assistant Professor</b>
<b>CRAVER, RHYS (1963-1994)</b> <i>Chemistry &amp; Physics</i> <i>B.S., Millersville State College; M.S., University of Delaware; Ph.D., Walden University</i>	<b>Associate Professor</b>
<b>CREAMER, MARVIN C. (1948-1977)</b> <i>Geography/Anthropology</i> <i>B.S., L.H.D., Glassboro State College; M.S., Univ. of PA; M.S., Univ. of Wisconsin</i>	<b>Professor</b>
<b>CROMIE, DAVID (1973-2000)</b> <i>Public Relations/Advertising</i> <i>B.A., M.A., Western State College of Colorado; Ed.D., University of Colorado</i>	<b>Associate Professor</b>
<b>DARRAH, GLADYS L. (1967-1979)</b> <i>Health and Physical Education</i> <i>B.S., M.S., University of Wisconsin</i>	<b>Assistant Professor</b>
<b>DELANEY, LAWRENCE (1964-1988)</b> <i>Physical Sciences</i> <i>B.S., Trenton State College; M.S., Ed.D., University of Pennsylvania</i>	<b>Professor</b>

## The Emeriti

<b>DETRICK, FRED (1964-1987)</b> <i>Foundations of Education</i> <i>B.A., M.S., Rutgers University</i>	<b>Associate Professor</b>
<b>DINSMORE, LEE (1971-2002)</b> <i>Chemistry and Physics</i> <i>B.S., M.A., Glassboro State College</i>	<b>Professor</b>
<b>DONAGHAY, ROBERT (1963-1992)</b> <i>Academic Advising</i> <i>B.S., University of Minnesota; Ph.D., University of Texas</i>	<b>Assistant Professor/Coordinator</b>
<b>DONAHUE, CHARLES T. (1960-2000)</b> <i>English</i> <i>B.A., Texas A &amp; M University; M.A., University of Texas; Ph.D., Temple University</i>	<b>Professor</b>
<b>DOSKOW, MINNA (1986-2002)</b> <i>English/Dean</i> <i>B.S., M.S., City College of N.Y.; M.A., University of Connecticut; Ph.D., University of Maryland</i>	<b>Professor</b>
<b>DOWNES, EDWARD (1961-1991)</b> <i>Elementary/Early Childhood Education</i> <i>B.S., M.A., Glassboro State College</i>	<b>Assistant Professor</b>
<b>DUFF, ELIZABETH R. (1959-1984)</b> <i>Psychology</i> <i>B.S., Kent State Univ.; M.A., New York Univ.; Ed.D., University of Maryland</i>	<b>Professor</b>
<b>DUGAN, RUTH (1964-1981)</b> <i>Psychology</i> <i>B.A., Washington Square College; M.A., Ph.D., New York University</i>	<b>Professor</b>
<b>EDWARDS, ROBERT (1960-1991)</b> <i>Geography/Anthropology</i> <i>B.A., M.A., University of Michigan</i>	<b>Associate Professor</b>
<b>ELLIOTT, GENE V. (1963-1998)</b> <i>Psychology</i> <i>B.S., M.A., Michigan State University; Ph.D., University of Maryland</i>	<b>Professor</b>
<b>EMERSON, ROBERT (1966-1992)</b> <i>Professional Lab Exper.</i> <i>B.R.E., United Wesleyan College; M.A., Glassboro State College</i>	<b>Asst Professor/Asst Director</b>
<b>ENGBRETSON, HERSCHEL (1969-1988)</b> <i>Communications</i> <i>B.A., Taylor University; M.A., University of Pennsylvania</i>	<b>Assistant Professor</b>
<b>ENSLIN, WILLIAM L.(1974-2000)</b> <i>Management/MIS</i> <i>B.E., University of Pennsylvania; Ed.D., Rutgers University</i>	<b>Associate Professor</b>
<b>FALZETTA, JOHN (1969-1988)</b> <i>Secondary Education</i> <i>B.A., LaSalle College; M.A., Niagara University; Ed.D., Temple Univesity</i>	<b>Professor</b>

## The Emeriti

<b>FANSLAU, MARTHA C. (1971-1980)</b> <i>Library</i> <i>B.A., University of Pennsylvania; M.A., Glassboro State College</i>	<b>Librarian/Instructor</b>
<b>FOSTER, BRUCE (1970-2005)</b> <i>Reading</i> <i>B.A., Trenton State College; M.S.Ed., Bucknell Univ.; Ed.D., Florida State University</i>	<b>Professor</b>
<b>FOX, JOHN (1964-1990)</b> <i>Health and Physical Education</i> <i>B.A.P.E., M.S.P.E., West Virginia University</i>	<b>Assistant Professor</b>
<b>FRANKL, RAZELLE (1983-2000)</b> <i>Management/MIS</i> <i>B.A., Temple University; M.B.A., Drexel University; M.A., Ph.D., Bryn Mawr College</i>	<b>Professor</b>
<b>FRIEBIS, GEORGE (1969-1993)</b> <i>Educational Media</i> <i>B.S., M.Ed., Temple University; M.A., Glassboro State College; Ed.D., Nova University</i>	<b>Director</b>
<b>FRISONE, JOHN (1973-2002)</b> <i>Psychology</i> <i>B.A., Queens College; Ph.D., City University of New York</i>	<b>Associate Professor</b>
<b>GALLAGHER, DONALD (1973-1994)</b> <i>Communications</i> <i>B.A., St. Francis College; M.A., Villanova University; Ed.D., Temple University</i>	<b>Professor</b>
<b>GARDINER, DICKINSON (1967-1991)</b> <i>Secondary Ed/Educational Foundations</i> <i>B.A., Western Maryland College; M.Ed., Ed.D., Temple University</i>	<b>Professor</b>
<b>GARRABRANT, WILLIAM (1973-2003)</b> <i>Interlibrary Loan &amp; Science Librarian</i> <i>B.A., Hamilton College; M.S.Ed., M.S.L.S., Syracuse University</i>	<b>Head of Circulation</b>
<b>GARRAHAN, JOHN (1965-1982)</b> <i>Special Education</i> <i>B.A., City College of New York; M.S., Ed.D., University of Pennsylvania</i>	<b>Associate Professor</b>
<b>GATES, RODNEY E. (1968-2000)</b> <i>Art</i> <i>B.S., Univ. of Maryland; M.A., Glassboro State College</i>	<b>Assistant Professor</b>
<b>GAYNOR, WILLIAM (1965-1987)</b> <i>B.A., Georgetown Univ.; M.A., Fairfield Univ.; M.S., Villanova University</i>	<b>Assistant Professor/Librarian</b>
<b>GILLESPIE, JOHN (1972-1992)</b> <i>Communications</i> <i>B.S., M.A., Glassboro State College</i>	<b>Associate Professor</b>
<b>GLASSBERG, ROSE (1964-1991)</b> <i>Secondary Ed/Educational Foundations</i> <i>B.S., West Chester State College; M.A., Middlebury College; Ph.D., Temple University</i>	<b>Professor</b>

## The Emeriti

<b>GOLDBERG, LEON (1968-1988)</b> <i>Physical Science</i> <i>B.S., City College of New York; M.S., New York University</i>	<b>Associate Professor</b>
<b>GOODFELLOW, FRANK (1965-1999)</b> <i>Secondary Education</i> <i>B.A., College of Wooster; M.S.L.S., Drexel Institute of Technology</i>	<b>Associate Professor</b>
<b>GRACE, JAMES H. (1969-2000)</b> <i>Philosophy/Religion</i> <i>B.A., M.Th., Drew University; M.A., Ph.D., Temple University</i>	<b>Professor</b>
<b>GRAZIAN, FRANK (1968-1991)</b> <i>Communications</i> <i>B.A., Rutgers University; M.S., Columbia University</i>	<b>Associate Professor</b>
<b>GREEN, CHARLES H. (1962-1993)</b> <i>Life Sciences</i> <i>B.S., Penn State Univ.; M.S., University of Delaware; Ph.D., Purdue University</i>	<b>Professor</b>
<b>GUERARD, MICHAEL P. (1971-1995)</b> <i>Technology</i> <i>B.S., M.Ed., Ph.D., Texas A &amp; M University</i>	<b>Associate Professor</b>
<b>GUNDAKER, ISABELLE (1983-2003)</b> <i>Composition &amp; Rhetoric</i> <i>B.A., Chestnut Hill College; M.A., Rutgers</i>	<b>Instructor</b>
<b>GURST, LAWRENCE (1966-1993)</b> <i>Elementary Education</i> <i>MA.A., M.Ed., Temple University</i>	<b>Assistant Professor</b>
<b>HABA, JAMES (1972-2003)</b> <i>English</i> <i>B.A., Reed College; Ph.D., Cornell University</i>	<b>Associate Professor</b>
<b>HAYNES, ROBERT (1960-1991)</b> <i>Art</i> <i>B.F.A., Colorado State College; M.A., Ed.D., Columbia University</i>	<b>Professor</b>
<b>HEWSEN, ROBERT H. (1967-1999)</b> <i>History</i> <i>B.A., University of Maryland; M.S., Catholic University; Ph.D., Georgetown University</i>	<b>Professor</b>
<b>HILTS, RICHARD (1962-1981)</b> <i>Music</i> <i>B.M., Eastman School of Music; M.M., University of Oklahoma</i>	<b>Professor</b>
<b>HITCHNER, BENJAMIN G. (1964-1998)</b> <i>Economics</i> <i>B.S., Temple University; M.S., University of Pennsylvania</i>	<b>Assistant Professor</b>
<b>HUMBERT, JOHN J. (1969-1995)</b> <i>Technology</i> <i>B.S., University of Maryland; M.Ed., Pennsylvania State University; Ed.D. Texas A&amp;M University</i>	<b>Professor</b>

## The Emeriti

<b>JAEGER, PETER (1966-1981)</b> <i>Communications</i> <i>B.A., Mexico City College; M.Ed., University of Houston</i>	<b>Associate Professor</b>
<b>JENSEN, IVAR I. (1959-1981)</b> <i>Foundations of Education</i> <i>B.Ed., Univ. of Connecticut; M.A., Middlebury College; Ed.D., Columbia University</i>	<b>Professor</b>
<b>JOHNSON, RICHARD J. (1971-2000)</b> <i>Political Science</i> <i>B.A., M.A., Cert. of Russian Institute; Ph.D., Columbia University</i>	<b>Associate Professor</b>
<b>JOHNSON, THEODORE B. (1990-1999)</b> <i>Educational Leadership</i> <i>B.S., M.A., Temple University; Ed.D., Rutgers University</i>	<b>Associate Professor</b>
<b>JONES, JOHN (1968-1990)</b> <i>Foreign Languages and Literatures</i> <i>B.A., M.A., University of Alabama; Diplome, Institut de Touraine, Tours, France</i>	<b>Assistant Professor</b>
<b>KAPEL, DAVID (1988-2002)</b> <i>Secondary Ed/Foundations</i> <i>B.S., M.Ed., Ed.D., Temple University</i>	<b>Professor</b>
<b>KARDAS, WILLIAM (1968-2000)</b> <i>B.S., M.L.S., Villanova University</i>	<b>Head Reference Librarian</b>
<b>KELLER, HORACE (1960-1986)</b> <i>Psychology</i> <i>B.S., West Chester University; M.Ed., Ed.D., Temple University</i>	<b>Professor</b>
<b>KELLY, MICHAEL F. (1961-1998)</b> <i>Theatre and Dance</i> <i>B.A., Elmhurst College; M.A., Ph.D., State University of Iowa</i>	<b>Professor</b>
<b>KERSHNER, E. THEODORE (1968-1998)</b> <i>Health and Exercise Science</i> <i>B.S., Ursinus College, M.Ed., Temple University</i>	<b>Assistant Professor</b>
<b>KESSLER, SIDNEY (1958-1991)</b> <i>History</i> <i>B.A., Montclair State College; M.A., Columbia University; M.L.S., Pratt Institute</i>	<b>Professor</b>
<b>KIRNER, CLARA (1971-1994)</b> <i>B.A., Rutgers University; M.A., Drexel University</i>	<b>Librarian</b>
<b>KLANDERMAN, JOHN (1986-2005)</b> <i>Special Education</i> <i>B.A., Calvin College; M.A., Ph.D., Michigan State University</i>	<b>Professor</b>
<b>KUSHNER, WILLIAM (1970-1999)</b> <i>Communication Studies</i> <i>B.A., Montclair State College; M.A., Temple University; Ph.D., Indiana University</i>	<b>Professor</b>

## The Emeriti

<b>LANGWORTHY, STANTON (1956-1991)</b> <i>Secondary Ed/Foundations of Education</i> B.A., M.Ed., Alfred University of NY; M.S., M.A., Ph.D., University of Wisconsin	<b>Professor</b>
<b>LEE, ELAINE (1967-1994)</b> <i>Elementary/Early Childhood Education</i> B.S., M.A., Trenton State College; Ed.D., Temple University	<b>Associate Professor</b>
<b>LESHAY, STEVEN V. (1978-1999)</b> <i>Marketing</i> B.A., Lenoir Rhyne College; M.A., Glassboro State College; Ph.D., Temple University	<b>Associate Professor</b>
<b>LIBRO, ANTOINETTE (1968-2002)</b> <i>Communication</i> B.A., Glassboro State College; Ph.D., New York University	<b>Dean/Professor</b>
<b>LINT, JERRY N. (1964-1998)</b> <i>Geography/Anthropology</i> B.S., Clarion State College; M.Ed., Pennsylvania State University	<b>Assistant Professor</b>
<b>LLOYD, DAVID D. (1959-2000)</b> <i>Journalism and Creative Writing</i> B.A., Montclair State College; M.A., University of Michigan	<b>Associate Professor</b>
<b>LOIGMAN, BARRY M. (1970-1999)</b> <i>Psychology</i> B.A., M.A., Temple University; Ph.D., Rutgers University	<b>Associate Professor</b>
<b>LONGACRE, DAVID (1961-1989)</b> B.A., Gettysburg College; M.S., University of Pennsylvania	<b>Education and Assistant Registrar</b>
<b>LYNCH, ROBERT D. (1973-1999)</b> <i>Management/MIS</i> B.S., M.S., Ph.D., Carnegie-Mellon University; SPHR	<b>Professor</b>
<b>MARTIN, DORIS (1976-1987)</b> <i>Home Economics</i> B.S., Penn State University; M.S., Cornell University; Ed.D., Temple University	<b>Assistant Professor</b>
<b>MARTIN, MARILYN (1995-2004)</b> <i>Library Services</i> B.A., M.L.S., Univ. of Washington; M.A., Univ. of Arkansas; Ph.D., Texas Woman's Univ.	<b>Dean</b>
<b>MASAT, FRANCIS E. (1972-1998)</b> <i>Mathematics</i> B.A., Blackburn College; M.S., Kansas State University; Ph.D., University of Nebraska	<b>Professor</b>
<b>MERCIER, J. DENIS (1967-2002)</b> <i>Communication</i> B.A., Marian College; M.A., Niagara University; Ph.D., University of Pennsylvania	<b>Professor</b>
<b>METCALF, OWEN (1972-2000)</b> <i>Music</i> B.M.E., M.M.E., University of Colorado; D.M., Indiana University	<b>Associate Professor</b>

## The Emeriti

<b>MEYERS, DOROTHY (1967-1985)</b> <i>B.A., State University of Iowa; M.L.S., Rutgers University</i>	<b>Assistant Professor/Librarian</b>
<b>MICAL, AGNES (1968-1996)</b> <i>Health &amp; Exercise Science B.S., M.S., West Chester University</i>	<b>Assistant Professor</b>
<b>MICHAELSON, JAMES (1967-1991)</b> <i>Secondary Ed/Ed. Foundations B.S., M.A., Temple University</i>	<b>Assistant Professor</b>
<b>MICKLUS, SAMUEL C. (1968-1991)</b> <i>Technology B.S., Philadelphia College of Art; M.A., Trenton State College; Ed.D., New York Univ.</i>	<b>Professor</b>
<b>MILLER, CLARENCE (1956-1992)</b> <i>Music B.M.E., Mount Union College; M.M., Marshal University</i>	<b>Professor</b>
<b>MITCHELL, RICHARD (1964-1991)</b> <i>English B.A., University of the South; M.A., Ph.D., Syracuse University</i>	<b>Professor</b>
<b>MITCHELL, ROBERT D. (1965-1997)</b> <i>Mathematics B.S., M.A., University of Texas</i>	<b>Associate Professor</b>
<b>MONROE, GERALD (1968-1986)</b> <i>Art B.S., M.A., Ed.D., New York University</i>	<b>Associate Professor</b>
<b>MOORE, ELIZABETH (1972-2002)</b> <i>Biological Sciences B.Sc., Rollins College; M.S., Ph.D., Cornell University</i>	<b>Professor</b>
<b>MOORE, OSCAR (1971-2003)</b> <i>Health &amp; Exercise Science B.S., M.S., Southern Illinois University</i>	<b>Assistant Professor</b>
<b>MORFORD, IDA B. (1956-1981)</b> <i>Psychology B.S., Geneseo State College; M.A., Ph.D., Ohio State University</i>	<b>Professor</b>
<b>MORRIS, WILLIAM C. (1968-1999)</b> <i>Theatre and Dance B.A., DePaul University; M.A., Northwestern University; Ph.D., University of Illinois</i>	<b>Professor</b>
<b>MOYER, MEL (1967-2000)</b> <i>Psychology B.A., Glassboro State College; M.Ed., Temple University; Ed.D., Rutgers University</i>	<b>Associate Professor</b>
<b>MUMFORD, DONALD (1961-1985)</b> <i>B.A., Geneva College; M.A., University of Pittsburgh</i>	<b>Assistant Professor/Research Assistant</b>

## The Emeriti

- MYKSVOLL, BIRGER (1962-1981)** Professor  
*Psychology*  
*B.A., Notodden Teachers College, Norway; M.A., Oslo Univ., Norway; Ph.D., University of Maryland*
- McCONNELL, HELEN (1965-1995)** Professor  
*Home Economics*  
*B.S., State Univ. College, Oneonta, NY; M.A., Columbia Univ.; Ph.D., Michigan State University*
- McCRANN, VIRGINIA E. (1968-1985)** Assistant Professor  
*Home Economics*  
*B.A., M.Ed., Rutgers University*
- McKENZIE, JAMES J. (1954-1980)** Professor  
*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*
- NEFF, GEORGE (1962-2000)** Professor  
*Art*  
*B.S., Kutztown University; M.A., Columbia University; Ed.D., Pennsylvania State University*
- NICHOLS, LOLA (1960-1986)** Assistant Professor  
*Elementary Education*  
*B.S., Trenton State College; M.A., Columbia University; M.A., Glassboro State College*
- NIENSTEDT, CARL W. (1962-1982)** Professor  
*Special Education*  
*B.A., M.A., Bucknell University; Ph.D., University of Connecticut*
- NORTON, DONALD (1961-1983)** Professor  
*Music*  
*B.S., Western Michigan University; M.A., University of Maryland; Ed.D., Columbia Univ.*
- O'DAY, SHIRLEY (1963-1990)** Professor  
*Health and Physical Education*  
*B.S., University of Delaware; M.Ed., West Chester State College; Ed.D., Temple University*
- ONNI, MURIEL (1967-1991)** Professor  
*Foreign Languages and Literatures*  
*B.A., Univ. of Toronto; M.A., McGill University; M.A., Ph.D., Rutgers University*
- PALLADINO, MARY ANNE (1964-1994)** Professor  
*Communications*  
*B.A., Immaculata College; M.A., Villanova University*
- PERKINS, THELMA (1970-1986)** Assistant Professor  
*Secondary Education*  
*B.S.Ed., M.Ed., Temple University; M.A., University of Pennsylvania*
- PERRY, WILHELMINA E. (1968-1997)** Professor  
*Sociology*  
*B.A., Tiltonson College; M.A., Howard University; Ph.D., University of Texas*

## The Emeriti

<b>PICKETT, ETHEL (1968-1987)</b> <i>Home Economics</i> <i>B.S., University of Delaware; M.Ed., University of Maryland</i>	<b>Assistant Professor</b>
<b>PIKE, FRANK (1964-1987)</b> <i>English</i> <i>B.A., Suffolk University; M.A., Boston College; M.Ed., State College at Boston</i>	<b>Assistant Professor</b>
<b>PITTARD, NORMA (1968-1987)</b> <i>Art</i> <i>B.A., Adelphi University; M.A., Columbia University; Ph.D., University of Maryland</i>	<b>Assistant Professor</b>
<b>PORTERFIELD, RICHARD (1961-1998)</b> <i>History</i> <i>B.A., Johns Hopkins University; M.A., University of Pennsylvania; Ph.D., Temple University</i>	<b>Associate Professor</b>
<b>PRIMACK, ROSE Z. (1964-1976)</b> <i>Psychology</i> <i>B.S., Seton Hall University; M.Ed., University of Maryland</i>	<b>Associate Professor</b>
<b>PUJALS, ENRIQUE J. (1969-2000)</b> <i>Foreign Languages and Literatures</i> <i>B.A., M.A., Indiana State University; Ph.D., Rutgers University</i>	<b>Professor</b>
<b>PUJALS, JOSEFINA (1971-2000)</b> <i>Foreign Languages and Literatures</i> <i>B.A., M.A., Indiana State University; Ph.D., Rutgers University</i>	<b>Associate Professor</b>
<b>REEVES, EDWIN C. (1968-1996)</b> <i>Reading</i> <i>B.A., M.A., Glassboro State College</i>	<b>Assistant Professor</b>
<b>REGENSBURG, GEORGE E. (1959-1984)</b> <i>Special Education</i> <i>B.S., Rider College; M.A., Montclair State College; Ed.D., Rutgers University</i>	<b>Professor</b>
<b>REINFELD, GEORGE (1956-2002)</b> <i>Communication</i> <i>B.A., M.A., Montclair State College</i>	<b>Professor</b>
<b>RESNIK, BENJAMIN (1965-1991)</b> <i>Communications</i> <i>B.A., M.A., Glassboro State College</i>	<b>Assistant Professor</b>
<b>RICHARDSON, HERBERT A. (1966-1998)</b> <i>History</i> <i>B.M., M.M., Yale University; M.A., Ph.D., University of Pennsylvania.</i>	<b>Assistant Professor</b>
<b>RILLING, MARION (1971-2001)</b> <i>Graduate School</i> <i>B.S., Trenton State College; M.S., Ed.D., University of Pennsylvania</i>	<b>Professor</b>
<b>ROBINETTE, JOSEPH (1981-2005)</b> <i>Theatre/Dance</i> <i>B.A., Carson-Newman College; M.A., Ph.D., Southern Illinois University</i>	<b>Professor</b>

## The Emeriti

- ROCH, JOHN (1959-1984)** Professor  
*English*  
*B.A., University of Massachusetts; M.A., Ph.D., Columbia University*
- 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*
- SALATI, RUDOLPH (1959-1983)** Assistant Professor/Registrar  
*B.S., Glassboro State College; M.Ed., Temple University*
- SALERNO, ANTHONY (1976-1997)** Assistant Professor  
*Law/Justice*  
*B.A., University of Delaware; M.A., Rutgers University*
- SCHREIBER, ELLIOTT (1967-1995)** Associate Professor  
*Psychology*  
*B.A., Upsala College; M.A., Bradley University; Ed.D., West Virginia University*
- SERFUSTINI, LEONARD (1971-1986)** Professor  
*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., Univ. of Missouri; Ed.D., Columbia Univ.*
- 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*
- SMITH, RICHARD R. (1964-1999)** Professor  
*Educational Leadership*  
*B.A., M.A., Glassboro State College; Ed.D., Temple University*
- SMITH, STEWARD (1968-1983)** Assistant Professor  
*Elementary Education*  
*B.A., Rutgers University; M.Ed., Temple University*
- SOOY, JOHN M. (1961-1998)** Professor  
*Mathematics*  
*B.S., Glassboro State College; M.S., University of Pennsylvania; Ed.D., Temple University*
- SPEAR, MIRIAM (1967-1983)** Assistant Professor  
*Secondary Education*  
*B.A., M.S., Glassboro State College*

## The Emeriti

<b>STANLEY, DANIEL (1966-1991)</b> <i>Health and Physical Education</i> <i>B.Ed., Univ. of Buffalo; M.Ed., State Univ. of New York; Ed.D., Temple University</i>	<b>Professor</b>
<b>STEVENS, KATHLEEN (1972-1998)</b> <i>Communication</i> <i>B.A., Georgian Court College; M.A., Glassboro State College (Rowan)</i>	<b>Associate Professor</b>
<b>STONE, DON C. (1968-2000)</b> <i>Computer Science</i> <i>E. Eng. Phys., Cornell University; M.S.E., Ph.D., University of Pennsylvania</i>	<b>Associate Professor</b>
<b>SULLIVAN, JANE E. (1972-1999)</b> <i>Reading</i> <i>B.S., Seton Hall University; M.S., Ed.D., State University of New York, Albany</i>	<b>Professor</b>
<b>TANNENBAUM, MARGARET D. (1971-2000)</b> <i>Secondary Education</i> <i>B.A., Bryan College; M.Ed., Ed.D., Temple University</i>	<b>Professor</b>
<b>TANNENBAUM, THEODORE (1973-1998)</b> <i>Sociology</i> <i>B.A., M.A., Brooklyn College; Ph.D., Purdue University</i>	<b>Professor</b>
<b>TAYLOR, ALBERT (1964-1987)</b> <i>Foundations of Education</i> <i>B.S., Trenton State College; M.Ed., Ed.D., Rutgers University</i>	<b>Professor</b>
<b>TAYLOR, ROBERT (1964-1991)</b> <i>Music</i> <i>B.S., Julliard; M.A., Ed.D., Teachers College, Columbia University</i>	<b>Professor</b>
<b>THYHSEN, JOHN (1969-2000)</b> <i>Music</i> <i>B.M., M.M., Eastman School of Music</i>	<b>Professor</b>
<b>TOMEI, MARIO (1964-1995)</b> <i>Educational Administration</i> <i>B.A., Montclair State College; M.S., University of Pennsylvania; Ed.D., Temple University</i>	<b>Professor</b>
<b>TRACEY, JAMES H. (1994-2000)</b> <i>College of Engineering</i> <i>B.S.E.E., M.S., Ph.D., Iowa State University</i>	<b>Dean/Professor</b>
<b>TSUJI, THOMAS (1969-1995)</b> <i>Technology</i> <i>B.S., M.S., Stoudt State College; Ph.D., Michigan State University</i>	<b>Professor</b>
<b>VERBEKE, MAURICE (1967-1987)</b> <i>Educational Administration</i> <i>B.S., M.Ed., Ed.D., Pennsylvania State University</i>	<b>Professor</b>
<b>VIVARELLI, THOMAS (1967-2004)</b> <i>Special Education</i> <i>B.A., Trenton State College; M.A., Glassboro State College</i>	<b>Assistant Professor</b>

## The Emeriti

<b>VOGAL, HAL (1984-2005)</b> <i>Public Relations/Advertising</i> <i>B.A., Temple University; M.A., William Paterson College; Ph.D., Antioch University; APR</i>	<b>Professor</b>
<b>WACKAR, RICHARD (1956-1988)</b> <i>Health and Physical Education</i> <i>B.S., M.A., Rutgers University</i>	<b>Professor</b>
<b>WARD, HUGH J. (1959-1976)</b> <i>Foundations of Education</i> <i>B.S., M.A., Glassboro State College</i>	<b>Associate Professor</b>
<b>WASSERMAN, BURTON (1960-2003)</b> <i>Art</i> <i>B.A., Brooklyn College; M.A., Ed.D., Columbia University</i>	<b>Professor</b>
<b>WEAR, BARBARA (1973-1999)</b> <i>Elementary/Early Childhood Education</i> <i>B.A., Trenton State College; M.S.W., Rutgers University</i>	<b>Assistant Professor</b>
<b>WELSH, CHARLES (1973-1992)</b> <i>Marketing</i> <i>B.S., Villanova University; M.B.A., Ph.D., University of Pennsylvania</i>	<b>Professor</b>
<b>WHITCRAFT, JOHN (1963-1987)</b> <i>Philosophy/Religion</i> <i>B.A., Asbury College; M.A., Temple Univ.; B.D., Asbury Seminary; S.T.M., Boston Univ.</i>	<b>Professor</b>
<b>WHITE, EDWARD H. (1973-2000)</b> <i>Educational Leadership</i> <i>B.A., Keene State College; M.S., Indiana State University; Ph.D., University of Maryland</i>	<b>Professor</b>
<b>WICKS, LAWRENCE (1962-1997)</b> <i>Music</i> <i>B.M., M.M., Ithaca College</i>	<b>Associate Professor</b>
<b>WILLIAMS, THELMA (1969-1987)</b> <i>Music</i> <i>B.S., Trenton State College; M.A., New York University</i>	<b>Associate Professor</b>
<b>WINAND, LOIS (1971-1991)</b> <i>Home Economics</i> <i>B.S., M.S., Drexel University; Ed.D., Pennsylvania State University</i>	<b>Assistant Professor</b>
<b>WOLFE, EDWARD (1959-1994)</b> <i>English</i> <i>B.A., M.A., Ph.D., University of Pennsylvania</i>	<b>Professor</b>
<b>WOOD, A. TAGE (1968-1987)</b> <i>Speech/Theatre/Dance</i> <i>B.S., East Stroudsburg State College; M.Ed., University of South Dakota</i>	<b>Associate Professor</b>
<b>WOODS, WELLINGTON (1967-1998)</b> <i>Chemistry and Physics</i> <i>B.S., Glassboro State College; M.Ed., Rutgers University; Ph.D., Walden University</i>	<b>Associate Professor</b>

## The Emeriti

<b>YANNELLA, DONALD (1964-1991)</b> <i>English</i> <i>B.S., M.A., Ph.D., Fordham University</i>	<b>Professor</b>
<b>YOUNG, FLORA (1968-1995)</b> <i>Sociology</i> <i>B.A., M.A., Howard University; Ed.D., University of Pennsylvania</i>	<b>Professor</b>
<b>YOUNG, WALTER BYRON (1972-1997)</b> <i>Art</i> <i>B.A., M.A., Glassboro State College; Ed.D., Pennsylvania State University</i>	<b>Professor</b>
<b>ZAHN, RICHARD (1960-1987)</b> <i>Foundations of Education</i> <i>B.S., West Chester State College; M.Ed., Ed.D., Temple University</i>	<b>Professor</b>
<b>ZALUSKY, DONALD (1966-1991)</b> <i>Physical Sciences</i> <i>B.S., M.A., University of Missouri; Ph.D., University of Delaware</i>	<b>Associate Professor</b>
<b>ZIMMERMAN, DONALD (1961-1992)</b> <i>Elementary/Early Childhood Education</i> <i>B.S., M.A., State University of New York, Buffalo; Ed.D., Temple University</i>	<b>Professor</b>
<b>ZINK, THEODORE (1966-1987)</b> <i>Law/Justice</i> <i>B.S., M.S., University of Delaware; Ed.D., Temple University</i>	<b>Professor</b>

# CAMPUS BUILDINGS

## **Alvin Shpeen Hall**

Named for the late mayor of Glassboro, an advocate for better town-gown relations, this restored downtown facility had been the old vacant Academy Street School. Purchased in 2001, it houses Rowan's Management Institute, Education Institute and Center for Addition Studies plus the Child and Family Assessment Clinic and Tobacco Dependency Clinic.

## **Bole Annex**

Opened in the spring of 1970, the Annex houses University Public Safety, University Marketing and Institutional Research and Planning.

## **Bosshart Hall**

Formerly home to the departments of biological sciences, chemistry and physics, Bosshart was replaced by the all new Science Hall in 2003. It is slated for demolition.

## **Bozorth Hall**

Named for former registrar Loriot D. Bozorth, the building opened in 1954 as the campus elementary school. Renovated in 1985 and 1994, Bozorth now houses the College of Communication offices and classrooms, a distance learning facility, television studios, WGLS radio, film editing suites, a computer-equipped newsroom, an advertising/public relations client suite, layout room and writing lab.

## **Carriage House**

Built in 1849 adjacent to the former Whitney mansion (now Hollybush), the Carriage House contains University Publications and the ROTC program.

## **Cassady Maintenance Building**

Opened in the summer of 1971 the Cassady Maintenance Building houses central receiving and as well as the carpentry, electrical and plumbing shops.

## **Chestnut, Magnolia and Willow Halls**

Built during a campus expansion in the 1980s, Chestnut, Magnolia and Willow Halls house up to 800 students combined. Arranged in same-gender suites that can accommodate five to 16 students, each suite shares a large common bathroom and lounge. Hallways and lounges are carpeted and furnished with couches and chairs. Rooms are furnished and wired for Internet, cable TV and phone service.

# CAMPUS BUILDINGS

## **Edgar F. Bunce Hall**

The original building on campus, Bunce Hall was built in 1923 and is named for the second president of Rowan University. Bunce houses the College of Business and the departments of Economics, English, Foreign Languages and Literatures, Philosophy and Religion, and Theatre and Dance. This building also houses the Tohill Auditorium and has classroom space.

## **Edgewood Park Apartments**

This four-building complex opened in the fall of 1974. Each building houses 24 apartments and up to four students live in each. Apartments contain two bedrooms, a living room, dining room, kitchen and bath. The apartments are carpeted, furnished and air-conditioned and limited parking is available for residents.

## **Education Hall**

New in January 2006, Education Hall is home to the College of Education, its 120 faculty and staff and nearly 2,500 education majors. The three-story, 135,000 square-foot facility features smart classrooms, distance learning facilities, an early childhood development center and an assortment of labs and outreach centers.

## **Esby Gym**

The Roland A. Esbjornson Health and Physical Education Center, "Esby" houses the gymnasium, a swimming pool and classrooms. The building is named for 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 with each containing two double bedrooms and a bathroom.

## **Hawthorn Hall**

Formerly a student residence facility, Hawthorn was renovated in 1986 and again in 2001 to house offices and classrooms for the College of Communication.

## **Henry M. Rowan Hall**

Home to the College of Engineering, the 95,000 sq. ft. building was designed for maximum flexibility in teaching and research. It features terrestrial and wireless networking, three floors of offices, classrooms, labs and a 115-seat auditorium.

# CAMPUS BUILDINGS

## **Hering Central Heating and Cooling Plant**

Sheathed almost entirely in glass, this facility provides heating and cooling for the entire campus. An \$11 million upgrade to the plant, begun in 2006, will enable it to generate 80 percent of Rowan's electricity upon completion. The plant creates steam as a by-product which is used for heating, hot water and air conditioning.

## **Hollybush Mansion**

Originally the Whitney Mansion, Hollybush was built in 1849 and served as a dormitory and then as the university president's private residence until 1998. The building was the site of the historic 1967 summit meeting between President Lyndon B. Johnson and Soviet Premier Alexei B. Kosygin. Hollybush is being restored and renovated into a museum and meeting center.

## **John B. Sangree Greenhouse**

Built in 1923 adjacent to Bunce Hall, the university's original greenhouse remains a functioning glassed-in botanical garden. It is named for the university's first biology teacher, a charter faculty member of the Glassboro Normal School.

## **John Green Team House**

Opened in the summer of 1971, the Team House contains locker and training facilities as well as offices for intercollegiate athletics and coaches.

## **Keith and Shirley Campbell Library**

Opened in 1995, Rowan University's central library features 118,000 square feet of space for research, study, archives and offices. Designed with a striking six-story tower, the highest point on campus, the library, renamed in 2000 for benefactors Keith and Shirley Campbell, is the intellectual heart of the University. The library has a computer lab, seating on four floors, and special facilities for group study and conferences. Collections include more than 350,000 volumes and there are subscriptions to approximately 3000 periodicals.

## **Laurel and Oak Halls**

Originally built as residence halls, these buildings were used as administrative offices for a number of years. In 1998, they were renovated and now serve as residence halls again housing 45 students in each hall.

## **Linden Hall**

Formerly a student residence facility, Linden Hall houses the office of human resources, the student health center, the facilities management office, the safety office and the offices of the vice president for administration and finance.

# CAMPUS BUILDINGS

## **Mansion Park Apartments**

The University owns and operates this complex of 24 one-bedroom and 50 two-bedroom apartments. These on-campus apartments offer an independent living environment in which residents are required to pay for electrical service for heat, hot water and cooking.

## **Mark M. Chamberlain Student Center**

Built in 1974, the Student Center was renamed in 2006 to honor the fourth president of Rowan University. The center features several dining options for students, staff and guests including The Rowan Marketplace (an all-you-can-eat buffet serving breakfast, lunch and dinner), The Owl's Nest restaurant and a food court on the lower level. The center has an ATM, study and meeting space, a laundry, TV lounge and ballroom.

## **Memorial Hall**

Opened in 1956, Memorial now serves as the university's center for information resources. Housed here are offices for the associate provost for Information Resources, Enterprise Information Services, Instructional Technology, Network & System Services, the Support Desk, and Duplicating Services. Memorial is also home to Web Development, the Graduate School, the Office of Government Grants, and studios for the Department of Theatre & Dance.

## **Mimosa Hall**

This freshmen resident hall houses up to 340 students on four floors. Mimosa is located centrally on campus and contains same-gender suites made up of 2-3 rooms that share a common bath.

## **Mullica Hall**

Located adjacent to an oak grove on the south side of campus, Mullica houses up to 103 students on three floors. Each floor consists of same-gender suites that contain two double bedrooms and a bath.

## **R. Grace Bagg Alumni Center**

Named in honor of a Rowan administrator who served the university for 48 years, the center on Whitney Avenue is headquarters for the Rowan University Alumni Association and the Office of Corporate and Foundation Relations.

## **Robert D. Bole Hall**

Bole is the administrative center of the University, home to the offices of the President, Provost, Executive Vice President for University Advancement, Associate Provost for Academic Affairs, Associate Provost for Faculty Affairs and University Relations.

# CAMPUS BUILDINGS

## **Robinson Hall**

Named after Thomas E. Robinson, the university's third president, Robinson Hall is home to many of the departments within the College of Liberal Arts and Sciences, the largest college at Rowan. Housed here are offices for the departments of Computer Science, Geography/Anthropology, History, Mathematics, Political Science, Psychology and Sociology. Robinson is also home to the International Center, the LAS Institute and McSiip.

## **Savitz Hall**

Named for Jerohn Savitz, the first president of the University, Savitz Hall houses student services offices including the Registrar, Bursar and Financial Aid, the Vice President for Student Affairs, the Dean of Students, Career and Academic Planning, Developmental Education, Tutoring, Basic Skills and Testing, Admissions, Counseling, Residence Life, Multicultural/international Affairs, Specialized Services and the offices of EOF/MAP.

## **Science Hall**

Dedicated in 2003, the facility features a 102-seat planetarium, rooftop observatory with 16-inch telescope, and rooftop greenhouse. Its 150,000 square feet of space is spread over 6 floors. There are 27 teaching laboratories and 22 research labs.

## **Seymour Winans Hall**

Home to the University bookstore, Winans is named for a former faculty member and is home to the University bookstore. The store sells all required textbooks, school and art supplies, Rowan gifts and clothing, toiletries and foodstuffs. It also offers such services such as resume printing, film developing, and cap and gown rentals.

## **South Jersey Technology Park at Rowan University**

A mixed research and academic campus at the intersection of Routes 322 and 55, the South Jersey Technology Park at Rowan University is designed as a massive business incubator to spur the economic revitalization of southern New Jersey through science and technology. Once complete it will be an integral part of the proposed 580-acre Rowan University West Campus.

## **Student Recreation Center**

Opened in 1993, the student recreation center adjacent to Esby Gym is a comprehensive recreation sports facility. The three-story, 76,000 square-foot center houses an 8-lane swimming pool (linked by a doorway to the Esby pool), a 3-lane indoor running track, a 3-court multi-sport gym, five racquetball courts, an aerobics room, fitness and free-weight rooms, a conference room, and men's and women's locker rooms.

# CAMPUS BUILDINGS

## **Townhouses**

Opened in the fall of 2004, the on-campus, 113-unit townhouse complex along Route 322 features four- and six-bedroom configurations nearby 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 Hall**

Located at the intersection of Route 322 and Bowe Blvd., Triad Hall is one of four on-campus student apartment complexes. The individual apartments are designated same-gender units and each floor is co-ed. Available are 1-, 2- or 3-bedroom units that can accommodate 2, 4, or 6 students. Each apartment is carpeted and fully furnished with a living room, bathroom and kitchen. There is a large laundry facility on the second floor and the site offers ample parking for all residents.

## **Westby Arts Center**

Completed in 1967, Westby houses the Art Department for the College of Fine and Performing Arts. Named in honor Cleve O. Westby, a former director of county and state college construction, Westby contains comprehensive laboratories, classrooms, a lecture hall, faculty offices, the Westby Gallery, the graphics communication technology center and a darkroom.

## **Wilson Hall**

Wilson Hall, which was named for former Rowan University faculty member Harold Wilson, opened in the spring of 1972 as the central music facility. It contains two large rehearsal rooms, a recital hall, numerous practice rooms, classrooms, two student lounges, a music library, faculty offices, the concert box office and the W. Clarke Pfleeger Hall (a 1,000 seat auditorium). Offices for the dean of the College of Fine & Performing Arts, the Music Department, and the Law and Justice Studies Department are also located in Wilson.

# Academic Calendar

## ACADEMIC YEARS 2007-2009

Activity	2007-2008	2008-2009
<b>FALL SEMESTER</b>	<b>FALL 2007</b>	<b>FALL 2008</b>
Labor Day (no classes)		
Semester Classes Begin	Tuesday, September 4	Tuesday, September 2
Convocation	Monday, September 10	Monday, September 8
1 <sup>st</sup> Quarter Concludes	Monday, October 22	Monday, October 20
Election Day (no classes)	Tuesday, November 6	Tuesday, November 4
Thanksgiving Recess (no classes)	Thursday-Friday, November 22-23	Thursday-Friday, November 27-28
2 <sup>nd</sup> Quarter Concludes	Friday, December 14	Friday, December 12
Finals Week	Monday-Friday, December 17-21	Monday-Friday, December 15-19
Fall Semester Concludes	Friday, December 21	Friday, December 19
<b>SPRING SEMESTER</b>	<b>SPRING 2008</b>	<b>SPRING 2009</b>
Spring Semester Begins	Tuesday, January 22	Tuesday, January 20
3 <sup>rd</sup> Quarter Concludes	Monday, March 10	Monday, March 9
Spring Break (No Classes)	Monday-Friday, March 17-21	Monday-Friday, March 16-20
Good Friday (No Classes)	Friday, March 21	Friday, April 10
4 <sup>th</sup> Quarter Concludes	Monday, May 5	Monday, May 4
Finals Week	Saturday, May 6-10	Tuesday-Saturday, May 5-9
Semester Concludes	Saturday, May 10	Saturday, May 9
Commencement – Graduate	Thursday, May 15	Thursday, May 14
Commencement-Undergraduate	Friday, May 16	Friday, May 15
<b>SUMMER SESSIONS</b>	<b>Summer 2008</b>	<b>Summer 2009</b>
Memorial Day (no Classes)	Monday, May 26	Monday, May 25
Fourth of July (no Classes)	Friday, July 4	Friday, July 3
Session 1 - First 3 week	May 19 – June 5 *	May 18 – June 4 *
Session 2 - 8 week	June 9 – July 31 *	June 8 – July 30 *
Session 3 - First 5 week	May 30 – June 29 *	May 18 – June 18 *
Session 4 - Second 5 week	June 23 – July 24 *	June 22 – July 23 *
Session 5 - Second 3 week	July 28 – August 14	July 27 – August 13

\*Includes either Memorial Day, Fourth of July, or both

# Directions to Campus

## DIRECTIONS TO 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 N.J. Turnpike, the Atlantic City Expressway, or any of the Delaware River bridges. For a detailed campus map go to [www.rowan.edu/campus\\_map](http://www.rowan.edu/campus_map).

### **From the North**

(Northern New Jersey, New York, etc.)

Take the N.J. Turnpike South 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 Route 322. Continue on Route 322 (7 miles) to the campus.

### **From Philadelphia**

Take the Walt Whitman or Benjamin Franklin Bridge to I-676 South toward Atlantic City. Shortly after I-676 becomes Route 42 South, the Atlantic City Expressway, exit right onto Route 55 South. Take that to exit 50A (Glassboro Mullica Hill). Take Route 322 East (2 miles) to the campus.

### **From the West**

Take I95 to the Commodore Barry Bridge. Follow Route 322 East (15 miles) to the campus.

### **From Central New Jersey**

Take Route 70 West to I-295 South. Follow I-295 to Route 42 South, the Atlantic City Expressway. Exit Route 42 South onto Route 55 South. Follow that to exit 50A (Glassboro Mullica Hill). Take Route 322 East (2 miles) to the campus.

### **From the East**

Take the Garden State Parkway to the Atlantic City Expressway Route 42. Take the Expressway to Exit 38 (Williamstown). Turn left after exiting and follow Route 322 West (8 miles) to the campus.

### **From the South**

(Maryland, Delaware, etc.)

Take I-95 North to the Delaware Memorial Bridge. Take the N.J. Turnpike to Exit 2 and follow Route 322 East (10 miles) to the campus.

## **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.

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**Notice of currency**

Rowan University reserves the right in its sole judgment and for any reason to make changes in its announced policies, requirements and fees and to cancel or modify any program or course at any time without prior notice.

**Non-discrimination policy**

It is the policy of Rowan University not to discriminate on the basis of sex, sexual orientation, handicap, race, color, religion or national or ethnic origin in its educational programs, admissions policies, employment practices, financial aid or other University-administered programs.

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