Rowan University

Undergraduate Catalog
2009 -2010

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

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Rowan University Undergraduate Catalog 2009-2010

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 Education, Master of Engineering Management, 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) and Camden, NJ Branch

Size
Approximately 8,435 full-time and 2,727 part time students; approximately 574 full-time equivalent (FTE) faculty

Average Costs (2008-2009)*

Tuition & Fees	Room & Board	Total
In State		
$10,908	$9,456	$20,364
Out of State		
$18,216	$9,456	$27,672

College of Professional and Continuing Education rates visit http://www.rowan.edu/bursar/

*subject to annual change.

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. In 1969, the university opened a branch in Camden, New Jersey to expand its educational services. 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.

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 58 undergraduate majors, seven teacher certification programs, 38 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 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, a college of Professional and Continuing Education and the Camden Campus.

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.

Tuition and Fees

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 2008-09 are:

Admissions Application	
(Graduate and Undergraduate):	$50
Meal Plans:	
14 Meal Plan with $600.00 Flex	$3,390
10 Meal Plan with $600.00 Flex	$3,080
7 Meal Plan with $600.00 Flex	$2,520
Unlimited Meal Plan $350.00 Flex	$3,550
Freshman Acceptance Fee	
(not refundable)	$100
Housing in	
Residence Hall	$6,606-$7,094
Residence Hall Security Deposit	$200
Residence Hall Lock-Out Fee	$5
Housing in	
Edgewood Park Apartments	$6,348
Mansion Park Apartments	$6,348
Triad Apartments	$6,348
Town House	$7,652
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)	$158
University Fee	
(p-t)	$131.50/credit
(f-t flat rate)	$1,534.00/semester
Student Teaching	$97-205
Transcript	$10/15
Music Practice Room Key Deposit	$10
Library Fines	
First Notice	$1
2nd Notice	$3
3rd 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 (2008-09) are:

New Jersey resident (p-t)	$302/credit
(f-t flat rate)	$3,920
Non-resident (p-t)	$564/credit
(f-t flat rate)	$7,574

Graduate tuition rates (2008-09) are:

New Jersey resident (p-t)	$590/credit
(f-t flat rate)	$5,312
Non-resident (p-t)	$590/credit
(f-t flat rate)	$5,312

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.

	Yearly Residents	*Commuters*
Tuition (30 cr/year is average load)	$7,840	$7,840
General Service Fee	$3068	$3068
Room and Board	$9,456	
Total expenses	**$20,364**	**$10,908**

Based on the following:	
Residence Room (double)	$6,066
14 Meal Plan	$3,390

Tuition and fees for full-time out-of-state students is $18,216/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.

Food Services

Students living in a residence hall must purchase an unlimited, 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 $3,033 (double) per semester for residence halls and $3,174 per semester for Edgewood Park and Triad Apartments. Rates, which here are reported for 2008-2009, 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 $3,174 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.

University Fee

This fee is charged to all students at $131.00 per credit hour with a maximum of $1,534 per semester. The purpose of this fee is to help defray the costs of an array of varied but integral services and projects that directly affect our student's everyday. Some of these important areas are briefly described below.

- The fee helps to offset placement service costs in order to assist all of our students as they proceed from the academic world to the job market.
- It assists in the overall support of our Student Health Center which offers treatment to currently enrolled students for acute illnesses, urgent care situations and certain health promotion needs. Registered nurses are available.
- The funds received provide much needed support for expansion and upgrade of our computer labs and academic programs.
- The fee helps defray the cost of debt service on recently constructed or renovated buildings as well as the operation and maintenance cost of newly constructed buildings and partially finances the operations of the Recreation Center and Student Center.

Late Payment Fee

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

Late Registration Fee

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

Parking

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.

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

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 ($158 fee 2008-2009). 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 http://www.rowan.edu/bursar/ .

More information can be obtained about Student Health Insurance from the Health Center Website at 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.

Student Teaching Fee
All teacher preparation students pay a student teaching fee of $97-205 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, and University 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	100% Registration
Withdrawal after Add/Drop	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, the business office, or the Dean of students in Savitz Hall.

Office of Admissions

Albert 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.

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

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. 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.

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 June 1. Deferred admission is not an option for those admitted to special admission programs or the EOF program.

Out-Of-State Applicants

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

Advanced Placement

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

Campus Visits & Interviews

Students applying for admission to Rowan University are encouraged to visit the campus. Campus tours are offered several times a week throughout most of the year. The University also holds numerous open house programs throughout the year. Specific dates are listed in admissions publications and on the Rowan University website www.rowan.edu. For those interested in studying at the Camden Campus, you may contact the Camden Admissions officer at (856) 756-5400 for a tour and information. Individual interviews are not required unless specifically requested by the Admissions

Office.

Transfer Admission

Students who have completed a minimum of 12 semester hours of transferable credit by the application deadline, are classified as transfer applicants. Rowan University admits transfer students on a competitive, space available basis. The cumulative GPA for all college work is the primary consideration for Rowan University's admission decisions. Although most programs require a 2.5 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 1 for September entrance
2. Arrange to have official transcripts of all previous academic work sent from each college attended to Rowan's Admissions Office. Students with fewer than 24 credits completed by the deadline are also required to submit SAT 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 .

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 Inter-national Student Services by phone 856-256-4239 or email internationalstudents@rowan.edu or visit our website www.rowan.edu/internationalstudents for detailed information.

Placement/Basic Skills/Testing Requirements

All freshmen and transfer students with less than 30 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 two ways:

1. pass the Computer Competency Exam.
2. pass a three-credit Basic Skills Computer Literacy course.

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. 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.

Office of 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 subsidies received from the State of New Jersey and from the University's endowment.

Students seeking assistance must file the **Free Application for Federal Student Aid** (FAFSA). The FAFSA is used to determine eligibility for assistance from the federal and New Jersey state financial aid programs. The FAFSA is available on the web at http://www.fafsa.ed.gov . There is a paper version of the FAFSA which may be obtained only by calling 1-800-4-FED-AID. We encourage applicants to file their FAFSA on the web. It is very important to designate Rowan University as a college choice by including Rowan University's federal school code 002609 on the FAFSA.

As the result of completing and filing the FAFSA, the student receives 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:

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.

Federal Stafford Student Loan

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

loan. There are two types of Federal Stafford Loans:

1. **Subsidized:** If the student demonstrates need based on the 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.

TEACH Grants

Grants offered to students pursuing a career in teaching in high need subject areas i.e. math, reading specialist, sciences, etc. The grants are for up to $4,000 each year. Students must teach four years in a low-income school district to earn their grants. If the recipient does not end up teaching at a low-income school district for the required four years, the grant will be treated as an unsubsidized student loan and must be repaid.

Federal Work Study Program

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

http://www.rowan.edu/provost/financialaid/workstudy.html

Institutional Work Study Program

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

http://www.rowan.edu/provost/financialaid/workstudy.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.

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 financialneed 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 Offices on the Glassboro and Camden campuses can provide more information.

Satisfactory Academic Progress

Satisfactory academic progress (SAP) towards the degree is necessary in order to receivefinancial aid from the state and federal programs. Satisfactory academic progress towardsthe degree is determined by the completion of coursework as well as the cumulative gradepoint 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 rewards academic success through our scholarship program. Scholarships are awarded to qualified first-year students. Scholarships are renewable for an additional six semesters provided students maintain a 3.0 GPA and maintain continous full-time enrollment.

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. Scholarships range from $2,000 to $10,900 depending upon student's qualifications.

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

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

Rowan University Foundation Scholarships
$500 yearly for four years offered to outstanding freshmen students. 3.0 GPA required for renewal.

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 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:

http://www.rowan.edu/studentaffairs/admissions/applications

Reserve Officers' Training Corps (ROTC)

Army Reserve Officers' Training Corps (ROTC)
Rowan University participates in the U.S. Army Reserve Officers Training Corps (ROTC) Program. 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 their leadership and management skills 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 to 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 $1,200 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 sophomore 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 to three years. Certain stipulations apply.

If interested, students may contact Major Jill Nitz, **nitz@rowan.edu**, at the campus ROTC Office at 401 Mullica Hill Road (856)256-4014/5445. For additional information, refer to: 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**.

Upperclass Scholarships

Scholarships are available to upperclass students through the University Scholarship Committee. Applications are available at the beginning of December.

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
Atlantic City 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

Division of Student Affairs

Carmen Jordan-Cox
Savitz Hall
Vice President for Student Affairs
856.256.4283
jordon-cox@rowan.edu

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

The departments within the Division of Student Affairs include: Athletics, Academic Success Center (Basic Skills/Tutoring and Disability Resources and Veterans Testing) Career and Academic Planning (CAP) Center, Center for Addiction Studies, Counseling and Psychological Services, Dean of Students, Dining Services, EOF/MAP, Judicial Affairs, Multicultural Affairs, Public Safety, Recreation Center, Residential Learning and University Housing, Service Learning and Volunteerism, Student Activities, Student Center, and Student Health Center. These departments are responsible for numerous programs including Greek Life, Intramurals, Living and Learning Communities, Mentoring, Orientation, Parent & Family Program, Rowan After Hours, the Sophomore Year Experience, Student Leadership, the Student Government Association, and Student University Programming.

Carol A. Gruber
Associate Vice President for Student Engagement
Savitz Hall, Room 202
856.256.4137
gruberc@rowan.edu

The Associate Vice President for Student Engagement is responsible for the development of programs and initiatives that engage Rowan University students with their campus and community, in ways that are both intentional and transformational. These initiatives include student transition programming, student leadership, student activities, service learning and volunteerism, and student government. The Associate Vice President coordinates the development and implementation of programmatic Student Learning Outcomes and a comprehensive assessment and program review process for the Division of Student Affairs. Additionally, the Associate Vice President assists the Vice President in coordinating the Student Affairs strategic and operational planning process for the Division of Student Affairs, and coordinates the Student Affairs Professional Staff Development Program.

Richard L. Jones
Associate Vice President for Residential Learning / Dean of Students
Savitz Hall, Room 103
856.256.4266
jonesri@rowan.edu

The Office of the Associate Vice President for Residential Learning/Dean of Students is responsible for creating and maintaining a safe, healthy, and supportive environment and culture that synthesizes the

intellectual, physical, social, emotional, and leadership development of our students in a holistic way reflecting the university's mission, vision and core values. The Office provides oversight for Academic Success Center, CAP Center, EOF/MAP Office, Greek Affairs, Judicial Affairs, Residential Learning, and provides strong advocacy for students and student affairs. The staff and services cultivate an environment that integrates the values and teachings of the Rowan University experience to enhance and support student learning and development and to prepare graduates for lives of discernment, civic engagement and professional growth. As an advocate for students, the Office of the Associate Vice President for Residential Learning/Dean of Students provides guidance and support to students in the following areas; students facing prolonged absences due to a health problem or other extenuating circumstances; reporting sexual assault; and other related student issues.

Academic Success Center

Melissa Arnott
Director of Academic Success Center
Savitz Hall, 3rd floor
856.256.4259
cox@rowan.edu

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

Athletics

Joy Solomen
Director of Athletics
Esby Gymnasium
856.256.4676
solomen@rowan.edu

The intercollegiate athletic department strives to be one of the finest Division III programs in the country. By providing strong leadership and competitive experiences, students are afforded the opportunity to develop as a scholar, athlete and citizen. Through strong support services, students are challenged to succeed, inspired to achieve and instilled with a sense of pride and tradition in the college community.

Career and Academic Planning Center

Lizziel Sullivan-Williams
Director, Career & Academic Planning Center
Savitz Hall
856.256.4456
sullivanl@rowan.edu

The mission of the Career & Academic Planning Center is to engage students in the development and implementation of meaningful educational and career goals consistent with their personal values, interests, and abilities. To this end, the CAP Center advocates the integration of developmental advising and career planning to provide the framework necessary in the educational process. Moreover,

the CAP Center is dedicated to providing centralized, comprehensive, and coordinated academic advising programs to all students enrolled in the Exploratory Studies Program (undeclared students) and students changing majors.

Finally, the CAP Center fosters excellence in career development, preparation, as well as professional opportunities by providing comprehensive services and programming and by promoting strong partnerships with employers, academic departments, and the university community.

Conference and Event Services

Tina Pinocci
Assistant Vice President for Campus Recreation, Student Center & Conference Services
Chamberlain Student Center
856.256.5446
pinocci@rowan.edu

The Office of Conference and Event Services is responsible for planning, developing, implementing and overseeing programs and or services related to Rowan University campus facility rental and conference program development. The Office supports the goals and objectives of the University and the Division of Student Affairs by overseeing and managing scheduling of campus public spaces while maintaining a high standard of quality.

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

Counseling and Psychological Services Center

David F. Rubenstein, Ph.D.
Director of Counseling and Psychological Services
Savitz Hall, 3rd floor
856.256.4222 for questions or to schedule an appointment
www.rowan.edu/counseling

The Counseling and Psychological Services Center (CPSC) provides confidential mental health services to enrolled students. The Center provides individual and group counseling, triage and emergency evaluations, psychological testing and outreach programs in the area of mental health. Some common areas addressed for college students include academic/personal skill building, personal and family relationships, stress, anxiety, depression, eating and body image issues, grief and loss, trauma and substance use.

The University's Stress Management and Response Team (SMART) is coordinated through the Center and each professional staff is a core member of the team. This university-wide group is available to meet with various groups on campus in order to assist with response to traumatic events that impact particular groups of students or university community as a whole.

Educational Opportunity Fund/Maximizing Academic Potential

Penny McPherson-Barnes
Assistant Dean of Students and Director of EOF/MAP
Savitz Hall, 3rd floor
856.256.4080
barnesp@rowan.edu

The mission of the EOF/MAP program is to provide access to a community of learners that embrace high academic standards and an appreciation of learning. Through a holistic approach, we will value each student's unique gifts and talents and provide an environment that embraces and celebrates diversity. Consistent with the University mission, we will foster the intellectual, critical thinking and personal development of students, which enables them to live as essential contributing members of a multicultural society.

EOF Program Description The Educational Opportunity Fund Program is an alternative admissions program established specifically to provide access to higher education for highly motivated low-income students who do not meet Rowan University¿s regular admission criteria. Eligible students receive a maximum amount of financial aid based on their individual need.
The four main requirements for applicants before consideration are:

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

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

Selected students of the EOF and MAP program are conditionally admitted and required to participate in the Pre-College Institute (PCI). MAP students fully participate in all aspects of the Institute (academic, career, counseling and residential) consistent with EOF student participation. This program provides college survival skills, leadership skills, academic coursework and support, and information concerning the college environment. During PCI, the EOF/MAP staff evaluates the student¿s demonstrated ability to successfully transition into Rowan University and makes a recommendation regarding the appropriateness of fall admission.

During the academic year, EOF/MAP students are provided with a broad range of academic support services including counseling, tutoring, leadership development, and workshops. Counselors interact with students in individual and small group settings, which cover academics.

Health and Wellness

Nancy M. H. Pontes, DNSc, APN, FNP-C
Assistant Vice President for Health and Wellness/Director of Health Services
856.256.4333 Fax 856.256.4427
stepup@rowan.edu
www.rowan.edu.health

Health and Wellness is an integrated branch within Student Affairs consisting of Student Health Services, Counseling and Psychological Services and Center for Addiction Studies and Awareness (CASA). Our departments place an emphasis upon students making lifestyle choices now that will have a positive impact upon health throughout the college experience and beyond. Because we recognize that holistic health and wellness is much broader than traditional concepts of health, we actively partner with other departments within Student Affairs and the university at large to promote campus wide healthy choices through RU Ready to STEP UP? This campaign actively encourages students to do the following:

- **S**afe Choices
- **T**hink Healthy
- **E**mbrace the Rowan Spirit
- **P**arty Responsibly
- **U**nderstand and Appreciate Others
- **P**articipate!

Health Center

Nancy M. H. Pontes, DNSc, APN, FNP-C
Assistant Vice President for Health and Wellness/Director of Health Services
Linden Hall-1st floor
856.256.4333 for questions or to schedule an appointment
Fax 856.256.4427
www.rowan.edu.health

The Student Health Center strives to remove health-related barriers to learning, to promote optimal wellness, to enable students to make informed decisions about health issues, and to empower students to be self-directed and well informed health care consumers. The Student Health Center has physicians, nurse practitioners and registered nurses who provide confidential preventive care and the treatment of acute illnesses and injuries to all students who are currently enrolled at Rowan University. The Health Center actively promotes health through education outreach in a variety of programs and trainings for the University community through our ¿RU Ready to STEP UP?¿ campaign.

All incoming matriculated students must provide the Student Health Center with a complete health record that is included in the admission packet and available at our website. This packet includes Personal Health Form, Physician Exam Form, Immunization Form, Tuberculosis Screening Form and Meningitis Information Form. Failure to submit these forms NJ State-required forms including documentation of 2 MMR vaccines, 3 Hepatitis B vaccines (taking 12 or more credits) and a Menactra¿ Meningitis Vaccine (residential students) will prevent students from living in campus housing and registering for classes. Students may receive their vaccinations at the Student Health Center for a fee. Students are responsible for the cost of medications, testing and outside specialty consultations.

New Jersey State law requires that all matriculated, fulltime students have health insurance coverage. These students will be automatically charged a Student Health Insurance fee. To waive this fee, the student must complete an online waiver identifying their current insurance coverage. To complete the waiver, go to www.rowan.edu/bursar, click on ¿health insurance¿ and follow the instructions. Students need to carry their insurance and prescription cards with them at all times.

Center for Addiction Studies & Awareness (CASA)

Pamela M. Negro, MSW, LCADC, CPS, SAC, DRCC
Director, Center for Addiction Studies and Awareness
Alvin Shpeen Hall, 40 N. Academy Street
856-863-2175 for questions or to schedule an appointment
Fax: 856-863-2169
www.rowan.edu/CASA

The Rowan University Center for Addiction Studies & Awareness (CASA) provides Alcohol, Tobacco and Other Drug (ATOD) treatment, education classes and prevention programs designed to serve the entire Rowan Community. The Center for Addiction Studies Clinic is a fully licensed facility providing therapeutic services for those experiencing problems with alcohol and drug use.

The Clinic is staffed by a multidisciplinary team of dependence specialists with backgrounds in psychology, social work, and counseling. Sometimes students feel that their substance use is interfering with day-to-day activities and/or leads to negative personal or legal consequences. Students may also come to college with a history of substance use. They may need help maintaining their sobriety or dealing with the consequences of a relapse. Our drug and alcohol counselors are available to talk with students no matter what their substance-use-related concern may be.

The Center also offers students substance abuse educational classes on ATOD issues. For more information about these classes, please contact Sandra Woodell at woodells@rowan.edu . Our Campus Prevention Project sponsors many health & wellness activities on the Rowan campus throughout the year, and we actively participate in the ¿RU Ready to STEP UP?¿ campaign. CASA also sponsors Student Care¿, a peer facilitation group dedicated to health promotion. CASA offers weekly Twelve Step meetings that are open to the Rowan community. These meetings include Narcotics and Alcoholics Anonymous as well as a more general meeting called "Twelve Steps for Everyone." AA and NA are closed meetings. Please check our web site for meeting times and locations.

Judicial Affairs

Joseph Mulligan
Assistant Dean of Students for Judicial Affairs
Savitz Hall, Room 339
856.256.4242
mulligan@rowan.edu

The mission of the Office of Judicial Affairs is to articulate to students the standards of behavior expected within the University community. Standards of student conduct ensure respect for all members of the community and maintenance of a collaborative and learning-centered environment as described in the University's mission statement. Education of students within these standards (which include honesty and personal integrity, respect for others as both individuals and groups, assumption of appropriate responsibility for the conduct of others within the community as well as for one's own behavior) occurs both preventatively (publications, presentations, interaction) and reflectively (through

the disciplinary process).

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. 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.

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/infoguide.html

Multicultural Affairs

John T. Mills
Assistant Director of Multicultural Affairs
Savitz Hall Room 337
856.256.4448
millsj@rowan.edu

The Office of Multicultural Affairs (OMA) works diligently to advance and institutionalize diversity at Rowan University at both the curricular and co-curricular level. In order to achieve this, we work closely with several entities of the institution to provide cultural programming celebrating the various cultures and heritages that comprise the Rowan community.

The OMA serves as a support for those campus organizations whose membership is primarily made up by the under-represented student body of Rowan University. The Office works with the various student cultural organizations to assist all participants in program development and membership growth.

The primary goal of the OMA is to assist the University and the student body in creating a functional and safe multicultural environment that allows for academic and life experiences that will benefit graduates of Rowan. It is our intent to work towards enhancing the climate of the institution so that all students, staff and faculty feel safe in expressing themselves intellectually and socially.

Orientation Program

Joanne Damminger
Director of Student Transition and Leadership Programs
Student Center Room 207
856.256.4453
damminger@rowan.edu

The University holds a 2-day orientation program for all incoming freshmen and parents. Orientation is designed to help first-year students and their parents learn about Rowan's academic programs, student services, how to be successful at the university level, maintaining a safe and healthy educational environment, and the Rowan community. During Orientation students meet other students and begin to connect with the University, its culture, and the people who care about them and their future.

A one-day orientation for all transfer students is held each winter and spring. Transfer students are encouraged to participate in Orientation and meet one another, begin their adjustment to the University and gain information about academic programs, student services, student clubs and organizations, and the Rowan community.

Students can direct any questions about Orientation to Dr. Joanne K. Damminger, Director of Student Transition and Leadership Programs, Student Center Room 207, by emailing Damminger@rowan.edu or calling 856.256.4453.

Parent and Family Connections Program

Julie A. Peterson
Director of Student Enrichment and Family Connections
Savitz Hall
856.256.4596
peterson@rowan.edu

Rowan University, through its Parent and Family Program, is committed to establishing and maintaining sound relationships with parents and guardians of our students to enhance and support their university experience and promote student success. We achieve this goal by being available to assist and guide parents in facilitating better communication with the university. We seek to maintain a welcoming university community by promoting an effective relationship between parents and the university community for the benefit of all.

The Parent and Family Program is dedicated to helping families with their student's transition to the university. Our office is available to help direct parents to appropriate college resources, facilitate timely responses, and assist parents and guardians with questions or concerns. The Program works collaboratively with all campus offices to offer a high level of parent support and services designed to enhance their student learning and the support and retention of students.

Public Safety

Reed W. Layton
Acting Senior Director of Public Safety and Director of Police Services
Bole Hall Annex
856.256.4922 or 856.256.4922
laytonr@rowan.edu

The mission of Rowan University Public Safety is to enhance the quality of life by providing a secure and safe environment through professional service to the University Community. Public Safety consists of six service areas: Public Safety Administration; Safety & Emergency Services; Police Services; Security Services; Parking Services; and Emergency Management.

Safety & Emergency Services includes Fire Prevention and Life Safety, Environmental Health and Safety, Occupational Health and Safety, Safety Training (Bloodborne Pathogen, etc.), Automatic External Defibrillator (AED) training, First Aid & CPR training, Emergency Medical Services, and Communications Center Operations.

Police Services includes Law Enforcement Operations, Patrol, Criminal Investigations, and Crime Prevention Programming, K-9 Operations, Accreditation Efforts, Policy and Procedures Development and Uniform Crime Reporting.

Security Services includes Patrol Operations, Building Opening and Closings, Special Events Management, Recruitment and Retention Efforts, Safe Walk and Ride Program, Oversight of the Student Community Policing Program and the Student Patrol Operation, Internal Complaint Investigations, and Oversight of Parking Services.

Recreation Center

Tina Pinocci
Assistant Vice President for Campus Recreation, Student Center & Conference Services
856.256.4900
pinocci@rowan.edu

The Rowan University Student Recreation Center joins in partnership with other service and academic areas on campus to improve the quality of life for students, faculty, staff and their families by providing varied and diverse recreational opportunities. The purpose of the Recreation Center and its operations is to create an atmosphere in which the individual participant will be encouraged to cultivate personal interests in the recreational activities of his or her choice.

The Rec Center is one of the finest facilities in the state for recreational activities, fitness programs, intramural sports and instructional classes. The programs and services we offer provide opportunities for individual development of knowledge, interests and behaviors that promotes and contributes to a healthy, well-rounded lifestyle.

The Rec Center is a state-of-the art health club open seven days a week for currently enrolled full-time students. Memberships are also available for part-time students, faculty, staff, and alumni. The 92,000 square foot facility features a three-court gymnasium, indoor track, 25-yard pool, four racquetball courts, a cycling room, a group exercise studio, fitness and free weight room areas, full locker/shower facilities, and a juice/smoothie bar.

Residence Learning and University Housing

Savitz Hall, Room 103
856.256.4266

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.

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

Mandatory Housing: All 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 co-ed (restructured sentence) housing, residence halls and furnished apartments.

All residence halls are substance and smoke free

Residence Halls:

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

In addition, 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.

Service Learning and Volunteerism

Chamberlain Student Center
(856) 256-4597

The Office of Service Learning and Volunteerism offers numerous opportunities for students who want to give back to the community as volunteers.

There are many reasons why individuals participate in service learning and volunteerism experiences. The following are some reasons why individuals within the collegiate environment consider service learning and volunteerism important:

- Develop civic-mindedness and social responsibility
- Academic learning becomes real and relevant
- Allows individual to see whether career choices are good ones
- Encourages individuals to examine moral and ethical issues
- Personally rewarding

Student Activities

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

The Office of Student Activities (OSA) is located in the Student Center, Room 209 and falls under the Division of Student Affairs. The OSA plans and implements extracurricular programs during the academic year that are designed to stimulate personal growth, create new opportunities for student involvement, and contribute to building campus community. Programs and services include social, cultural and educational events such as Freshman Connection "Adventure", Welcome Weekend, Rowan After Hours, Homecoming, Sibs Weekend, Spring Fest, Off-Campus Trips, Bands, Comedians, and Guest Speakers. The OSA also serves as a resource to individual students and student organizations in leadership development and program plan

Student Center

Tina Pinocci
Assistant Vice President for Campus Recreation, Student Center & Conference Services
Chamberlain Student Center
856.256.4604
pinocci@rowan.edu

The Chamberlain Student Center serves as a safe and welcoming environment with unlimited opportunities for personal development and enhanced learning experiences. Through quality services, programs and facilities, the Student Center is "more than just a building".

The Administration of the Chamberlain Student Center is responsible for a variety of services within the building. Scheduling of all meetings within the Student Center, approval of all flyers and posters is done in this office. Student employees working at the Information Desk and Game Room report to staff and supervisor's housed here as well. The buildings policies and procedures are available at any time during the day.

Offices and services housed within the Chamberlain Student Center are; Conferences and Events Services, Student Government Association, Student University Programmers, Service Learning and Volunteerism, Multicultural Affairs, Student Activities, Mailroom, Sodexho Dining Services (Food Court, Marketplace Convenience Store, Jazzmans, Marketplace Dining, Owl's Nest, and Catering), and Student Publications.

Student Government Association

Chamberlain Student Center
856.256.4540

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

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

An elected executive board and senate consisting of student representatives of academic departments, classes and bureaus, administer the SGA. Students interested in running for or being appointed to a position in SGA may seek information in the SGA suite on the 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 Student Government Association assumes the responsibility for distributing all monies to the various organizations.

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.

Academic Advising Policy

Providing academic advisement at Rowan University is a partnership between advisor and advisee to provide information and support that will assist studentLevels 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 email 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

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

Academic Honors Policy

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

Students' 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.

Academic Honors & Dean's List for Part-Time Students Policy

Outstanding academic achievement is recognized when students have grade point averages or 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. Part-time students who have completed 12 or more semester hours with letter grades during the academic year (Fall, Winter, Summer 1 and Summer 2 semesters) and who achieve a grade point average of 3.450 or better will be placed on the Dean's List in August.

Academic Integrity Violation Policy

I. Introduction

The integrity of academic programs is imperative to Rowan University's mission. While acknowledging the social and collaborative nature of learning, the University expects that grades awarded to students will reflect individual efforts and achievements. All members of the Rowan community are responsible for understanding what constitutes academic dishonesty; upholding academic integrity standards and encouraging others to do likewise; and knowing the procedures, rights and obligations involved in the Academic Integrity Policy. Academic dishonesty, in any form, will not be tolerated. Students who commit an act of academic dishonesty are subject to disciplinary sanctions up to and including expulsion from the university.

II. Definitions of Academic Integrity Violations Cheating: Cheating is an act of deception by which a person misrepresents his or her mastery of material on a test or other academic exercise.

Examples of cheating include but are not limited to:

- Copying from another person's work.
- Allowing another person to copy your work.
- Using unauthorized materials such as a textbook or notebook during an examination or using technology to illicitly access unauthorized materials.
- Using specifically prepared materials such as notes written on clothing or other unauthorized notes, formula lists, etc., during an examination.
- Collaborating with another person during an examination by giving or receiving information without permission.

Plagiarism: Plagiarism occurs when a person represents someone else's words, ideas, phrases, sentences, or data as one's own work. When submitting work that includes someone else's words, ideas, syntax, data or organizational patterns, the source of that information must be acknowledged through complete, accurate and specific references. All verbatim statements must be acknowledged through quotation marks. To avoid a charge of plagiarism, a person should be sure to include an acknowledgment of indebtedness, such as a list of works cited or bibliography.

Examples of plagiarism include but are not limited to:

- Quoting, paraphrasing or even borrowing the syntax of another's words without acknowledging the source.
- Using another's ideas, opinions or theories even if they have been completely paraphrased in one's own words without acknowledging the source.
- Incorporating facts, statistics or other illustrative material taken from a source, withoutacknowledging the source, unless the information is common knowledge.
- Submitting a computer program as original work that duplicates, in whole or in part, without citation, the work of another.

Fabrication: Fabrication refers to the deliberate use of invented information or the falsification of research or other findings with the intent to deceive.

Examples of fabrication include but are not limited to:

- Citation of information not taken from the source indicated.
- Listing of sources in a bibliography or other report not used in that project.
- Fabricating data or source information in experiments, research project or other cademic exercises.
- Misrepresenting oneself or providing misleading and false information in an attempt to access another user's computer account.

Academic Misconduct: Academic Misconduct includes the alteration of grades; involvement in the acquisition or distribution of unadministered tests, and the unauthorized submission of student work in more than one class.

Examples of academic misconduct include but are not limited to:

- Submitting written work to fulfill the requirements of more than one course without the explicit permission of both instructors.

- Changing, altering, falsifying or being accessory to the changing, altering or falsifying of a grade report or form, or entering any university office, building or accessing a computer for that purpose.
- Stealing, buying, selling, giving away or otherwise obtaining all or part of any unadministered test/examination or entering any university office or building for the purpose of obtaining an unadministered test/examination.
- Coercing any other person to obtain an unadministered test.
- Substituting for another student or permitting any other person to substitute for oneself to take a test or examination.
- Altering test answers and then claiming instructor inappropriately graded the examination.
- Violating the Network and Computer Use Policy, also known as the "Acceptable Use Policy, Network and System Services" established by Information Resources. Currently available at: http://www.rowan.edu/toolbox/policies/network/. Below are some examples of violations listed in the policy. Students should refer to the policy for the full list of violations.

- Each user is solely responsible for all functions performed from his/her account(s) on any system.
- No user may violate Federal Copyright Law. This means he/she may not alter, copy, translate, transmit, or receive software, music, images, text, or any other information licensed to or copyrighted by another party unless the license or copyright explicitly permits he/she to do so.
- No user may attempt to monitor another individual¿s data communications, nor may he/she read, copy, change, or delete another individual's files or software, without the prior permission of the owner.
- No user may send messages that are likely to result in the loss of the recipient's work, system downtime, or otherwise compromise a remote user's system. This includes, but is not limited to, redistribution of computer viruses or Trojan horses.

III. Classification of Academic Integrity Violations by Offense

Violations of academic integrity are classified into four categories based on the seriousness of the behaviors and the possible sanctions imposed. Brief descriptions are provided below. These are general descriptions and should not be considered as all inclusive.

Level 1 Violations

Level 1 violations may occur because of ignorance or inexperience on the part of the person(s) committing the violation and ordinarily include a very minor portion of the course work. A sanction for a level 1 violation will not exceed a failing grade on the assignment.

Example: Improper footnoting or unauthorized assistance with academic work on the part of a first-year Rowan University student.

Recommended Sanction(s): Make-up assignment at a more difficult level or assignment of no credit for work in question, required attendance at a workshop on academic honesty, and/or an assignment that will increase the student¿s awareness of academic integrity.

Reporting Mechanisms: Matters involving Level 1 violations are normally adjudicated by the instructor and sanctioned accordingly. A record of this violation will be retained in the Office of the Provost in accordance with State record retention guidelines. The student can appeal the determination and/or the sanction imposed in accordance with policy.

Level 2 Violations

Level 2 violations involve incidents of a more serious nature and affect a significant aspect or portion of the course. Any violation that involves repeat offenses at level 1 is considered a level 2 violation. A sanction for a level 2 violation will not exceed a failing grade in the course.

Example: Quoting directly or paraphrasing without proper acknowledgment on an assignment or failing to acknowledge all sources of information and contributors who helped with an assignment.

Recommended Sanction(s): A failing grade in the course, Academic Integrity Probation and/or the imposition of other lesser sanctions as deemed appropriate.

Reporting Mechanisms: Matters involving Level 2 violations are normally adjudicated by the instructor and sanctioned accordingly following a sanction review by the Academic Integrity Review Board (for additional information refer to Section V below, "Academic Integrity Review Board Procedures"). The student can appeal the determination and/or the sanction imposed in accordance with policy. A record of this violation will be retained in the Office of the Provost in accordance with State record retention guidelines.

Level 3 Violations

Level 3 offenses are even more serious in nature and involve dishonesty on a more significant portion of course work, such as a major paper, hourly or final examination. Any violation that is premeditated or involves repeat offenses below level 3 is considered a level 3 violation. A sanction for a level 3 violation will not exceed suspension from the University.

Example: Copying from or giving assistance to others on an hourly or final examination, plagiarizing major portions of an assignment, using forbidden material on an hourly or final examination, presenting the work of another as one¿s own, or altering a graded examination for the purposes of re-grading.

Recommended Sanction(s): A failing grade in the course, Academic Integrity Probation, and suspension from the University for one or more semesters with a notation of "Disciplinary Suspension" placed on a student's transcript and/or the imposition of other lesser sanctions as deemed appropriate. Reporting Mechanisms: Matters involving Level 3 violations are adjudicated by the Academic Integrity Review Board and sanctioned accordingly. The student can appeal the determination and/or the sanction imposed in accordance with policy. A record of this violation will be retained in the Office of the Provost in accordance with State record retention guidelines.

Level 4 Violations

Level 4 violations are the most serious breaches of academic integrity. They also include repeat offenses below level 3 violations and violations committed while already on or after returning from Academic Integrity Probation.

Example: Forgery of grade change forms; theft of examinations; having a substitute take an examination; any degree of falsification or plagiarism relating to a senior or graduate thesis;fusing a purchased term paper; sabotaging another¿s work; the violation of the clinical code of a profession.

Recommended sanction: Expulsion from the University and a permanent dismissal notation on the student's transcript and/or the imposition of other lesser sanctions as deemed appropriate.

Reporting Mechanisms: Matters involving Level 4 violations are adjudicated by the Academic Integrity Review Board and sanctioned accordingly. The student can appeal the determination and/or the

sanction imposed in accordance with policy. A record of this violation will be retained in the Office of the Provost in accordance with State record retention guidelines.

IV. Reporting and Adjudication of Academic Integrity Violations

A student or University employee who has witnessed an apparent act of academic misconduct or has information that reasonably leads to the conclusion that such an act has or will occur should inform the instructor or the Office of the Provost. An instructor who believes that a student has attempted or committed an apparent act of academic misconduct should investigate the matter. Instructors are encouraged to consult with staff in the Office of the Provost.

Role of Instructor

a. If the instructor then concludes that misconduct has occurred, he or she should obtain a copy of the Report of an Academic Integrity Violation (RAIV) form from the web, the departmental office, or the Office of the Provost. The instructor should complete as much of the RAIV form as possible prior to meeting with the student, including the appropriate type of violation/level. Instructors are permitted to refer the alleged violation directly to the Office of the Provost for adjudication by the Academic Integrity Review Board. In such matters a member of the Office of the Provost will be designated to conduct the meeting with the student.

b. The instructor should make reasonable attempts to meet with the student in question as soon as possible. When necessary, such meetings may be conducted by telephone or electronic mail. In this meeting every effort should be made to preserve the basic teacher/student relationship. The student should be given the opportunity to respond to the allegation and to review and sign the RAIV if he/she so chooses. The student should be allowed to remain in class and complete course work until a final resolution is reached.

c. The instructor should include a recommended grade sanction on the RAIV before the student signs the acknowledgement section of the RAIV form. Instructors may recommend sanctions up to and including a failing grade for the course. Students should not sign the form if they have additional questions or want to consult staff in the Office of the Provost.

d. At the conclusion of the meeting the instructor must provide the student with a copy of the RAIV form. The instructor should then forward the form and all supporting documentation to the Office of the Provost for a determination of the appropriate level of violation.

Level 1 violations: The instructor will make the determination on whether a violation has occurred and on the penalty. Appeals go directly to the Office of the Provost.

Level 2 violations: The instructor will make the determination of whether a violation occurred and on the penalty. Appeals go to the Office of the Provost, which will refer the matter to the Academic Integrity Review Board for a sanction review.

Level 3 and 4 violations: The Office of the Provost will refer the matter to the Academic Integrity Review Board for adjudication at a hearing. Appeals are decided by the Provost.

a. Additional sanctions, including suspension or expulsion from the university, may be assessed when requested by the instructor, requested by the academic unit in which the violation occurred, or when stipulated by the academic integrity policy (i.e. the level of the violation or the existence of previous academic integrity violations by the student.)

b. In the case that an instructor must assign a grade before the case is resolved, the instructor should assign a grade of "INC," which will be changed when the case is resolved.

c. A student may not withdraw from a course in which he or she has committed or has been accused of committing an academic integrity violation. A student found to have withdrawn from a course in which an academic integrity violation is alleged or determined will be re-enrolled in the course upon receipt of a RAIV by the Office of the Provost. In addition, a student found responsible for an academic integrity violation in a course in which they have participated but have not enrolled will be retroactively enrolled and assigned an appropriate sanction.

V. Academic Integrity Review Board Procedures

The Academic Integrity Review Board is composed of six regular members.

- Two student members who are appointed by the Student Government Association.
- Student members must be matriculated and in good standing with the University.
- Two members of the faculty who are appointed by the University Senate President.
- Two members of the administration who are appointed by the Office of the Provost.
- One alternate from each category will also be appointed.

The Academic Integrity Review Board is chaired by the Associate Provost for Academic Affairs. The Chair shall be a participating but nonvoting member of the Committee. The Academic Integrity Review Board may conduct a sanction review or be convened for adjudication of an allegation of academic dishonesty by a quorum of four members, provided that at least one student, one faculty member and one administrator are present.

Additional Procedural Guidelines

a. For matters not being adjudicated by the Academic Integrity Review Board (Levels 1 and 2), the Board will conduct a sanction review to determine whether the student has prior violation and then determine appropriate additional sanctions.

b. When applicable the Office of the Provost will be responsible for providing both the student and the instructor with proper notice concerning their participation in a hearing before the Academic Integrity Review Board. In addition notice of the results of hearings and matters referred for sanction review will also be provided. In the event that either the student or the instructor does not attend a scheduled hearing the matter will be heard based on the written record and the information provided by the party in attendance.

c. Hearings conducted by the Academic Integrity Review Board will be closed to all members of the campus and outside community except those directly involved with the case.

d. he burden of proof rests upon the complainant, who must establish that it was "more likely than not" that the accused student is responsible for the conduct violation based on the weight of the credible information presented.

e. Any student appearing at a hearing before the Academic Integrity Review Board for adjudication of an allegation of academic dishonesty may challenge the assignment of any member of the board to his/her case. Upon hearing the details of the challenge, the Chair will either uphold or deny the challenge.

f. A Board member will withdraw from adjudicating any case in which he/she cannot reach a fair and objective decision.

g. There will be an audio recording of the hearing (excluding Board deliberations and voting) for the purpose of providing assistance to the Board in their deliberations and to the accused student or complainant for use in filing an appeal. This recording remains the property of the University and constitutes an official record of the hearing.

h. Because legal procedures will not be formally applied, the Chair will make all determinations on questions of procedure and admissibility of information presented and will not be excluded from hearings or Board deliberations except that s/he will not vote. The Chair will exercise control over the manner in which the hearing is conducted to avoid unnecessarily lengthy hearings and to prevent the harassment or intimidation of witnesses. Anyone who disrupts a hearing or who fails to adhere to hearing procedures may be excluded from the proceeding.

i. The Board will review all materials and hear all information pertinent to the case from the complainant, the accused and all witnesses. Members of the Board, including the Chair, will be free to ask relevant questions in order to clarify information or resulting issues.

j. After hearing all the information, the Board will deliberate privately until a decision is reached by a majority vote. A tie vote will result in a finding of "not responsible."

k. If the student is found "responsible" the Board will determine the appropriate sanction to be imposed. At this point both the academic and non-academic past disciplinary records of the accused student will be supplied to the Board by the Chair. Other information from the Chair which is relevant to the choice of sanction(s) may also be introduced at this point, including information concerning sanctions imposed against other students for similar offenses. No information directly related to the case in question may be introduced for the first time unless the accused student has been informed and allowed to review and comment on the information.

l. Following the hearing, the Chair will provide the accused student with written notification of the decision reached, the reason for the decision and information regarding the University's appeal process.

VI. Rights in Hearings

The University disciplinary system is not a criminal or civil law process and the legal procedures applicable in criminal and civil cases will not apply. This policy is not intended to supercede any existing law or regulation. University disciplinary hearings will accord the following specific rights to all students:

a. To receive written notice of the alleged violation.

b. To have reasonable access to the case materials prior to and during any hearing.

c. To have access to advice by an individual of his or her choosing, including an attorney. (refer to the Student Information Guide. However, the advisor may not participate in the hearing.

d. To participate in the hearing, present information on his or her own behalf, call witnesses and question information provided at their hearing. This does not include the right to directly question

witnesses.

e. To receive written notification of the decision reached. The notification will also include a list of any sanctions imposed and appeal information.

VII. Description of Sanctions

A student may receive a single or multiple sanctions for violations of the Academic Integrity policy. Factors to be considered in deciding sanctions will include present demeanor and past disciplinary record of the student and the nature and severity of the violation. Sanctions which may be imposed upon any student found to have violated the Academic Integrity policy include the following:

XF Grade: When a student fails a course for reasons of academic dishonesty, a grade of XF will be assigned. X will be removed from the transcript after the student completes an academic integrity seminar or its equivalent; the student can have a maximum of one X removed in his/her career as a Rowan student. XF for the purpose of GPA calculation will be considered an F.

Academic Integrity Probation: A defined period of time (minimum of one semester) indicating that a student is no longer in good standing with the university. Any subsequent violation while in this status will likely result in suspension or expulsion from the university.

Suspension: Beginning on the date the suspension takes effect, the student is no longer a registered student, may not attend classes, nor receive grades for a specified period of time. In addition, while in this status, the student is not permitted to be present on the campus or at a University-sponsored event for any reason whatsoever. The suspension will be noted on the student's academic transcript as disciplinary suspension. The student is not entitled to any refund of any fees after published refund

Expulsion: Beginning on the date the expulsion takes effect, the student may never again be a registered student, may never attend classes, nor receive grades. In addition, the student may never be present on the campus nor at a University-sponsored event for any reason whatsoever. The expulsion will be noted on the student's academic transcript as Academic Integrity Expulsion. The student is not entitled to any refund of any fees after published refund dates.

VIII. Appeal of Academic Integrity Violations 1. Upon receiving notification of the outcome of a case, the accused student may file an appeal for the following reasons:

a. A specified procedural error(s) or error(s) in the interpretation of University regulations is so substantial as to have effectively denied the participant a fair hearing.

b. New and significant information has become available which could not have been discovered by a properly diligent person before or during the hearing.

c. The sanction is substantially disproportionate to the violation.

d. The facts of the case were insufficient to establish that a violation occurred. Please Note: If a student has pleaded responsible to a violation, the reason for appeal will be limited to reason "c" only.

2. All appeals must be made within seven (7) business days of the date on the letter informing the student of the decision. Appeals must be submitted in writing to the Provost or designee and should

explain in detail the basis of the request, including any supporting documentation. Upon receipt of the written appeal, the Provost will defer the imposition of the sanction(s) pending the decision on the appeal.

3. The Provost will review the written appeal and all documentation contained in the case file and will decide whether to deny or uphold the appeal. If an appeal is upheld based on procedural error or new information (reasons a or b above), the case will be remanded to the original adjudicator for re-opening of the hearing. If an appeal is upheld based on disproportionate sanction or lack of sufficient information (reasons c or d above), the Provost will render the appropriate determination and/or sanction.

4. The Provost will respond to the appeal within seven (7) business days of the date on the letter. The final decision will be issued in writing either accepting or denying the appeal and giving the reasons for this decision.

5. Normally, all appeal decisions are final and will be implemented immediately. For matters involving the expulsion of a student, the accused student may request that the President of the University review the decision of the Provost. A request for review by the President must be made within seven (7) business days of the date on the letter informing the parties of the Provost's decision. The request must be submitted in writing to the Office of President and must include clear and convincing reasons to change the decision of the Provost. The President may or may not elect to review a decision. The request for review will be responded to in a timely manner by the Office of the President.

6. The appeals process described will be the final step in the adjudication process. *Approved May, 2008*

Academic Standing Policy

Academic Good Standing

Rowan University has established standards for academic standing which apply to all matriculated undergraduate students as follows: Students who have attempted 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*)

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 less 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 removes 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*)

At the end of each Spring semester, matriculated students who have attempted 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 maybe 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.
- The College Deans or the Director of the Career and Academic Planning 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

As outlined above, academic dismissal takes place under the following circumstances:

Students who have attempted 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 canceled.
- 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.

Academic Standing 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. NEW 2007-2008, revised 12-2008

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.

Attendance Policy

Because classroom experiences vary greatly among disciplines, deliveries and instructors, Rowan's community of learners is best realized when teachers and learners interact in ways deemed appropriate for any particular class. Thus, although what constitutes attendance can differ from course to course, the following applies to all courses:

Responsibilities of Students

1. Students are expected to be present at each meeting of each scheduled class for which they are officially registered. Students are responsible for knowing the instructor's attendance policy as stated in the syllabus.
2. Students absent for any of the following reasons:

- Religious observances
- Official University activities
- Documented illness
- Death of a family member or loved one
- Inclement weather

* Students must inform their instructor with official written documentation before the fact in cases of religious observances and official University activities, or as soon as possible thereafter in cases of illness, death of a family member or loved one, and inclement weather.

Responsibilities of Faculty

1. Faculty are expected to keep accurate attendance records.
2. Attendance requirements must be part of the syllabus provided to students prior to the end of the drop/add period.
3. In the case of #2 under Student Responsibilities, faculty must make reasonable accommodation to provide these students the opportunity to make up their written work, tests, or other assignments at the earliest possible convenient time. In cases where graded classroom activities cannot be repeated, the faculty member will either provide an alternative graded exercise to replace the missed activity or remove the activity from the calculation of the student's final grade.
4. Faculty are under no obligation to make special provisions for students that are absent for reasons other than those listed above.
5. Faculty should counsel students who develop a pattern of excessive and unexplained absences, and to request assistance from the Dean of Students if the pattern continues.
6. Faculty (singularly or as part of a department or program) may establish additional attendance criteria that are consistent with the above. This may include referring students who have missed more than 25% of scheduled class times for reasons listed in #2 under student responsibilities to the Dean of Students to arrange a hardship withdrawal from the class.

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.

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.

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.

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.

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 30th 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.

Classroom Behavior Policy and Procedures

The following procedures apply to classrooms as well as student interactions with instructors in labs, offices and other campus learning environments.

Rowan University recognizes that students play a major part in creating and supporting the educational environment and believes that students have a right to learn and a responsibility to participate in the learning process. While Rowan University is committed to the fundamental principles of freedom of speech, including controversial positions taken in the classroom, all types of speech and behavior must be balanced with principles of appropriate classroom behavior. Furthermore, course instructors have a right to establish clear expectations in this regard, and students share the responsibility for maintaining an appropriate, orderly learning environment.

Students who fail to adhere to the behavioral expectations outlined by the instructor (either in the syllabus or at the time the behavior occurs) may be subject to discipline in accordance with the procedures described in this classroom behavior policy. Students and instructors are expected to follow the procedures described below when a concern about student behavior in the classroom arises. This policy does not replace or preclude any Rowan policies or local, state or federal laws concerning unlawful behaviors, whether inside or outside the classroom, including those concerning the health and safety of class members or the instructor.

What Constitutes Disruption?

Disruptive behavior can be classified into two levels.

Level I disruptive behavior can include:

- Persistent speaking without permission
- Engaging in activities not related to the class
- Inappropriate use of electronic devices, cell phones, or pagers
- Sleeping in class
- Chronically entering class late or leaving early
- Eating/drinking in class without permission
- Verbally abusive speech directed at faculty or other students

Level II disruptive behaviors can include:

- Threats of any kind
- Harassment
- Physical altercations
- Destruction of property
- Any behavior that puts the health or safety of the instructor or other students in the classroom in jeopardy

Some disruptive students many have emotional or mental disorders. Although such students may be considered disabled and are protected under the Rehabilitation Act/ADA, they are held to the same standards of conduct as any student.

Procedures

Level I Disruptive Behavior

A. The instructor may warn the student that such behavior is unacceptable and, if such behavior continues, it may result in the student being directed to leave the classroom. The instructor is advised to make a written record of this incident for his/her personal records in the event further action is needed.

B. If the instructor feels the behavior warrants prompt action and/or the behavior continues, the instructor must direct the student to leave the classroom immediately. If the student refuses to leave, the instructor should contact Public Safety at 256-4911. The instructor is required to make a written report of the incident and provide a copy of this report to the student, the department chair, the dean of the college where the course is held and the provost's office using the Classroom Behavior Report form.

C. In the event the student is directed to leave the classroom, the instructor and student should attempt to resolve the issue prior to the next class meeting.

D. If the issue cannot be resolved, then the matter must be referred to the department chair, who will meet with the student and instructor to facilitate a resolution. The department chair is required to make a written record of the meeting and provide copies to the instructor and student.

E. If the issue is not resolved to both the instructor's and the student's satisfaction or the department chair believes that the student is in violation of the Student Code of Conduct or the disruptive behavior becomes a Level II situation, the chair must refer the matter to the Office of Judicial

Affairs. The dean of the college where the course is housed and the provost's office will also be notified when this occurs. This process must be conducted in a timely manner so the student does not miss more than one week of class.

Level II Disruptive Behavior

A. The first course of action is to contact Public Safety (256-4911) to defuse the situation as necessary.

B. All Level II violations must be referred to the Office of Judicial Affairs using the Classroom Behavior Report form. The department chair, the dean of the college where the course is housed, and the provost's office will also be notified.

C. The student will be notified in writing by the Office of Judicial Affairs concerning violations of the Student Code of Conductand will have a hearing opportunity before being sanctioned for misconduct. Once a decision is made, the following will be notified in writing of the decision: the student, the instructor, the department chair, the dean of the college where the course is housed, and the provost's office. "Classroom Behavior Report Template" is located on the Provost Webpage.

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.

Course Withdrawal

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.)

Credit by Examination for Life Experience, External Examination

The University recognizes tests by external assessment agencies, e.g., College LevelExamination Placement (CLEP) and Advanced Placement. Assignment of credit basedupon external evaluation is considered as transfer credit. Credit assessments made by Thomas Edison College are accepted as transfer credit. No more than 30 hours totalsemester 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 creditrequirement 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 no 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. Successful applicants receive a grade of pass and credit will be applied to the total credit required for graduation.

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 multidisciplinary 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.

Deferred Payment Plan

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

Exploratory Studies

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 they will be placed in Liberal Studies - Humanities and Social Sciences major.

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.

Family Educational Rights and Privacy Act of 1974 (FERPA)

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.

Grading System Policy

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

Letter	Grade Point	Value
A	4.0	Excellent
A-	3.7	
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 forstudents 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'.

Graduation Requirements Policy

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 additional credits).

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 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, February 2 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.

Leave of Absence or Withdrawal From The University Policy

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.

Matriculated Distinguish Policy

(To Distinguish Between Undergraduate and Graduate Educational Experiences in Student Records)

Undergraduate and graduate educational experiences are distinct and need to be clearly delineated in student records:

Students admitted to an undergraduate program will: Have all academic records stored in an undergraduate account; Apply all courses taken (whether graduate level or undergraduate level) to their undergraduate degree and undergraduate GPA; Be charged at the undergraduate rate for tuition and fees; Be subject to all undergraduate academic policies and procedures.

Students admitted to a graduate program will: Have all academic records stored in a graduate account; Be charged for all courses (graduate or undergraduate) at the graduate rate for tuition and fees; Apply all courses to the graduate GPA; Be subject to all graduate academic policies and procedures;

Undergraduate courses taken by graduate students cannot be used to fulfill degree requirements.*

Credits from graduate level courses taken while an undergraduate student (whether taken at Rowan or other accredited university) may transfer and be used toward the graduate degree if approved by the program, but the grade associated with the courses will not transfer and will not impact the Rowan Graduate GPA.

*Except in rare and compelling circumstances beyond the control of the student, where the student may apply a maximum of three semester hours of upper level undergraduate coursework toward the graduate program semester hour requirement with the prior approval of the program advisor, department chairperson, dean, and Director of The Graduate School.

Matriculated/Non-Matriculated Status Policy

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.

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).

Official Transcripts Policy

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 charge of $10.00 at the counter and $15 by mail (check or money order, not cash) 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).

Process for Resolving Disputed Grades Policy

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 30th 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 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.

Registration Procedures Policy

Self Service Banner 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 Self Service Banner 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. Self Service Banner 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 confirming registration regardless of who is paying the bill. If such confirmation has not been completed by the due date on the invoice, registration 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.

Repeating a Course Policy

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 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.

Research Papers - The Term Paper Law Policy

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.

Second Baccalaureate Degree Policy

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 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.

Senior Privilege Policy

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.

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.

Turnitin.com Policy

University Policy: Rowan University has a license agreement with Turnitin, an online service that can be used to detect and prevent plagiarism in student assignments. Student papers are protected by the Family Educational Rights and Privacy Act (FERPA) as they are educational records that may contain personally identifiable information. The following policy should be in effect to be compliant with FERPA:

The use of Turnitin by faculty is entirely voluntary. If a faculty member chooses to use Turnitin:

- The faculty member must notify students on the official syllabus of the following:
    1. The use and purpose of Turnitin
    2. The rights of the student to not submit personally identifiable information to Turnitin. Students must be informed that this will have no impact on their success in the class
    3. The options that the faculty member and student have with respect to the students' right to privacy and the faculty member's right to evaluate student work for academic honesty
- If a faculty member personally submits student work to Turnitin or other plagiarism detection sites, the faculty member must remove all personally identifying information from the work. This includes the student's name, social security number, and/ or Rowan ID number.
- If a faculty member receives information from Turnitin that leads the faculty to judge that a student has plagiarized, the faculty member must follow the University policy for Academic Integrity.
- Faculty may not give out any information about student work to a faculty member from any other institution than Rowan University. All requests from faculty at other institutions should be forwarded to the Provost's Office.

An instructor using Turnitin should offer students either an opt-in or opt-out option. See below for recommended syllabus statements. Note: this should be modified according the professor's specific use of Turnitin in a class.

Recommended statement for the syllabus with the Opt-Out option: Rowan University has a licensing agreement with Turnitin, an online service to help prevent student plagiarism. As part of this course I will be using Turnitin at my discretion to determine the originality of your work. If your work is submitted to Turnitin, it will be stored in the Turnitin database. You have the right to refuse either to submit your work to Turnitin or have the university do so; availing yourself of this right will not negatively impact your success in the course. If you do not wish to use Turnitin you must notify me by e-mail within two weeks of today's date. If you object to the use of Turnitin I will use other procedures to assess originality.

Recommended statement for the syllabus with the Opt-In option: Rowan University has a licensing agreement with Turnitin, an online service to help prevent student plagiarism. As part of this course I will be using Turnitin at my discretion to determine the originality of your work. If your work is submitted to Turnitin, it will be stored in the Turnitin database. You have the right to refuse either to submit your work to Turnitin or have the university do so; availing yourself of this right will not negatively impact your success in the course. If you object to the use of Turnitin I will use other procedures to assess originality.

Undeclared Major

See Exploratory Studies.

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.

Division of Academic Affairs

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Bole Hall
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James Newell, Associate Provost for Academic Affairs
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Rowan University is an institution of higher learning in which priority is given to the intellectual development of its students. Intellectual development is held to be important for its own sake, essential as part of preparation for future careers and significant for the personal growth of students. Further, the University is committed to an academic tradition that encourages research and provides public service as a function of its social responsibility.

All academic programs offered at Rowan University have broad perspectives affecting the mind, body and spirit of its students. Intellectual pursuits often are matched by experiential enrichment field experience, work study and personal involvement. Students at Rowan University are expected to master bodies of knowledge. This mastery is typically accomplished by means of subject-matter specialization in combination with a required general education program strongly based in the liberal arts and sciences.

Academic excellence is core to all programs at Rowan University. Our faculty has the requisite expertise to assure the currency and high quality of the curriculum. The academic administrators and professional staff are selected according to their experience and expertise in curriculum, policy, and leadership. Support staff is essential to a well-functioning division that aims to promote student learning. Academic programs at Rowan University are reviewed, enhanced and/or modified regularly by the faculty to assure excellence and currency. Student learning outcomes assessment provide information to make changes where needed in the curriculum or to assure the excellence of programs. We seek accreditation or external review for academic programs to demonstrate quality.

The academic program is divided into three main offerings: those courses which constitute the major program of study, general education courses which assure breadth and depth of the liberally educated mind, and free electives which provide students opportunities to explore various intellectual areas of curiosity.

The Academic Affairs Division is headed by the Provost or Chief Academic Officer. The Provost is responsible for leadership and oversight of academic programs, faculty affairs, Library Services, technology delivery and planning and the Rowan University Camden Campus. The Deans of the Colleges of Business, Communication, Education, Engineering, Fine & Performing Arts, Liberal Arts & Sciences, Professional & Continuing Education and the Library report to the Provost. The associate provosts for Academic Affairs, Faculty Affairs, Information Resources; the assistant provosts/directors of the Graduate School, Research, Institutional Research & Planning, Rowan at Camden and the directors of Financial Aid, Student Information Services and Admissions also report to the Provost. The Provost reports directly to the President and is second in the chain of command at the University.

Research

Gautam Pillay, Associate Provost
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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
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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.

International Student Services

Craig Katz, Director of International Student Services
Robinson 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.

Graduate School

Mira Lalovic-Hand, Assistant Provost and Director of Graduate School
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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 Director 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.

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 go to www.rowan.edu/cpce/ .

Rowan University at Camden

Tyrone W. McCombs, Interim Assistant Provost
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Camden Campus
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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 courses at Rowan at Camden are taught by members of the university faculty who take pride in teaching.

The English as a Second Language (ESL) Program at Rowan at Camden is an intensive academic program affiliated with the Writing Arts Department of the University. 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 bookstore with the other two City institutions. The 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
Keith and Shirley Campbell Library
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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.

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

Government Documents

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

Archives and Special Collections

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

The Music Library at Wilson Hall

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

labs are also available in the Music Library.

Virtual Library Services

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

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 the general education and Rowan experience requirements plus the requirements of the academic major. Requirements for the major will vary from program to program, and some programs exceed 120 hours.

Students who have completed an Associate of Arts or Associate of Science degree at a New Jersey community college will receive at least 60 hours of transferrable credit towards the appropriate Bachelor of Arts or Bachelor of Science Program. With regard to General Education, it is assumed that transfer students will have met all lower division General Education requirements expected of students having completed the first two years of a four-year program. Those students who do not complete an approved transfer program or who transfer from other accredited institutions will have their previous work evaluated on a course-by-course basis and will be required to correct any deficiencies that exist in the requirements of their major.

Academic Major Programs

Academic major programs listed with general education requirements in the colleges of Business, Communication, 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.

Exploratory Studies

Exploratory Studies provides an academic home for students with less than 60 credits that are not prepared to select a major. Students in the exploratory studies program are housed within the Interdisciplinary center of the College of Liberal Arts and Science. Exploratory studies students receive academic and professional advising from the CAP center, but also have access to a professional staff

coordinator and a faculty director of the program to assist in identifying majors of interest and facilitating the transition into the permanent major. Students may remain in exploratory studies until they have completed 60 credits (including all transfer credits). Students who have not selected a major at that time will be placed in Liberal Studies/Humanities and Social Sciences major.

The Rowan Seminar

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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 courses 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/freshem .

Semester Abroad Programs

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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 toward 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 Hall or at its website: http://www.rowan.edu/internationalcenter

International Student Services

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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.

General Education at Rowan University

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

Broadly speaking, the general education program will:

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

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

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

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

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

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

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

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

General Education Requirements by Area of Study

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

General Education Areas

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

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

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

1. All students must take College Composition I (3 semester hours) or Integrated College Composition I (4 semester hours) as well as College Composition II (3 semester hours).
2. The minimum of 6 s.h. of Communications is fulfilled by College Composition I and II. For all other banks requiring 6 or more s.h., students must take courses from at least two different disciplines within the bank.
3. All students must take at least one course from the list of mathematics courses listed under Science and Mathematics.
4. All students must take at least one approved course that includes an in-class laboratory experience (LAB) under Science and Mathematics. Transfer courses must include the in-class lab experience. Students may not test out of the lab experience (CLEP).
5. All students must demonstrate computer literacy by passing the University Computer Competency Exam or completing a computer competency course by the end of their freshman year. Transfer students must meet this requirement before the end of their first semester at Rowan University. Advanced computer competency courses may be required of specific programs.
6. All courses at the university can be used in the Non Program Bank, as long as they are not courses in the major program of the student.

Students Transferring from a New Jersey Community College to Rowan University

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

For students transferring to the university without completing an Associate of Arts or Associate of Science degree, it is expected that credits taken at a New Jersey community college that are applicable to an Associate of Arts or and Associate of Science degree, up to a maximum of 60-64 semester hours will be transferable to the basic four-year degree program at Rowan University. Transfer students must meet the specific graduation requirements of the Rowan University degree program to which they seek to transfer. It is expected that through careful planning, the transfer student will be able to meet these requirements within their two years of study at the community college and the following two years of study at Rowan University.

General Education Requirements

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

Communication Bank Goals

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

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.

Social and Behavioral Sciences Bank Goals

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

Non-Program Electives Bank Goals

1. 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.

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

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

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

The Rowan Experience

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

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

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

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

The specific goals of the Rowan Experience Requirements are:

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

5. Develop the ability to create and/or critically evaluate works of art through experiential courses designed to expose students to the plastic and performing arts (ACE).
6. The Rowan Experience course listing can be viewed in the Approved Rowan Experience Courses section of this catalog.

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

Interdisciplinary Studies Concentrations

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

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Required Credits **18 s.h.**

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

Program Information

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

Requirements 6 s.h.

AFST11.104	Introduction. to Africana Studies
ENGL02.216	African/American Lit through Harlem Ren
or ENGL02.316	African/Amererican Lit Since Harlem Renas
or HIST05.377	Afro-American History Since 1865

Electives 12 s.h.

AFST11.304	Africana Social Thought
ENGL02.116	Readings in Non-West Lit
ENGL02.200	Women in Literature
ENGL02.216	Afr/Amer. Lit through Harlem Ren
ENGL02.316	Afr/Amer. Lit Since Harlem Ren
ENGL02.217	U.S. Lit. of Latin/Hisp Peoples
ANTH02.202	Intro to Cultural Anthropology
GEOG06.111	World Regional Geography
HIST05.376	African American History to 1865

HIST05.394	Sub-Saharan Africa to 1800
HIST05.397	Sub-Saharan Africa Since 1800
HIST05.441	Imperialism/Colonialism
HIST05.322	Civil War and Reconstruction
HIST05.413	Comparative Race Relations
HIST05.425	History of Feminisms
HIST05.422	Women in American History
LAWJ05.330	Problems of World Justice
LAWJ05.346	Women & Crime
LAWJ05.401	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
ZULU16.101	Zulu I
ZULU16.102	Zulu II

Air Force Reserve Officers' Training Corps (ROTC)

Professor of Aerospace Studies
AFROTC, Detachment 750
Saint Joseph's University
Philadelphia, PA 19131-1399
(610) 660-3190

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

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

summer training program and then enters the POC in the junior year.

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

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

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

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

Army Reserve Officers' Training Corps (ROTC)

Major Jill Nitz, Coordinator
ROTC House, 401 Mullica Hill Road
Rowan University
856.256.4014/5445
nitz@rowan.edu

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

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

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

The Army ROTC scholarship program provides financial assistance for the education and training of highly qualified and motivated students who desire to be commissioned as officers in the Army after graduation from college. Scholarships pay full tuition and fees at Rowan University. Students also receive a book allowance and a monthly stipend. Army scholarships offer an excellent incentive to join the ROTC program. For more information, see Army R.O.T.C. under the scholarship section.

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

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

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

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

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

Rowan Army ROTC is located at the ROTC House at 401 Mullica Hill Road (intersection of Route 322 and Bowe Boulevard). **Contact information is at the top this section and you can visit: http://www.goarmy.com/rotc/**

Note: All Military Science Courses (MILS) are listed under the Interdisciplinary heading in the Courses Description section of this catalog.

Asian Studies Concentration

Q. Edward Wang, Coordinator
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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.

Program Information

The Concentration requirements are as follows:

Required Courses (3-6 s.h.)

ENGL02.116	Readings in Non-Western Literature
POSC07.350	Introduction to Asian Political Systems

Core Courses (9 s.h.)

ARHS03.231	Surveying Asian Art
CHIN07.101	Elementary Chinese I (Fall)
CHIN07.102	Elementary Chinese II (Spring)
CHIN07.201	Intermediate Chinese I (Fall)
CHIN07.211	Intermediate Chinese II (Spring)
GEOG06.343	Geography of Asia
HIST05.355	Modern China
HIST05.351	Modern Japan
HIST05.408	Chinese Cultural History
PHIL09.330	Asian Thought
REL10.220	Introduction to Buddhism
REL10.230	Religions of Asia

Elective Courses (9 s.h.)

ANTH02.202	Intro to Cultural Anthropology
ANTH02.350	Comparative Cultures
ANTH02.420	Culture and Personality
ECON04.307	Economics of Developing Nations
ECON04.310	International Economics
ECON04.320	Contemporary Economic Systems
ENGL02.116	Readings in Non-Western Literature
FIN04.435	International Finance and Management
GEOG06.111	World Regional Geography
HIST05.120	World History since 1550
HIST05.441	Imperialism and Colonialism
INTR01.130	Women in Perspective
LAWJ05.330	Problems of 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 & Middle East
POSC07.230	Comparative Political Systems
POSC07.321	Contemporary World Problems
POSC07.320	International Relations
POSC07.421	International Organizations
REL10.200	Religions of the World
SOC08.220	The Sociology of the Family
SOC08.221	Social Problems
SOC15.322	The Sociology of Population
THD07.440	Contemporary World Theatre
THD08.146	World Dance Forms

Environmental Studies Concentration

Dr. 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 recommended courses for each career track:

Program Requirements

Environmental Planning 18-24 s.h.

GEOG06.360	Geographic Information Systems (GIS) I
GEOG06.415	Geographic Information Systems (GIS) II
GEOG06.325	Geomorphology
GEOG06.103	Geology I
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.

BIOL20.330	Environmental Science
GEOG06.308	Geographic Information Systems (GIS) I
GEOG06.415	Geographic Information Systems (GIS) II
GEOG06.325	Geomorphology
GEOG06.103	Geology I
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
BIOL07.300	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
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The International Studies program is an interdisciplinary concentration that prepares students for careers in an increasingly interdependent world. Students are introduced to a wide range of economic, political and environmental issues and they develop expertise in the culture, history and languages of other parts of the globe.

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

International Studies may be pursued in conjunction with major and minor programs, or as General Education, Multicultural/Global, Literature, Writing Intensive, or Rowan Seminar requirements. Study of a foreign language is recommended. Students can also pursue Study Abroad in partial fulfillment of the International Studies Concentration. For more information, contact the International Center in Robinson 117, at x4105, at ic@rowan.edu, or simply sign up at the CAP Center in Savitz Hall (code C901).

Program Information

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
LAWJ05.401	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
POSC07.321	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.

Area Studies

African Studies (Dr. Corann Okorodudu; x3782):

ZULU16.101	Zulu I
ZULU16.102	Zulu II
ARAB12.101	Elementary Arabic I
ARAB12.102	Elementary Arabic II
GEOG06.345	Geography of Africa
HIST05.417	Women in Islam
HIST05.394	Sub-Saharan Africa to 1800
HIST05.397	Sub-Saharan Africa since 1800
HIST05.413	Comparative Race Relations
HIST05.437	Twentieth Century African Nationalism
AFST11.104	Introduction to Africana Studies
AFST11.304	Africana Social Thought
THD08.311	African Influences in American Dance (M/G)(GenEd)

Asian Studies (Dr. Edward Wang; x4077):

INTR01.136	Gateway to Asia (RS)
ARHS03.231	Survey of Asian Art
ARAB12.101	Elementary Arabic I
ARAB12.102	Elementary Arabic II
CHIN07.101	Elementary Chinese I (GenEd)

CHIN07.102	Elementary Chinese II (GenEd)
CHIN07.201	Intermediate Chinese I
CHIN07.211	Intermediate Chinese II
ENGL02.112	Readings in Asian Literature (M/G)(LIT)(GenEd)
GEOG06.343	Geography of Asia (M/G)
HIST05.408	Chinese Cultural History
HIST05.355	Modern China
HIST05.438	History of the Vietnam War
HIST05.351	Modern Japan
REL10.220	Introduction to Buddhism
REL10.230	Religions of Asia
REL10.330	Introduction to Daoism
PHIL09.330	Asian Thought (M/G)

Eastern European and Russian Studies (Dr. Larissa Kyj; x3984):

RUSS06.101	Elementary Russian I (GenEd)
RUSS06.102	Elementary Russian II (GenEd)
RUSS06.201	Intermediate Russian I
RUSS06.211	Intermediate Russian II
RUSS06.345	Russian Literature in Translation (GenEd)
RUSS06.347	Women in Russian Literature in Translation
GEOG06.346	Geography of the C.I.S. (former Soviet Union)(M/G)
HIST05.343	Russia to 1914
HIST05.344	Russia since 1914
POSC07.341	Politics and Society in Russia and the C.I.S.
POSC07.351	Russian Foreign Policy

Middle East Studies (Dr. Corinne Blake; x3991):

ARAB12.101	Elementary Arabic I
ARAB12.102	Elementary Arabic II
GEOG06.347	Geography of the Middle East (M/G)
HIST05.304	Islamic Civilization
HIST05.307	Ancient Mediterranean World
HIST05.308	Modern Middle East
HIST05.417	Women in Islam
HIST05.404	Arab-Israeli Conflict

Latin American and Iberian Studies (856-256-4500 x3465):

SPAN05.300	Spanish Phonetics
SPAN05.201	Spanish III (GenEd)
SPAN05.211	Spanish Reading and Conversation (GenEd)
SPAN05.305	Oral Spanish
SPAN05.212	Spanish Reading and Composition (GenEd)
SPAN05.312	Spanish for Business (GenEd)
SPAN05.320	Spanish Civilization & Culture
SPAN05.321	Survey of Spanish Literature I
SPAN05.322	Survey of Spanish Literature II
SPAN05.323	Survey of Spanish-American Literature I
SPAN05.324	Spanish-American Civilization and Culture (M/G)

SPAN05.325	Readings in Contemporary Spanish Literature
SPAN05.326	Spanish Novel
SPAN05.327	Spanish-American Poetry
SPAN05.328	Spanish-American Theatre
SPAN05.381	Contemporary Spanish Theatre
SPAN05.383	Spanish-American Short Story
SPAN05.400	History of the Spanish Language
SPAN05.409	Advanced Spanish Grammar and Composition(WI)
SPAN05.410	Advanced Spanish Grammar and Composition
SPAN05.411	Advanced Spanish Conversation
SPAN05.426	Spanish-American Novel
SPAN05.481	The Generation of 1898
SPAN05.482	Modern Spanish Novel
SPAN05.435	Spanish Individual Study
ANTH02.210	Natives of South America (M/G)(GenEd)
GEOG06.344	Geography of Latin America (M/G)
HIST05.347	Traditional Latin America
HIST05.350	Modern Latin America
HIST05.362	History of Mexico & the Caribbean
HIST05.409	Latin American Revolutions and Reform
HIST05.411	Topics in Latin-American History
HONR05.390	Linguistics and Cultures of Native South America
HONR05.390	Modern Descendents of the Incas

Western European Studies (Dr. Edward C. Smith III; x4105):

ARHS03.103	Art History Survey I
ARHS03.104	Art History Survey II
ARHS03.205	Art History Survey III
ENGL02.110	Readings in British Literature (LIT)(GenEd)
ENGL02.309	British Literature to Romanticism
ENGL02.311	British Literature since Romanticism
ENGL02.330	Classical Literature in Translation
ENGL02.421	The English Novel
ENGL02.430	Anglo-Saxon and Medieval Literature
ENGL02.441	English Renaissance Literature
ENGL02.460	Restoration and 18th Century British Literature
ENGL02.471	English Romanticism
ENGL02.472	Victorian Literature
ENGL02.473	Twentieth Century British Literature
ENGL02.482	Modern European Literature
FREN02.201	Intermediate French I (GenEd)
FREN02.211	Intermediate French II (GenEd)
FREN02.300	French Phonetics
FREN02.205	Oral French
FREN02.311	Advanced French Conversation
FREN02.315	Introduction to French Literature
FREN02.320	French Civilization and Culture
FREN02.324	Appreciation of French Literature
FREN02.325	Readings in Contemporary French Literature

FREN02.400	History of the French Language
FREN02.410	Advanced French Composition
FREN02.421	The French Short Story
FREN02.435	Individual Study (French)
GERM03.201	Intermediate German I (GenEd)
GERM03.211	Intermediate German II (GenEd)
GERM03.212	German Reading and Composition
GERM03.320	German Civilization and Culture
ITAL04.201	Intermediate Italian I (GenEd)
ITAL04.211	Intermediate Italian II (GenEd)
GEOG06.342	Geography of Europe (M/G)
HIST05.100	Western Civilization to 1660 (GenEd)
HIST05.307	Ancient Mediterranean World
HIST05.310	Medieval Europe
HIST05.311	Renaissance and Reformation
HIST05.312	Age of Enlightenment 1648-1789
HIST05.313	Age of Revolution 1760-1815
HIST05.314	Europe 1871-1914
HIST05.315	Twentieth Century Europe I
HIST05.316	Twentieth Century Europe II
HIST05.321	England since 1715
HIST05.407	History of World War II
HIST05.380	Traditional Jewish History
HIST05.381	Modern Jewish History
HIST05.406	Jewish Holocaust 1933-1945
HIST05.411	European Intellectual History since the 16th Century
HIST05.418	Women in Europe to 1700
HIST05.419	Women in Modern Europe
HIST05.327	Victorian England
SOC08.399	Sociology of the Holocaust (GenEd)

Students interested in pursuing Western European area studies must complete a study of a foreign language at the intermediate (200) level (courses are offered up to this level in German, French, Italian, Russian and Spanish), or the equivalent. One-half of all credits (i.e. 6 credits) must be taken at the 300 level or above. To encourage the development of interdisciplinary perspectives, the remaining 6 credits must be selected from at least two academic departments.

International Honor Society Phi Beta Delta is a national honor society for students, faculty and staff interested in international issues. The Delta Lambda chapter at Rowan University has been in existence since 1998. This society provides a forum for students, faculty and staff to meet informally and discuss topics of common interest. It also sponsors or co-sponsors a number of activities, such as a scholarship program for student members, lectures, the International Film Series, International Week, etc. Each spring the Delta Lambda chapter of Phi Beta Delta hosts a formal initiation ceremony. Students interested in applying must demonstrate an interest in international education (Study Abroad, international student, etc.) and maintain a GPA of at least 3.1.

Scholarships, Internships and Career Opportunities Students with a strong academic background should consider applying for some of the scholarship programs that send graduating seniors abroad, especially the Fulbright Program and the Rotary Ambassadorial Scholarship Program. For more information about these scholarships visit www.rowan.edu/internationalcenter or make an

appointment with the International Studies coordinator in the International Center, located in Robinson 117.

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

Leadership Studies Concentration

Education Leadership Department
Education 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.

Program Information

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 Interdicisplinary 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.
CMS04.220	Interpersonal Communication	
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	
EDPA02.320	Public Administration	

PSY08.310	Industrial/Organizational Psychology
PSY05.206	Social Psychology
HLTH37.170	Stress Management

Thomas N. Bantivoglio Honors Concentration

Kathleen L. Pereles, Coordinator
Keith and Shirley Campbell Library
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pereles@rowan.edu

The Thomas N. Bantivoglio Honors Concentration is an eight (8) course concentration open to Rowan students in all academic major and college. 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 a unique educational experience. At graduation ceremonies, Bantivoglio Scholars receive special recognition and their accomplishments are highlighted in the Commencement Program and on their diplomas.

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.

Students earn an Honors Concentration in addiction to their specific program degree. Honors courses can be used to complete general education, Rowan Experience requirements, non-program and free electives, and/or specific degree requirements.

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, financial assistance to study abroad 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, and a letter of recommendation. Rowan University students may apply to the concentration if they have a GPA of 3.45 or higher and can complete the Concentration by their graduation.

To graduate with an Honors Concentration, students must complete at least eight (8) Honors courses and participate in extra-curricular Honors activities and service projects. At least four (4) of the Honors courses must be interdisciplinary and a maximum of four (4) courses may be discipline-specific.

Each semester, there are a number of different Honors courses offered so that students can plan their Honors Concentration progress. Grades of below a B- in Honors courses do not count toward completion of the Honors Concentration. Students must also maintain a cumulative GPA of 3.00, continue to make progress toward completing the Honors Concentration within the normal time period to earn their major degree, and must participate in Honors activities in order to remain in the Concentration.

Women's and Gender Studies Concentration

Melissa Klapper, Coordinator
426 Keith and Shirley Campbell Library
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klapper@rowan.edu

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

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

Each student enrolled in the Women's and Gender Studies Concentration is required to take:

1. the core course, Women in Perspective (INTR01.130); and
2. fifteen (15) credits of approved Women's and Gender Studies courses (now ranked First and Second Tier), of which nine (9) credits must be from the First Tier.

Program Information

Required Core Course (3 s.h.)

INTR01.130	Women in Perspective

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

ANTH02.322	Sex and Sex Roles in a Cross Cultural Perspective
ARHS03.340	Survey of Women Artists
CMS04.320	Communicating Gender
CMS04.310	Images of Gender in Popular Culture
ECON04.225	Women in the Economy
ENGL02.200	Women in Literature
HIST05.417	Women in Islam
HIST05.418	Women in Europe to 1700
HIST05.419	Women in Modern Europe
HIST05.422	Women in American History

HIST05.425	History of Feminisms
HIST05.429	Proseminar in History: Women in African History
HIST05.455	Gender, Sexuality and History
INTR01.200	Issues in Women's Health
INTR01.430	Women, Sex, and Power:Capstone Seminar in Women's Studies
LAWJ05.346	Women, Crime and Criminal Justice
PHIL09.328	Philosophy and Gender
PHIL09.346	Feminist Ethics
POSC07.311	Women in American Politics
PSY01.200	Psychology of Women and Cultural Experience
RTF03.272	Images of Women in Film
SOC08.370	The Sociology of Women in Society
SOC08.440	Selected Topics: Understanding Gender
SOC08.493	Seminar on Gender Roles
HONR05.214	Women Artists in the Age of Enlightenment

Selected Topics courses in various disciplines
(see the coordinator of the program for more information)

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

ENGL02.205	Adolescent Literature
ENGL02.216	African American Literature Through Harlem Renaissance
ENGL02.316	African American Literature Since Harlem Renaissance
HIST05.408	Chinese Cultural History
HIST05.492	Proseminar in History: History of Witchcraft
INTR01.158	From Nancy Drew to Lara Croft: Historical and Critical Dimensions of the Female Detective Genre
PHIL09.369	Philosophy of Science
PSY05.310	The Psychology of Human Sexuality
SOC08.220	The Sociology of the Family
SOC08.399	Sociology of the Holocaust

Rohrer College of Business

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Mission

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

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

Vision

To become a regionally prominent, nationally recognized, and globally engaged college of business creating a transformative learning experience.

Core Values

Excellence: faculty, staff, students, and alumni strive to distinguish themselves as valued quality contributors in their chosen fields/professions

Inquiry: nurture a culture of intellectual curiosity and critical thinking

Innovation: encourage creative and adaptive thinking

Respect: promote tolerance, collegiality, and ethical behavior

Social Responsibility: strive to generate sustainable value for business and society as a whole

General Education Requirements

The General Education component of the undergraduate curriculum for the degree programs in Business must comprise at least 50% of the student's four-year program.

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 Rohrer College of Business (2) is pursuing a Minor offered by the College of Business; (3) istaking 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-matriculated student for transfer to another academic institution. Transfer students should note that the degree programs in the Rohrer College of Business 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 programs successfully demonstrated a wide range of quality standards relating to curriculum, faculty resources, admissions, degree requirements, facilities, financial resources, and intellectual climate.

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

Programs Offered

The College of Business offers the following programs to serve its undergraduate and graduate students: a Bachelor of Science in Accounting; Entrepreneurship; Finance; Human Resource Management; Marketing and Management Information Systems; and a minor in Business Administration; Human Resource Management, Management Information Systems; and Marketing.

The aims of the programs 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 which are consistent with reasonable societal expectations
- Develop in students the communication 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 Entrepreneurship, and Marketing and Business Information Systems.

Minor in Business Administration

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

Required Prerequisite Courses 12 s.h.

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

Business Courses 21 s.h.

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

Required courses 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 MGT06.309	Organizational Behavior - WI
FIN04.300	Principles of Finance
MIS02.334	Management Information Systems

Department of Accounting and Finance

Carol Welsh, Chair
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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 majors, a solid basis in accounting and financial theory. At the upper levels, courses are designed to qualify students for a wide range of careers in the accounting and the financial environment.

Bachelor of Science in Accounting

The B.S. in Accounting requires the common core of the College of Business courses. Courses within the accounting major provide students with a broad understanding of accounting theory and 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.

Program Requirements

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirement as described on page 68

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

COMP01.111	College Composition I
COMP01.112	College Composition II
MATH01.130	Calculus I
or MATH03.125	Calculus Techniques and Applications
CS01.200	Computing Environments
ECON04.101	Introduction to Economics: Macroeconomic Perspective
ECON04.102	Introduction to Economics: Microeconomic Perspective
STAT02.261	Statistics II
ACC03.210	Principles of Accounting I
ACC03.211	Principles of Accounting II
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
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
ACC98.300	Law for Accountants

Business Elective 3 s.h.

Choice of any course in the College of Business, or Business Ethics (PHIL09.322), 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.

Bachelor of Science in Finance

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

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

Program Requirements

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All Students must complete the Rowan Experience requirements as described on page 68

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

COMP01.111	College Composition I
COMP01.112	College Composition II
MATH01.130	Calculus I
*or*MATH03.125	Calculus Techniques and Applications
CS01.200	Computing Environments

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

ECON04.101	Introduction to Economics: Macroeconomic Perspective
ECON04.102	Introduction to Economics: Microeconomic Perspective
STAT02.261	Statistics II
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
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 (3) three of the following courses:

ACC03.311	Intermediate Accounting II
FIN04.424	Seminar in Finance
FIN04.425	Risk Management
FIN04.330	Supervised Internship in Finance
FIN04.327	Selected Topics in Finance

Business Elective 3 s.h.

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

Free Electives 8 s.h.

Total Credits for the Program 120 s.h.

Department of Management and Entrepreneurship

Dilip Mirchandani, Chair
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mirchandani@rowan.edu

The Management and Entrepreneurship Department awards B.S. degrees in Management, Entrepreneurship, and Human Resource Management. These business programs offer students a solid grounding in management theory and practice and provide a strong professional foundation for a wide variety of organizational functions.

Students benefit from a curriculum that combines liberal arts requirements with intensive business theory and fundamentals, and hands-on learning opportunities.

Bachelor of Science in Management

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

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

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

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

Program Requirements

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirement as described on page 68

Required Courses for Management Degree (may be included in General Education) 27 s.h.

COMP01.111	College Composition I
COMP01.112	College Composition II
MATH01.130	Calculus 1

or MATH03.125	Calculus Techniques and Applications	3 s.h.
STAT02.260	Statistics 1	
CS0x.xxx	**	

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

ECON04.101	Introduction to Economics: Macroeconomic Perspective
ECON04.102	Introduction to Economics: Microeconomic Perspective
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
WA01.408	Writing as Managers (WI)
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

Choose 5 courses with at least one being from each of the three banks below: 15 s.h.

Quantitative Skills

MIS02.322	Design of Database
MKT09.384	Research Methods in Marketing-WI
FIN04.422	Financial Management I
MGT06.404	Quality Management
MIS02.150	Integrated Business Software Tools
MGT06.354	Managerial Data Analysis
ENT06.426	New Venture Development
MKT09.378	Product, Price, and New Venture Management
ACC03.326	Cost Accounting

Qualitative People Skills

MGT06.304	Organizational Change and Development
HRM06.302	Management of Human Resources
HRM06.420	Principles of Training and Training Management
HRM06.315	Recruitment and Selection
ENT06.327	Strategic Issues in Family Business
MKT09.382	Sales Force Management
MKT09.376	Consumer Behavior
PHIL09.322	Business Ethics
MGT06.361	Supervised Internship (additional 3.0 s.h.)
SPAN05.312	Spanish for Business

Organizational Task Skills

ENT06.450	Technology Entrepreneurship
ENT06.240	Entrepreneurship and Innovation
ENT06.326	Entrepreneurship and Small Business Management
MKT09.360	Services Marketing
MIS02.332	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 Management II: Business Seminar

Free Electives	6-8 s.h.
Total Credits for Program	120 s.h.

Bachelor of Science in Entrepreneurship

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

Students working toward a B.S. in Entrepreneurship must maintain a 2.00 grade point average overall and a 2.50 grade point average in all business courses taken.

Program Requirements

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirement as described on page 68

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

COMP01.111	College Composition I
COMP01.112	College Composition II
MATH01.130	Calculus I
or MATH03.125	Calculus Techniques and Applications
STAT02.260	Statistics I
CS0x.xxx	**

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

ECON04.101	Introduction to Economics: Macroeconomic Perspective
ECON04.102	Introduction to Economics: Microeconomic Perspective
MKT09.200	Principles of Marketing

ACC03.210	Principles of Accounting I
ACC03.211	Principles of Accounting II
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)
MGT06.402	Business Policy
ENT06.240	Entrepreneurship and Innovation
MGT06.330	Managing International Business (M/G)
or MKT09.379	International Marketing (M/G)
MKT09.384	Research Methods in Marketing (WI)
ENT06.426	New Venture Development
ENT06.342	Financing and Legal Aspect of Entrepreneurship
ENT06.415	Management Consulting Field Study

Select 6 s.h. from the following list:

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

Select 9 s.h. from the following list:

Any ENT course or

MKT09.378	Product, Price, and New Venture Management
MKT09.360	Services Marketing
MKT09.391	Business to Business Marketing
MGT06.304	Organizational Change and Development
MGT06.405	Business Management Simulation
MIS02.150	Integrated Business Software Tools
ACC03.326	Cost Accounting
PHIL09.322	Business Ethics
THD07.365	Theatre Management
EDPA02.320	Public Administration
ECON04.307	Economic Development

Free Electives	6-8 s.h.
Total Credits for Program	120 s.h.

Bachelor of Science in 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 major should be of interest to students pursuing careers as human resource managers, as well as to those who anticipate that they will someday be responsible for making hiring, performance appraisal, and pay decisions. Students working toward a B.S. in Human Resource Management must maintain a 2.00 grade point average overall and a 2.50 grade point average in all business courses taken.

Program Requirements

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirement as described on page 68

Required Courses for Human Resource Management Degree (may be included in General education)

COMP01.111	College Composition I
COMP01.112	College Composition II
MATH01.130	Calculus I
or MATH03.125	Calculus Techniques and Applications
STAT02.260	Statistics I
CS0x.xxx	**

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

ECON04.101	Introduction to Economics:Macroeconomic Perspective
ECON04.102	Introduction to Economics:Microeconomic Perspective
MKT09.200	Principles of Marketing
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)
MGT06.402	Business Policy
MIS02.334	Management Information Systems
HRM06.302	Management of Human Resources
MGT06.330	Managing International Business
HRM06.315	Recruitment and Selection
HRM16.401	Labor/Employee Relations
HRM06.425	Management of Compensation
HRM98.337	Legal Aspects of Human Resource Management-WI
MGT06.361	Supervised Internship

Select 12 s.h. from the following list:

PHIL09.322	Business Ethics
ECON04.345	Labor Economics
SPAN05.312	Spanish for Business
STAT02.261	Statistics II
PSY05.402	Psychology of Conflict Resolution

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.

Department of Marketing and Business Information Systems

Phillip A. Lewis, Chair
Edgar F. Bunce Hall, Room 208
845.256.4029 or 256-4298
lewisph@rowan.edu

The Marketing Department awards Bachelor of Science Degrees in Marketing and Management Information Systems (MIS).

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.

Bachelor of Science in Marketing

Program Requirements

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirement as described on page 68

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

COMP01.111	College Composition I
COMP01.112	College Composition II
MATH01.130	Calculus I
or MATH03.125	Calculus Techniques and Applications
STAT02.260	Statistics I (Equivalent of College Algebra)
CS0x.xxx	**

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

ECON04.101	Introduction to Economics: Macroeconomic Perspective
ECON04.102	Introduction to Economics: Microeconomic Perspective
ACC03.210	Principles of Accounting I
ACC03.211	Principles of Accounting II
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

Major Requirements 12 s.h.

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

Marketing Electives: Electives 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
MKT09.386	The Marketing Plan
MKT09.390	Selected Topics in Marketing
MKT09.391	Business to Business Marketing
MKT09.411	Supervised Internship in Marketing

Marketing and Business Elective: Select 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 Department
- Any Non-Required 300 or 400 level course except the Supervised Internships offered by the Management and MIS on Accounting and Finance Departments
- MKT09.101 Marketing and the Business Environment (Rowan Seminar)

Free Electives	9 s.h.
Total Credits for Program	120-122 s.h.

Minor in Marketing (21 s.h.)

Required (18 s.h.)

STAT02.260	Statistics I (Equivalant of College Algebra)
MKT09.200	Principles of Marketing (College Comp) 1; (12 completed s.h.)
MKT09.376	Consumer Behavior (Principles of Marketing, 57 s.h)
MKT09.384	Research Methods in Marketing (Prin of Marketing, Statistics I, Comp II, 57 s.h.)
MKT09.379	International Marketing (Principles of Marketing, 57 s.h.)
MKT09.386	The Marketing Plan (Cons. Behavior, Int'l Marketing)

Electives: Select one (3.s.h.) course from the list below:

MKT09.375	Business Logistics
MKT09.391	Business to Business Marketing
MKT09.305	Internet Marketing
MKT09.350	Management of Advertising and Promotion

MKT09.360	Marketing Channels
MKT09.315	Personal Selling
MKT09.378	Product, Price, and New Venture Management
MKT09.372	Retailing
MKT09.382	Sales Force Management
MKT09.390	Selected Topics in Marketing
MKT09.411	Supervised Internship in Marketing

Bachelor of Science in Management Information Systems

The Bachelor of Science in Management Information Systems (MIS) 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 majoring 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 cumulative grade point average and a 2.50 grade point average in all business courses completed at Rowan.

Bachelor of Science in Management Information Systems (MIS)

Program requirements

General Education: All students must complete the University General Education requirements as described on 257

Rowan Experience: All students must complete the Rowan Experience requirement as described on 68

Required Courses for MIS Degree (may be included in General Education):

COMP01.111	College Composition I
COMP01.112	College Composition II
MATH01.130	Calculus I
or MATH03.125	Calculus Techniques and Applications
STAT02.260	Statistics I(Equivalent of College Algebra)
CS04.140	Enterprise Computing I
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
CS04.141	Enterprise Computing II
MIS02.330	Business Systems

MIS02.322	Principles of Systems Design
MIS02.338	Design of Database Systems
MIS02.336	Advanced Database Management
MIS02.327	Network Management
MIS02.428	Business Web Applications
MIS02.325	Project Management
MGT06.330	Managing International Business
MIS02.333	E-Business: IS Perspective-WI
MIS02.450	MIS Capstone Experience

Select 3 s.h. from the following list:

MIS02.344	MIS Supervised Internship
MIS02.320	Seminar in MIS
MIS02.150	Integrated Business Software Tools
HRM06.318	Human Resource Information Systems
ACC03.326	Cost Accounting
FIN04.422	Financial Management I
MGT06.304	Organizational Change and Development
ENT06.326	Entrepreneurship and Small Business Management
MGT06.401	Independent Project
MKT09.305	Internet Marketing
HRM06.420	Principles of Training/Training Management
WA01.400	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
PHIL09.130	Introduction to Symbolic Logic
PHIL09.322	Business Ethics
CMS04.220	Interpersonal Communication
GEOG06.360	Introduction Geographic Information Systems
INTR01.265	Computers and Society

Free Electives	9 s.h.
Total Credits for the Program	120 s.h.

Minor in Management Information Systems (18 s.h.)

Required (12 s.h.)

MIS02.334	Management Information Systems
MIS02.330	Business Systems
MIS02.338	Design of Database Systems
MIS02.322	Principles of Systems Design

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

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

College of Communication

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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 undergraduate 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 Arts. Journalism, Communication Studies 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.

Introduction

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 (13) thirteen major courses. Writing Arts requires (11) eleven three credit courses and a one credit Portfolio Seminar.

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Department of Communication Studies

Ed Streb, Chair
Hawthorn Hall
856.256.4293
streb@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 Isssues in Human Communication, and Seminar in Studies provide a broad and rigorous grounding in communication theory, research, and practice.

Bachelor of Arts in Communication Studies

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Core Requirements (Must be completed with grades no lower than a C-) 15 s.h.

CMS04.200	Introduction to Communication Studies
CMS04.250	Communication Theory
CMS04.300	Ethical Issues in Human Communication
CMS04.350	Communication Studies Research Methods
CMS04.450	Seminar in Communication Studies

Communication Studies Specializations 12 s.h.

Select four courses from one of the following groups (must be completed with grades no lower than a C-):

A. Rhetoric/Cultural Criticism

CMS04.210	Mass Media and Their Influences

CMS04.270	Persuasion and Social Influence
CMS04.290	Rhetorical Theory
CMS04.310	Images of Gender in Popular Culture
CMS04.330	International Media Communication
CMS04.370	Political Communication
CMS04.375	Special Topics in Communication
CMS04.390	Rhetorical Criticism

B. Interpersonal/Organizational Communication

CMS04.220	Interpersonal Communication
CMS04.240	Small Group Communication
CMS04.260	Organizational Communication Theory and Research
CMS04.320	Communicating Gender
CMS04.340	Family Communication
CMS04.360	Intercultural Communication
CMS04.375	Special Topics in Communication
CMS04.380	Health Communication

Cross-Specializations Elective 3 s.h.

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

Related Electives 9 s.h.

Select three (3) courses from the following group:

CMS04.210	Mass Media and Their Influence
CMS04.215	Fiction & Film
CMS04.220	Interpersonal Communication
CMS04.225	Semantics
CMS04.240	Small Group Communication
CMS04.260	Organizational Communication Theory and Research
CMS04.270	Persuasion and Social Influence
CMS04.290	Rhetorical Theory
CMS04.305	Advanced Public Speaking
CMS04.310	Images of Gender in Popular Culture
CMS04.320	Communicating Gender
CMS04.325	Linguistics
CMS04.335	Intro to Survey Research
CMS04.340	Family Communication
CMS04.345	Argumentation and Debate
CMS04.355	Field Exp I
CMS04.356	Field Exp II
CMS04.357	Field Exp III
CMS04.360	Intercultural Communication
CMS04.365	Practicum
CMS04.375	Special Topics in Communication
CMS04.380	Health Communication
CMS04.390	Rhetorical Criticism
CMS04.330	International Media Communication
CMS04.370	Political Communication
ADV04.330	Intro to Advertising

JRN02.335	Communication Law
PR06.350	Intro to Public Relations
RTF03.205	TV History and Appreciation
RTF03.220	The TV Industry
RTF03.270	Film History and Appreciation I
RTF03.271	Film History and Appreciation II
RTF03.272	Images of Women in Film
PR99.362	Public Opinion
WA01.400	Writing for the Workplace

Other Requirements:

- Psychology Course
- Economics or Political Science Course
- Total of 3 Math/Science Courses
- Total of 4 History/Humanities/Language Courses
- Sociology Course
- History or Philosophy Course
- Total of four (4) Social & Behavioral Science Courses

Free Electives 39 s.h.
Total Credits in Program 120 s.h.

Minor in Communication Studies

Required Core 6 s.h.
All Communication Studies minors should complete the following two courses (with grades no lower than a C-):

CMS04.200	Introduction to Communication Studies
CMS04.250	Communication Theory

Communication Studies Specialization Selections 12 s.h.
Each student will complete 4 courses within the specializations, with at least one course in each (with grades no lower than a C-):

Rhetoric/Cultural Criticism

CMS04.210	Mass Media and Their Influences
CMS04.270	Persuasion and Social Influence
CMS04.290	Rhetorical Theory
CMS04.310	Images of Gender in Popular Culture
CMS04.330	International Media Communication
CMS04.370	Political Communication
CMS04.375	Special Topics in Communication
CMS04.390	Rhetorical Criticism

Interpersonal/Organizational Communication

CMS04.220	Interpersonal Communication
CMS04.240	Small Group Communication
CMS04.260	Organizational Communication Theory and Research
CMS04.320	Communicating Gender
CMS04.340	Family Communication
CMS04.360	Intercultural Communication

CMS04.375	Special Topics in Communication
CMS04.380	Health Communication

Department of Journalism

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

The Department of Journalism houses the Journalism major and minor.

Bachelor of Arts in Journalism

The Bachelor of Arts in Journalism prepares students for a variety of 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: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Core Courses Required 21 s.h.

JRN02.205	Journalism Principles and Practices
JRN02.310	News Reporting I
JRN02.319	Media Ethics
JRN02.318	Enterprise Journalism
JRN02.335	Media Law
JRN02.321	Online Journalism I
JRN02.410	Problems in Contemporary Journalism

Sequences 12 s.h.
(Each student must choose at least one sequence.)

Print Journalism

JRN02.311	News Reporting II
JRN02.312	Feature Writing
JRN02.411	Copy Editing
JRN02.317	Publication Layout and Design

Broadcast Journalism

JRN02.341	Broadcast News Writing (Fall)
JRN02.307	On-Camera Field Reporting
JRN02.356	Journalism Internship I, II or III
JRN02.305	Broadcast Journalism: (Spring) TV Newscast

Online Journalism

JRN02.311	News Reporting II
JRN02.317	Publication Layout and Design
JRN02.325	Online Journalism II

JRN02.314	Photojournalism

Editing and Publishing

JRN02.411	Copy Editing
JRN02.317	Publication Layout and Design
JRN02.425	Advanced Publication Layout
JRN02.322	The Publishing Industry

Related Electives 6 s.h.

(Each student must take 2 courses from this list)

JRN02.425	Advanced Publication Layout
JRN02.320	Broadcast Journalism: Radio
JRN02.305	Broadcast Journalism: TV Newscast
JRN02.341	Broadcast News Writing
CMS04.250	Communication Theory
JRN02.411	Copy Editing
JRN02.356	Journalism Internship I
JRN02.358	Journalism Internship II
JRN02.359	Journalism Internship III
JRN02.355	Journalism Practicum I
JRN02.357	Journalism Practicum II
JRN02.313	Magazine Article Writing
JRN02.420	Newspaper Laboratory
JRN02.312	Feature Writing
JRN02.311	News Reporting II
JRN02.307	On-Camera Field Reporting
JRN02.325	Online Journalism II
JRN02.314	Photojournalism
JRN02.317	Publication Layout and Design
PR06.354	The Impact of PR on the News
JRN02.322	The Publishing Industry
RTF03.220	The Television Industry
RTF03.222	TV Production I

Note: Only two courses may transfer in the major.

Free Electives 39 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

Claudia Cuddy, Advisor
Bozorth Hall
856.256.5414
cuddy@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
JRN02.310	News Reporting I
JRN02.318	Enterprise Journalism

Electives: (choose three) 9 s.h.

JRN02.425	Advanced Publication Layout
JRN02.320	Broadcast Journalism: Radio
JRN02.305	Broadcast Journalism: TV Newscast
JRN02.341	Broadcast News Writing
JRN02.335	Media Law
JRN02.411	Copy Editing
JRN02.313	Magazine Article Writing
JRN02.319	Media Ethics
JRN02.312	Feature Writing
JRN02.311	News Reporting II
JRN02.307	On-Camera Field Reporting
JRN02.321	Online Journalism I
JRN02.325	Online Journalism II
JRN02.314	Photojournalism
JRN02.410	Problems in Contemporary Journalism
JRN02.317	Publication Layout and Design
JRN02.322	The Publishing Industry

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

Department of Public Relations and Advertising

Suzanne FitzGerald, Chair
Bozorth Hall
856.256.4265
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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 a graduate program leading to a Master of Arts in Public Relations. The department advises a nationally acclaimed chapter of the Public Relations Student Society of America and a student chapter of the American Advertising Federation. Rowan University's Public Relations program has become the 16th program in the country to receive CEPR accreditation from the Public Relations Society of America.

Bachelor of Arts in Public Relations

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Major Requirements 33 s.h.

CMS04.250	Communication Theory
PR99.362	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
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 Internship I
or PR06.362	PR/Adv Internship II

Related Electives 6 s.h.

Select two courses from the following groups:

ADV04.360	Integrated Marketing Communication
ADV04.432	Media Planning
ADV04.430	Electronic Media Copywriting
JRN02.335	Media Law
JRN02.319	Media Ethics
CMS04.210	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
CMS04.380	Health Communication
CMS04.370	Political Communication
MGT06.300	Organizational Behavior
CMS04.240	Small Group Communication
JRN02.310	News Reporting I
JRN02.313	Magazine Article Writing
JRN02.312	Feature Writing
CMS04.270	Persuasion and Social Influence
RTF03.220	The Television Industry

Other Requirements

- Total of three (3) Math/Science Courses
- Total of four (4) History/Humanities/Language/Literature Courses (must include a History or Philosophy caourse, must include one Literature)
- Total of four (4) Social & Behavioral Science Courses (one must be a Phychology, one must be Sociology and one must be a Political Science or economics course)

Free Electives	39 s.h.
Total Credits in Program	120 s.h.

Bachelor of Arts in Advertising

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Major Requirements 36 s.h.

CMS04.250	Communication Theory
ADV04.330	Introduction to Advertising
PR06.350	Introduction 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 Communication
PR06.310	Intro PR/Adv Research
PR06.360	PR/Adv Internship I
or PR06.362	PR/Adv Internship II

Related Electives 3 s.h.

JRN02.335	Media Law
JRN02.319	Media Ethics
CMS04.210	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
CMS04.380	Health Communication
CMS04.370	Political Communication
MGT06.300	Organizational Behavior
CMS04.240	Small Group Communication
JRN02.310	News Reporting I
JRN02.313	Magazine Article Writing
JRN02.312	Feature Writing
CMS04.270	Persuasion and Social Influence
RTF03.220	The Television Industry

Other Requirements

- Total of three (3) Math/Science Courses
- Total of four (4) History/Humanities/Language/Literature Courses (must include a History or Philosophy course, must include one Literature course)
- Total of four (4) Social & Behavioral Science Courses (one must be Psychology, one must be Sociology and one must be Political Science or Economics course)

Free Electives 39 s.h.

Total Credits in Program 120 s.h.

Minor in Advertising

Requirements 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 Communication
PR06.310	Intro PR/Adv Research

Department of Radio, Television and Film

Joseph Bierman, Chair
Bozorth Hall
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bierman@rowan.edu

The Department offers a Bachelor of Arts in Radio, Television and Film that prepares students for career opportunities in traditional and emerging media industries by covering a wide range of topics including media production, business, history, and aesthetics. Students can select from two specializations within the major. The RTF Production Specialization emphasizes media writing and production skills, while the RTF Critical Studies Specialization emphasizes writing and research skills. Both specializations include a broad exploration of the history, business practice, and aesthetics of the media. Students completing either specialization receive a broad-based liberal arts education and a strong preparation for either media production or critical studies related careers.

Outside of the classroom, learning continues as students are engaged in student clubs and organizations, including Cinema Workshop (16mm and digital filmmaking), The Rowan Television Network (the University's Cable Channel), and WGLS-FM (the University's radio station). In addition, the department offers juniors and seniors an extensive internship program that includes businesses in the Philadelphia, New Jersey and the New York Metropolitan areas.

Bachelor of Arts in Radio,Television and Film with Production Specialization

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

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
RTF03.370	Film Production I
RTF03.222	TV Production I

Plus two of the following:

RTF03.220	The Television Industry

RTF03.221	The Radio Industry
RTF03.273	The Movie Industry

Related Electives 15 s.h.

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

HRM06.302	Management of Human Resources
MKT09.200	Principles of Marketing
ADV04.330	Introduction to Advertising
ADV04.432	Media Planning
PR06.350	Intro to Public Relations
JRN02.335	Communication Law
CMS04.270	Persuasion and Social Influence

GROUP II: Six (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
JRN02.305	Electronic Journalism II: TV
RTF03.393	Film Scenario Writing WI
RTF03.433	TV Program Packaging WI
CRWR07.290	Creative Writing I
CRWR07.291	Creative Writing II
WA01.304	Writing with Style WI
WA01.400	Writing for the Workplace WI

GROUP III: Six (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
RTF03.271	Film History and Appreciation II
RTF03.272	Images of Women in Film
RTF03.371	Film Production II
RTF03.372	American Film Directors
RTF03.294	Contemporary International Cinema
RTF03.470	Advanced Film Production
RTF03.471	Techniques in 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
CMS04.215	Fiction to Film
RTF03.393	Film Scenario Writing WI
RTF03.433	TV Program Packaging WI
RTF03.420	Current Issues in Electronic Media

RTF03.280	African American Film History
RTF03.380	Acting for the Camera

Other Requirements

- Psychology Course
- Economics or Political Science Course
- Total of three (3) Math/Science Courses
- Total of four (4) History/Humanities/Language Courses
- Sociology Course
- History or Philosophy Course
- Total of four (4) Social & Behavioral Science Courses

Free Electives 39 s.h.
Total Credits in Program 120-121s.h.

Bachelor of Arts in Radio, Television and Film with Critical Studies Specialization

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

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 Radio Industry
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):

CMS04.405	Independent Study in Communication
CMS04.270	Persuasion and Social Influence
RTF03.272	Images of Women in Film
RTF03.350	RTF Studio Practicum

RTF03.351	RTF Field Experience I
RTF03.352	RTF Field Experience II
RTF03.353	RTF Field Experience III
RTF03.372	American Film Directors
RTF01.402	Special Topics in Radio/TV/Film
CMS04.215	Fiction to Film
RTF03.271	Film History and Appreciation II
RTF03.280	African American Film History
RTF03.294	Contemporary International Cinema

Other Requirements

- Psychology Course
- Economics or Political Science Course
- Total of three (3) Math/Science Courses
- Total of four (4) History/Humanities/Language Courses
- Sociology Course
- History or Philosophy Course
- Total of four (4) Social & Behavioral Science Courses

Free Electives	42 s.h.
Total Credits in Program	120-121 s.h.

Department of Writing Arts

Jeff Maxson, Chair
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The Department of Writing Arts teaches the required first-year writing courses, as well as ESL and basic skills in writing for the entire University. The Department also houses the Writing Arts major, serving primary majors as well as dual majors in Elementary Education and Early Childhood Education. In addition, the Department offers a Concentration in Creative Writing.

Bachelor of Arts in Writing Arts

The Writing Arts major provides broad-based study and practice in written communication, drawing on the disciplinary strengths of the College of Communication and from departments across the University. Writing Arts offers students intensive experience in a variety of writing forms, creative and expository, personal and public. Students learn how writers compose in print and new media forms and how audiences react to their writing. In classroom workshops and peer response groups, through lecture and discussion, and after creating and composing multiple drafts and revisions, students develop sensitivity to rhetorical considerations of audience, purpose, and text. Through these diverse experiences, students are prepared for success in a wide variety of writing settings beyond the University.

General Education: All students must complete the University General Education requirements as described on page 257
Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Non-Program Courses		15 s.h.
Major Requirements		16 s.h.
CMS04.250	Communication Studies	
WA07.200	Introduction to Writing Arts	
WA01.401	The Writer's Mind	
WA01.301	Writing, Research, and Technology	
WA01.405	Evaluating Writing	
WA07.450	Writing Arts Portfolio Seminar	
Related Electives		18 s.h.

A. Elements of Language (select 1)

CMS04.325	Linguistics
CMS03.581	Psycholinguistics
CMS04.225	Semantics (30 s.h)
ENGL05.301	American English Grammar
ANTH02.250	Intro to Anthropological Linguistics

B. Creative Writing (select 1 plus 2 from this or the following cluster)

CRWR07.290	Creative Writing
CRWR07.291	Creative Writing II
CRWR07.391	Fiction Writing
CRWR07.395	Writing Poetry
RTF03.393	Film Scenario Writing
WA01.304	Writing with Style

C. Writing in the Professions (select 1 plus 2 from this or the previous cluster)

WA01.302	Intro to Technical Writing
WA01.400	Writing for the Workplace
JRN02.312	Magazine Article Writing
WA07.410	Tutoring Writing
JRN02.317	Publication Layout and Design
PR06.350	Introduction to Public Relations
or ADV04.330	Introduction to Advertising
or JRN02.210	Journalistic Writing

D. Culture and Communication (select 1)

CMS04.210	Mass Media and Their Influence
CMS04.215	Fiction to Film
CMS04.290	Rhetorical Theory
RTF03.270	Film History and Appreciation I
RTF03.271	Film History and Appreciation II
READ30.120	Literacies in Today's World
ANTH02.321	Cultural Ecology
PHIL09.310	Aesthetics
PHIL09.370	Epistemology

Other Requirements

- Psychology Course
- Economics or Political Science Course
- Total of three (3) Math/Science Courses

- Total of four (4) History/Humanities/Language Courses
- Sociology Course
- History or Philosophy Course
- Total of four (4) Social & Behavioral Science Courses

Free Electives	45 s.h.
Total	121-122 s.h.

Creative Writing Concentration

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 course section of this catalog lists prerequisites.

Creative Writing Concentration Requirements To complete the Concentration in Creative Writing, students must complete 18 hours of coursework selected from the following list:

CRWR07.290	Creative Writing I
CRWR07.291	Creative Writing II
CRWR07.309	Writing Children's Stories
CRWR07.391	Writing Fiction (Creative Writing I)
RTF03.393	Film Scenario Writing
CRWR07.395	Writing Poetry
WA01.320	Field Experience in Writing Arts
JRN02.313	Magazine Article Writing
WA01.401	The Writer's Mind

It is also possible for students to take the following graduate classes in creative writing in accordance with the senior privilege policy: (graduate course descriptions can be viewed in the graduate catalog)

MAWR02.505	Poetry Workshop
MAWR01.558	Fiction Workshop
MAWR02.505	Writing the Novel
MAWR02.523	Writing the Memoir
MAWR02.515	Creative Non-fiction Workshop

College of Education

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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.

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.

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
- 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.

Admission to Teacher Certification Programs

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 the 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. Passing grade on Praxis I tests (Mathematics, Reading, & Writing)
6. Acceptable score on Portfolio assessment at this Transition Point
7. 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:
   - Satisfactory rating on final supervisor assessment
   - COE evaluation forms from supervisor and cooperating teacher
   - 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 six (6) academic departments. They include:

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

Support Services

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

The Student Services Center
Jean B. Brodie, Executive Director
Education Hall
856.256.4420
brodie@rowan.edu

The Center houses the Office of Field Experiences, Undergraduate and Graduate 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 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 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 Located in the College of Professional and Continuing Education. The primary goal of the Institute is to provide 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.

Department of Educational Leadership

James Coaxum III, Chair
Education Hall
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coaxum@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.

Department of Foundations of Education

Lynne C. Levy, Chair
Education Hall
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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
3. To offer a Certificate of Graduate Study in Educational Technology, which can be used as a component of the M.Ed. in Teacher Leadership

Department of Health and Exercise Science

Richard J. Fopeano, Chair
Education Hall
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The Department of Health and Exercise Science prepares professionals who can assume leadership roles in school, community, medical and corporate settings. Student majors are persons interested in working with people of varying ages in the areas of health, wellness, human movement, exercise science, physical education, sports medicine and athletic training. Career opportunities include: teaching health and physical education (Pre-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.

The Department of Health and Exercise Science offers undergraduate majors in three related fields:

Bachelors of Arts in Education with Specialization in Teacher Certification in Health and Physical Education (129 s.h.) Prepares teacher candidates for positions from preschool through high school. This nationally accredited program combines instruction in both Health Education and Physical Education. Successful candidates become dually certified Pre-K-12 Health and Physical Education teachers by the New Jersey State Department of Education.

Bachelors of Arts in Exercise Science (122 s.h.) Offers a major in Health Promotion/Fitness Management. 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.

The Bachelors of Science in Athletic Training (125 s.h.) A nationally accredited program which prepares students to become certified Athletic Trainers. Successful graduates go on to work as Athletic Trainers in various professional settings including public schools, medical centers and professional sport franchises.

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 above.

The department has a two-level admission and retention policy. Students seeking admission into Health and Exercise Science programs (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 major a student must demonstrate an above-average academic ability and be involved in professional-related activities. Each of the three majors offered within the department provide students with numerous experiences and opportunities to grow professionally.

The philosophy of the department is to extend the classroom knowledge and theory into field experience settings. Students in the Health and Physical Education Teacher Certification major complete field experiences in both urban and rural settings at different educational levels to include children with special needs. Health Promotion and Fitness Management internships are completed in corporate wellness facilities, community health agencies, and hospital-based wellness and rehabilitation centers. Student Athletic Trainers work with on-campus, high school and professional sport teams.

Bachelor of Arts in Education, Specialization in Health and Physical Education

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Program Requirements

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience Requirements as described on page 68

Required Courses for B.A. in Education: Health and Physical Education Teacher Certification
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.

STAT02.100	Elementary Statistics I	3 s.h.
INAR06.200	Basic Nutrition	3 s.h.
HLTH37.327	Consumer Health Decisions	3 s.h.
PHED35.109	Adventure/Experiential Learning	2 s.h.
SOC08.120	Introduction to Sociology	3 s.h.
PSY09.209	Child Development	3 s.h.
or PSY09.210	Adolescent Development	
PSY01.107	Essential Psychology	3 s.h.
PHYS02.150	Physics	4 s.h.
or BIOL01.113	General Biol Human Focus	
or CHEM05.102	Chemistry of Everyday Life	
THD08.135	Elements of Dance	3 s.h.
EDUC01.270	Teaching in Learning Communities I	2/3 s.h.
PHED35.286	Teaching in Learning Communities II	2/3 s.h.
READ30.280	Teaching Literacy	3 s.h.
FNDS21.150	History of American Education	3 s.h.
READ30.120	Literacies in Today's World	3 s.h.
SPED08.130	Human Exceptionalities	3 s.h.
FNDS21.230	Characteristics of Knowledge Acquisition	3 s.h.
PHED35.228	Rhythmic Activities & Forms	3 s.h.
PHED35.116	Safety, First Aid BSC UNDR of Athletic Injury	3 s.h.
PHED35.272	Technology & Assessment HES	3 s.h.
PHED35.241	Structure Function I Human Body	3 s.h.
PHED35.242	Structure Function II Human Body	3 s.h.

PHED35.343	Kinesiology	3 s.h.
PHED35.344	Exercise Physiology	3 s.h.
PHED35.320	Teaching Concepts Team Sports	3 s.h.
PHED35.270	Foundations of Fitness & Motor Development	3 s.h.
PHED35.310	Teaching Concepts Individual & Dual Sports	3 s.h.
HLTH37.325	Teaching Concepts HED I	3 s.h.
HLTH37.326	Teaching Concepts HED II	3 s.h.
HLTH37.453	School Health Program Planning	2 s.h.
PHED35.336	Teaching Concepts Elementary PE	3 s.h.
PHED35.452	Adapted PE	3 s.h.
PHED35.450	K-12 Curriculum/Instruction	3 s.h.
PHED35.392	Practicum A/B HPE	1 s.h.
PHED35.461	Clinical Practice Secondary HPE	5 s.h.
PHED35.460	Clinical Practice Elementary HPE	5 s.h.
PHED35.465	Clinical Senior Seminar	5 s.h.
Total Semester Hours		129 s.h.

Bachelor of Arts in Health & Exercise Science: Health Promotion and Fitness Management Specialization

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Melvin Pinckney, Advisor
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Program Requirements

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience Requirements as described on page 68

Required Health Promotion & Fitness Management Specialization Courses 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. No grades less than a C- will be counted toward graduation.

PHYS02.150	Physics	4 s.h.
or BIOL01.113	General Biol Human Focus	
or CHEM05.102	Chemistry of Everyday Life	
THD08.135	Elements of Dance	3 s.h.
HLTH37.327	Consumer Health Decisions	3 s.h.
HLTH37.192	Contemporary Health I	3 s.h.
HLTH37.193	Contemporary Health II	3 s.h.
PHED35.241	Structure/Function I or Anatomy & Physiology I	3/4 s.h.
PHED35.242	Structure/Function II or Anatomy & Physiology II	3/4 s.h.
PHED35.343	Kinesiology	3 s.h.

PHED35.116	Safety, First Aid BSC UNDR of Athletic Injury	3 s.h.
PHED35.272	Technology & Assessment HES	3 s.h.
HLTH37.310	Foundations Health Promotion & Fitness Management	3 s.h.
HLTH37.170	Stress Management	3 s.h.
HLTH37.350	Health Behavior	3 s.h.
INAR06.200	Basic Nutrition	3 s.h.
HLTH37.340	Administration Health Promotion & Fitness Management	3 s.h.
PHED35.345	Exercise Physiology with Lab	4 s.h.
HLTH37.329	Lab/Personal Training Technology	1 s.h.
PHED35.401	Exercise Prescription	3 s.h.
PHED35.412	Exercise For Special Population	3 s.h.
HLTH37.340	Practicum in Health Promotion & Fitness Management	3 s.h.
HLTH37.483	Field Experience Internship Health Promotion & Fitness Management	9 s.h.

*Students are strongly encouraged to complete a minor or concentration using 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.

Total Semester Hours 122 s.h.

Bachelor of Science in Athletic Training

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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 for the Commission on Accreditation of Athletic Training Education [CAATE]).

The following abilities and expectations must be met by all students admitted to the Athletic Training 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 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

Program Requirements

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience Requirements as described on page 68

Required Courses for Athletic Training Major To complete the program, students must have a minimum of 2.5 overall GPA, 2.75 GPA in Health and Exercise Science core, and 3.0 GPA in the Athletic Training major. No grades less than a C in any Athletic Training course and no grade lower than C- in any other course will be counted toward graduation.

Required Courses

STAT02.100	Elementary Statistics	3 s.h.
PSY01.107	Essentials of Psychology	3 s.h.
PSY09.210	Adolescent Development	3 s.h.
PHYS02.150	Physics	4 s.h.
BIOL01.113	General Bio Human Focus	4 s.h.
THD08.135	Elements of Dance	3 s.h.
HLTH37.192	Contemporary Health I	3 s.h.
HLTH37.193	Contemporary Health II	3 s.h.
PHED35.341	Anatomy and Physiology I	4 s.h.
PHED35.450	Anatomy and Physiology II	4 s.h.
PHED35.343	Kinesiology	3 s.h.
PHED35.116	Safety, First Aid BSC UNDR of Athletic Injury	3 s.h.
PHED35.272	Technology & Assessment in Health & Exercise Science	3 s.h.
PHED35.105	Introduction to Athletic Training	2 s.h.
PHED35.218	Prevention and Care of Orthopedic Injuries	3 s.h.
PHED35.219	Pathology & Evaluation of Orthopedic Injuries I	3 s.h.
PHED35.238	Pathology & Evaluation of Orthopedic Injuries I - Lab	2 s.h.
PHED35.220	Pathology & Evaluation of Orthopedic Injuries II	3 s.h.
PHED35.239	Pathology & Evaluation of Orthopedic Injuries II - Lab	2 s.h.
INAR06.200	Basic Nutrition	3 s.h.
INAR06.415	Nutrition For Fitness	3 s.h.
PHED35.334	Advanced Emergency Care	3 s.h.

PHED35.345	Exercise Physiology with Lab	4 s.h.
PHED35.475	Therapeutic Modalities	3 s.h.
PHED35.476	Therapeutic Modalities - Lab	2 s.h.
PHED35.478	Therapeutic Exercise	3 s.h.
PHED35.476	Therapeutic Exercise - Lab	2 s.h.
PHED35.401	Exercise Prescription	3 s.h.
PHED35.338	Clinical Experience in Athletic Training I	3 s.h.
PHED35.339	Clinical Experience in Athletic Training II	3 s.h.
PHED35.340	Clinical Experience in Athletic Training III	3 s.h.
PHED35.341	Clinical Experience in Athletic Training IV	3 s.h.
PHED35.358	Residency in Athletic Training I	1 s.h.
PHED35.359	Residency in Athletic Training II	1 s.h.
PHED35.360	Residency in Athletic Training III	1 s.h.
PHED35.361	Residency in Athletic Training IV	1 s.h.
PHED35.479	General Medicine/Pharmacology	3 s.h.
PHED35.405	Organization & Administration of Athletic Training	3 s.h.
PHED35.430	Senior Seminar in Athletic Training	1 s.h.
PHED35.477	Psychosocial Aspects of Physical Activity	3 s.h.
Total Semester Hours		125 s.h.

Department of Reading

Marjorie E. Madden, Chair
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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	3 s.h.
READ30.280	Teaching Literacy	3 s.h.
READ30.351	Differentiated Literacy Instruction	2 s.h.
READ30.320	Language Development, Emergent Literacy & Reading in Young Children	4 s.h.

Students should consult certification program advisors.

Teacher of Reading Endorsement Program and Post Baccalaureate Program for Teacher of Reading

Jeffrey A. Margolis, Advisor
Education Hall
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These programs fulfill the requirements for state of New Jersey certification as a Teacher of Reading. Students learn how to link assessment procedures with diagnostic teaching and corrective instructional strategies. Reading certification is granted only when a student has fulfilled all requirements for a major teaching certificate. To matriculate, students must complete an introductory reading course and satisfy the requirements listed below.

The program requires students to successfully complete 30 semester hours of coursework in reading and reading-related areas to obtain Teacher of Reading Certification. Students may fulfill the requirement for New Jersey Teacher of Reading Endorsement with undergraduate coursework, graduate coursework, or a combination of the two.

Admissions Requirements:
The teacher of Reading Endorsement Program is available to students who are currently enrolled in the BA in Education. The Post Baccalaureate Program in Reading is available to students who already hold New Jersey teaching certificates (CEAS or Standard).

Additional admissions criteria include:

- An overall GPA of 3.0 based on 30 semester hours of coursework
- Completion of Teaching Literacy or its approved equivalent
- A 3.0 GPA in reading courses completed prior to application
- Completion of an Application form with Passing Essay

Program Requirements
To complete the program, students must have an overall GPA of 3.0 based on 30 semester hours of coursework and pass the PRAXIS II Specialty Area Test, Introduction to the Teaching of Reading (also a New Jersey certification requirement).

Course Requirements

Area A: Reading Theory and Pedagogy		12 s.h.
READ30.280	Teaching Literacy	3 s.h.
READ30.351	Differentiated Literacy Instruction	2 s.h.
or ELEM02.338	Practicum in Mathematics and Literacy	1 s.h.
READ30.347	Phonics and Spelling	3 s.h.
READ30.350	Using Children's Literature in the Reading /Writing Classroom	3 s.h.
READ30.515	Teaching Reading Across the Grades	3 s.h.
READ30.520	Content Area Literacy	3 s.h.
READ30.530	Teaching Reading to the Exceptional Child	3 s.h.
READ30.535	Word Study: Phonics, Spelling, and Vocabulary Instruction	3 s.h.
Area B: Application through Tutoring		6 s.h.
READ30.421	School Reading Problems	3 s.h.
READ30.451	Supervised Clinical Practice	3 s.h.

READ30.550	Diagnosis of Remedial Reading Problems	3 s.h.
READ30.560	Correction of Remedial Reading Problems	3 s.h.
READ30.570	Clinical Experiences in Reading	6 s.h.

Area C: Core/Supporting Courses 12 s.h.

FNDS21.230	Characteristics of Knowledge Acquisition	3 s.h.
SPED08.130	Human Exceptionality	3 s.h.
READ30.120	Literacies in Today's World	3 s.h.
EDUC01.272	Teaching in Learning Communities II	2 s.h.
SECD03.350	Teaching Students of Linguistic and Cultural Diversity	1 s.h.
ELEM02.539	Contemporary Processes/Elementary Language Arts	3 s.h.
PSY22.215	Educational Psychology	3 s.h.
PSY22.586	Psychology of Motivation and Learning	3 s.h.
EDST24.561	Statistics in Educational Research	3 s.h.
LIBR01.502	Survey of Children's Literature	3 s.h.
LIBR01.503	Survey of Young Adult Literature	3 s.h.

*Descriptions for courses at the 500-level can be found in the Graduate Catalog.

Department of Special Educational Services/Instruction

S. Jay Kuder, Chair
Education Hall
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kuder@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:

SPED08.130	Human Exceptionality	3 s.h.
SPED08.316	Differentiated Instruction in the Inclusive Classroom	2 s.h.

Teacher of Students with Disabilities Endorsement

Chuck Brett, Program Advisor
Education Hall
856.256.4787
brett@rowan.edu

Nick Schmelz, Program Advisor for Undergraduate (Blended Candidates only)
Education Hall
85.256.4774
schmelz@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 prerequisite 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 (plus the prerequisite 3-credit Human Exceptionality course) 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 requirements.

Required Courses

SPED08.130	Human Exceptionality (Prerequisite for program entry)	3 s.h.
SPED08.360	Positive Behavioral Support Systems for Students with Exceptional Learning Needs	3 s.h.
SPED08.316	Differentiated Instruction in the Inclusive Classroom	3 s.h.
READ30.280	Teaching Literacy	3 s.h.
READ30.351	Differentiated Literacy Instruction	2 s.h.
SPED08.308	Assistive Technology and Transition Planning for Students with Exceptional Learning Needs	3 s.h.
SPED08.307	Assessment of Students with Exceptional Learning Needs	3 s.h.
SPED08.415	Specialized Instruction for Students with Exceptional Learning Needs	3 s.h.
SPED08.445	Clinical Seminar in Special Education	1 s.h.
SPED08.450	Clinical Practice in Special Education	4 s.h.

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.

Department of Teacher Education

(Early Childhood Education, Elementary Education, K-12 Subject Matter Education)

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"Teachers are more than any other class the guardians of civilization."

- Bertrand Russell, British Philosopher and Writer

The Department of Teacher Education proudly offers a variety of opportunities for caring, academically focused, and dedicated undergraduate 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. At Rowan, teacher candidates are part of Learning Communities in Action.

Our nationally accredited undergraduate and graduate programs recognize the impact that teachers have on the future. Our undergraduate 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 Teacher Leadership is designed for in-service 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/education/programs/teachered/

Bachelor of Arts in Education, Specialization in Early Childhood Education

Program Advisors located in Student Services Center
Education Hall
856.256.4420
ssc@rowan.edu

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 (American Studies, Liberal Studies: Humanities/Social Sciences [with restriction] or Writing Arts) approved by the University for certification.

Students accepted into the Specialization are expected to adhere to the prescribed sequence of courses and to consult with their advisors in Education at least once a semester.

Program Requirements

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience Requirements as described on page 68

Required Courses for B.A. in Education, Specialization in Early Childhood Education

SPED08.130	Human Exceptionality	3 s.h.
PSY09.209	Child Development	3 s.h.
READ30.120	Literacies in Today's World	3 s.h.
ART09.110	Experiencing Art	3 s.h.
MATH01.201	Structures of Mathematics	3 s.h.
FNDS21.150	History of American Education	3 s.h.
FNDS21.230	Characteristics of Knowledge Acquisition	3 s.h.
PHED35.103	Health and Wellness or Biology	3 s.h.
EDUC01.270	Teaching in Learning Communities I	3 s.h.
EDUC01.272	Teaching in Learning Communities II: Early Childhood	3 s.h.
SMED33.420	Educational Technology	1 s.h.

READ30.320	Language Development	4 s.h.
ECED23.320	Growth and Learning: Birth - 5 years	3 s.h.
ECED23.321	Growth and Learning K - 3rd Grade	3 s.h.
ECED23.322	Integrating and Adapting Curriculum: Math/Science	3 s.h.
ECED23.430	Observation, Assessment, and Evaluation	3 s.h.
ECED23.431	Planning Curriculum: Across the Content	3 s.h.
ECED23.446	Clinical Practice in Early Childhood Education	10 s.h.
ECED23.447	Early Childhood Education Clinical Seminar	1 s.h.
SECD03.350	Teaching Students of Linguistic and Cultural Diversity	1 s.h.
	Non-Lab Science	3 s.h.
	Geography (any)	3 s.h.
	History (any)	3 s.h.
	Sociology (any)	3 s.h.
Total Semester Hours		120 s.h.

Bachelor of Arts in Education, Specialization in Elementary Education

Program Advisors located in Student Services Center
Education Hall
856.256.4420
ssc@rowan.edu

The B.A. in Education, with Specialization in Elementary Education has four required strands of study: 1) General Education courses, 2) Core Education courses, 3) the Professional Specialization Sequence, and 4) the dual major requirements, where Elementary Education Specialization candidates are required to complete major requirements in one of eight 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.

Program Requirements

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience Requirements as described on page 68

Required Courses for B.A. in Education, Specialization in Elementary Education

MATH01.115	Contemporary Mathematics	3 s.h.
SPED08.130	Human Exceptionalities	3 s.h.
PSY09.209	Child Development	3 s.h.
READ30.120	Literacies in Today's World	3 s.h.
MATH01.201	Structures of Mathematics	3 s.h.
FNDS21.230	Characteristics of Knowledge Acquisition	3 s.h.
HIST05.150	History of American Education	3 s.h.
PHED35.103	Health and Wellness or Biology	3 s.h.
EDUC01.270	Teaching in Learning Communities I	3 s.h.
EDUC01.272	Teaching in Learning Communities II	3 s.h.
SMED33.420	Educational Technology	1 s.h.
READ30.280	Teaching Literacy	3 s.h.
ELEM02.319	Curriculum and Assessment in the Elementary Classroom	4 s.h.

SPED08.316	Differentiated Instruction in the Inclusive Classroom	2 s.h.
ELEM02.336	Mathematics Pedagogy for Elementary Teachers	2 s.h.
ELEM02.338	Practicum in Mathematics and Literacy	1 s.h.
READ30.351	Differentiated Literacy Instruction	2 s.h.
ELEM02.448	Clinical Practice in Elementary Education	10 s.h.
ELEM02.445	Elementary Education Clinical Seminar	1 s.h.
SECD03.350	Teaching Students of Linguistic and Cultural Diversity	1 s.h.
	Lab Science (Biological or Physical*)	4 s.h.
	Non-Lab Science (Biological or Physical*)	3 s.h.
	Geography (any)	3 s.h.
	U.S. History(any)	3 s.h.
	Sociology (any)	3 s.h.

*For certification purposes, candidates must complete both a Biological and Physical Science course (one must be a 4 SH Lab).

Total Semester Hours **121 s.h.**

Dual Major Requirements

Elementary Education majors may choose one of the following dual majors:

- American Studies
- English
- Geography
- History
- Liberal Studies: Humanities/Social Science (See advising guide for restrictions.)
- Mathematics
- Spanish
- Writing Arts

Bachelor of Arts in Education, Specialization in K-12 Subject-Matter Education

Program Advisors located in Student Services Center
Education Hall
856.256.4420
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The B.A. in Education, with Specialization in K-12 Subject-Matter Education has four required strands of study:

1. General Education courses
2. Common Education Core courses
3. Professional Specialization Sequence
4. Dual major requirements, where K-12 Subject-Matter Education Specialization candidates are required to complete major requirements in one of eleven academic disciplines approved by the University for Certification

In keeping with the College of Education's overarching focus on the theme of "learning community," faculty in Subject-Matter Education strive to transcend traditional rote forms of learning and model a more collaborative, interactive, and intellectually challenging pedagogy that is true to the richness and rigor of the academic disciplines they represent. As teacher candidates experience and participate in such learning environments in their Subject-Matter Education classes at Rowan, they develop the commitment, confidence, and ability to go into the field and create K-12 classroom environments in

which students work actively with the teacher and with each other to investigate important and meaningful ideas in a particular academic discipline.

Admission to Rowan University does not guarantee admission to the Subject-Matter Education Program. For most majors, we are able to admit all qualified students but there is a cap each year. A minimum number of credits in the subject major must be completed satisfactorily prior to admission to junior-level courses and practica. Admission to English and Social Studies is highly competitive and based on GPA.

Program Requirements

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience Requirements as described on page 68

Required Courses for B.A. in Education, Specialization in K-12 Subject-Matter Education

SPED08.130	Human Exceptionalities	3 s.h.
PSY09.210	Adolescent Development	3 s.h.
READ30.120	Literacies in Today's World	3 s.h.
FNDS21.230	Characteristics of Knowledge Acquisition	3 s.h.
FNDS21.150	History of American Education	3 s.h.
PHED35.103	Health and Wellness or Biology	3 s.h.
EDUC01.270	Teaching in Learning Communities I	3 s.h.
EDUC01.272	Teaching in Learning Communities II	3 s.h.
READ30.280	Teaching Literacy	3 s.h.
SPED08.316	Differentiated Instruction in the Inclusive Classroom	2 s.h.
SMED31.350	Elementary Art Methods: Teaching and Learning A: Art	3 s.h.
or SMED32.329	Teaching and Learning Music A: Elementary General Music	
SMED33.330	Teaching and Learning A: Mathematics	
or SMED34.330	Teaching and Learning A: Science	
or SMED50.330	Teaching and Learning A: English/Language Arts	
or SMED51.330	Teaching and Learning A: Foreign Language (Spanish)	
or SMED52.330	Teaching and Learning A: Social Studies	
SECD03.330	Practicum Teaching and Learning A: Content Area	1 s.h.
SMED33.420	Educational Technology	1 s.h.
SMED31.360	Secondary Art Methods: Teaching and Learning B: Art	3 s.h.
SMED32.330	Teaching and Learning B: Vocal Methods/Techniques	
or SMED32.331	Teaching and Learning B: Instrument Methods/Techniques	
or SMED33.331	Teaching and Learning B: Mathematics	
or SMED34.331	Teaching and Learning B: Science	
or SMED50.331	Teaching and Learning B: English/Language Arts	
or SMED51.331	Teaching and Learning B: Foreign Language (Spanish)	
or SMED52.331	Teaching and Learning B: Social Studies	
SECD03.332	Practicum Teaching and Learning B: Content Area	1 s.h.
SECD03.350	Teaching Students of Linguistic/Cultural Diversity	1 s.h.
SECD03.435	Clinical Practice in Subject Matter Education	10 s.h.
SECD03.436	Subject Matter Clinical Seminar	1 s.h.
Total Semester Hours		**125 s.h.**

History majors must take:

HIST05.150	US History to 1865	3 s.h.
HIST05.151	US History Since 1865	3 s.h.
HIST05.100	Western Civilization to 1660	3 s.h.
HIST05.101	Western Civilization since 1660	3 s.h.
HIST05.120	World History after 1500	3 s.h.

Mathematics majors must take:

MATH01.310	College Geometry	3 s.h.
MATH01.410	History of Mathematics	3 s.h.

Dual Major Requirements

Dual Major requirements for each content-area specialization can be obtained by contacting the program advisors or by visiting:

http://www.rowan.edu/colleges/education/programs/teachered/undergraduate/sme

K-12 Subject Matter Education majors may choose one of the following dual majors:

- Art
- Biology
- Chemistry
- English
- Foreign Language (Spanish)
- History*
- Mathematics*
- Music
- Physical Science: Chemistry
- Physical Science: Physics
- Physics

Minor in Education

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Program Advisors located in Student Services Center
Education Hall
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ssc@rowan.edu

The major goals of the Minor in Education are three-fold:

1. Create an avenue for students at Rowan who have an interest in Education but do not want to do a full BA in Education to have this work noted on their transcripts as a Minor.
2. Create an avenue for Internal Transfer Candidates (for P-3, K-5, and K-12 Subject-Matter) to complete a Minor rather than spending a minimum of 5 additional semesters to complete the Major in Education.

3. Create an avenue for students who leave the program having completed most, if not all of the courses in the proposed Minor, to have an official designation to show for their work in Education.

Required courses for Minor in Education

SPED08.130	Human Exceptionalities	3 s.h.
READ30.120	Literacies in Today's World	3 s.h.
EDUC01.270	Teaching in Learning Communities I	3 s.h.
EDUC01.272	Teaching in Learning Communities II (or equivalent)	3 s.h.
READ30.280	Teaching Literacy	3 s.h.
SMED33.420	Educational Technology	1 s.h.
FNDS21.230	Characteristics of Knowledge Acquisition	3 s.h.
FNDS21.150	History of American Education	3 s.h.
PSY09.209	Child Development(P-3 or K-5)	3 s.h.
or PSY09.210	Adolescent Development (K-12)	
Total Semester Hours		25 s.h.

Collaborative Education

Susan Browne, Coordinator
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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.

Note: This program is not currently accepting new applicants.

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:

- Freshman Engineering Clinic I, II (Rowan Seminar experience is embedded in Fr Clinic I)
- College Composition I
- Accelerated Calculus I, II
- Introductory Mechanics
- Advanced College Chemistry I
- Computer Science (see major requirements for specific course)

Department of 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.

Mission and Goals The Rowan University Chemical Engineering Program is a student-centered, primarily undergraduate program that incorporates leading-edge educational methods and technology with engineering practice. We prepare students for careers in the global chemical process industry and related fields, and for advanced degree study. Our program provides students with a strong foundation in chemical engineering science and design, and emphasizes the development of effective communication and teaming skills, and professional responsibility in preparation for a career in a diverse global workforce.

Throughout the curriculum, students are exposed to chemical engineering methods using hands-on, state-of-the-art experiments, modern computer tools, and problem synthesis and solution approaches. The Chemical Engineering Program is committed to technical excellence, professional responsibility, and lifelong learning.

We use this mission statement along with the following 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.

Bachelor of Science in Chemical Engineering

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Program Requirements

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Required Courses for Chemical Engineering Degree

COMP01.111	College Composition I	
MATH01.140	Accelerated Calculus I or Calculus I (MATH01.130)	
MATH01.141	Accelerated Calculus II or Calculus II (MATH01.131)	
MATH01.235	Math for Engineering Analysis I	4 s.h.
MATH01.236	Math for Engineering Alalysis II	4 s.h.
CHEM06.105	Adv. College Chemistry I	
CHEM06.106	Adv. College Chemistry II	
CHEM07.200	Organic Chemistry I	4 s.h.
	History, Humanities and Languages elective	6 s.h.
	Art and Creative Experience elective	3 s.h.
	Social and Behavioral Science elective	3 s.h.
ECON04.102	Microeconomics	3 s.h.

(This course is required in addition to the above elective)

PHYS02.200	Introductory Mechanics	4 s.h.
CS04.103	Computer Science and Programming	4 s.h.
or CS01.104	Intro to Scientific Programming	3 s.h.
or CS01.102	Introduction to Programming	3 s.h.
BIOL01.210	Biological Systems and Applications	4 s.h.
ENGR01.101	Freshman Engineering Clinics I	2 s.h.

(This course also fulfills the Rowan Seminar requirement.)

ENGR01.102	Freshman Engineering Clinics I	2 s.h.
ENGR01.102	Freshman Engineering Clinic II	2 s.h.
ENGR01.201	Sophomore Engineering Clinic I*	4 s.h.

(This course also fulfills the General Education requirement College Composition II)

ENGR01.202	Sophomore Engineering Clinic II*	4 s.h.

(This course also fulfills the Rowan Experience Public Speaking requirement)

CHE06.201	Principles Chemical Processes I	2 s.h.
CHE06.302	Principles Chemical Processes II	2 s.h.
ENGR01.341	Fluid Mechanics I	2 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 & 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.

(This course also fulfills the Rowan Experience Writing Intensive requirement)

CHE06.401	Chemical Process Component Design	4 s.h.
CHE06.406	Chemical Plant Design	3 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.

Materials Specialization

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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 multi-disciplinary, requiring of its practitioners a broad range of knowledge and a variety of skills. Students in the proposed program will be able to follow the complete cycle of materials science from concept to research design to synthesis, to measurement of and explanation for the physical properties of the material to successful application. Coupled with the

organization of learning for chemical engineering students within the program comes a distinct and strong effort to motivate students to pursue careers in materials research. Ultimately, these efforts should help us retain a diverse pool of talented students in New Jersey instead of being lost to out-of-state institutions.

This specialization is a cohesive set of courses that focus on materials within chemical engineering. To obtain this specialization in materials, at least 12 semester hours of credit are required. The requirements to earn a specialization in materials are as follows:

Course Credits	12 s.h.
Materials Science (ENGR01.281)	2 s.h.
Jr/Sr Clinic Materials-related project (ENGR01.301,302,401,402)	4 s.h.
ChE or Chemistry Elective - from approved list	3 s.h.
Out of Discipline Elective - from approved list	3 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 multi-disciplinary nature of materials science, we will require students to take one chemistry or chemical engineering elective, and one materials elective outside of chemical engineering. Note that a chemistry course can be used to fulfill either requirement, but no one course can be used to fulfill both.

Approved Materials Electives from ChE or Chemistry

CHE06.466	Polymer Processing	3 s.h.
CHE06.490	Approved Special Topics Course	3 s.h.
CHEM05.430	Approved Advanced Topics in Chemistry,	3 s.h.
CHEM07.405	Introduction to Polymer Chemistry	3 s.h.
CHEM07.475	Polymer Synthesis	4 s.h.
CHEM07.478	Polymer Characterization	4 s.h.

Approved Materials Electives from outside Chemical Engineering

CEE08.301	Civil Engineering Materials	2 s.h.
ME10.422	Introduction to Computational Fluid Dynamics	3 s.h.
CHEM05.430	Approved Advanced Topics in Chemistry	3 s.h.
CHEM07.405	Introduction to Polymer Chemistry	3 s.h.
CHEM07.475	Polymer Synthesis	4 s.h.
CHEM07.478	Polymer Characterization	4 s.h.
INTR01.486	Interdisciplinary Materials Science	3 s.h.

Faculty in chemical engineering and throughout the College routinely manage Junior/Senior Engineering Clinic projects in materials.

The following is a list of Junior/Senior Clinic projects that would be acceptable for this specialization:

ME-01	Plastics Ignition Experiment Development
ME-06	Development and Testing of Component Packaging for an Optical Filter

ME-07	Magneto-Rheological Rubber Development and Testing
ECE-01	Nano-Imprint Lithography
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

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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 12 s.h.

Biological Systems and Applications (BIOL01.210)
Jr/Sr Clinic Bio-related project (ENGR01.301, 302, 401 and 402)

Electives - from approved list

The Biological Systems and Applications course is a required course in chemical engineering that was added as a response to the growing national interest in biochemical engineering. This course is prerequisite for all subsequent work towards a biological engineering specialization.

Junior/Senior Engineering Clinic is a required 2-credit course for students in all engineering disciplines. This course is a hallmark of the Rowan College of Engineering and provides undergraduate students with hands-on experience on practical engineering research and design problems, frequently in collaboration with local industrial sponsors. All engineering students are required to take four semesters (8 credits) of Junior/Senior Clinic. Students who wish to earn a specialization in biological engineering must select an approved Junior/Senior Clinic project for at least one of their four semesters. Note that students can also fulfill the project requirement through independent study on bio-related projects (Independent Study in Engineering ENGR01.391).

Because the department wishes to maintain a "depth and breadth" approach to the biological engineering specialization, a student will not be allowed to apply more than 4 credits worth of Junior/Senior Clinic to their specialization. Students must earn the balance of the 12 credits by taking any combination courses from the following list:

Approved list of electives - Chemical Engineering

CHE06.462	Bioprocess Engineering	3 s.h.
CHE06.472	Principles of Biomedical Processes	3 s.h.
CHE06.476	Principles of Bioseparation Processes	3 s.h.
CHE06.482	Principles of Food Engineering	3 s.h.
CHE06.483	Principles of Engineering Exercise Physiology	4 s.h.
CHE06.484	Fundamentals of Controlled Release	3 s.h.
CHE06.486	Membrane Processes	3 s.h.
CHE06.490	Approved Special Topics Course	3 s.h.

Approved list of electives - Other engineering disciplines

CEE08.412	Environmental Treatment Process Principles	3 s.h.
ECE09.404	Principles of Biomedical Systems and Devices	3 s.h.

Approved list of electives with bio focus

BIOL01.430	Cell Biology	4 s.h.
BIOL01.435	Cell Culture Technology	4 s.h.
BIOL01.440	Special Topics in Biological Sciences	2 s.h.
BIOL11.405	Environmental Microbiology	4 s.h.
BIOL14.440	Intro to Biochemistry	3 s.h.
BIOL22.410	Concepts in Human Genetics	4 s.h.
BIOL22.450	Molecular Genetics	4 s.h.
CHEM07.348	Biochemistry	4 s.h.
CHEM07.410	Medicinal Chemistry	3 s.h.
CHEM08.305	Biophysical Chemistry	4 s.h.

The current chemical engineering curriculum requires students to take two advanced chemical engineering electives and one advanced chemistry elective. Consequently, the biological engineering specialization is readily attainable under the current chemical engineering curriculum: it requires a focused selection of project work and electives but no "additional" courses.

Department of Civil and Environmental Engineering

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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 with a strong understanding of green and sustainable practices.

The Civil Engineering Program strives to prepare students for professional careers by providing a broad-based civil engineering education through a rigorous curriculum including hands-on laboratory and design experiences integrated throughout. The program is committed to the integration of teaching, research, scholarly, and service activities within a collaborative educational environment as part of its students' preparation for both engineering practice and graduate school. The program endeavors to produce graduates ready to communicate their ideas in a diverse and multidisciplinary workplace.

Rowan Civil Engineering graduates will be:

- Knowledgeable engineers, versed in multiple areas of the civil engineering profession, who remain current during their professional careers
- Problem-solvers, who can collect and utilize needed information to reach creative and realistic solutions to engineering problems
- Well rounded engineers who understand their professional, ethical, and global/social responsibilities and are able to work in multidisciplinary and diverse groups
- Communicators, who are able to disseminate information to professional and lay audiences

Bachelor of Science in Civil Engineering

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Program Requirements

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Required Courses for Civil Engineering Degree

COMP01.111	College Composition I	3 s.h.
MATH01.140	Accelerated Calculus I	4 s.h.
MATH01.141	Accelerated Calculus II	4 s.h.
MATH01.235	Math for Engineering Analysis I	4 s.h.

MATH01.236	Math for Engineering Analysis II	4 s.h.
CHEM06.105	Adv. College Chemistry I	4 s.h.
ECON04.102	Microeconomics	3 s.h.

(This also counts as a Social and Behavioral Sciences General Education course.)

PHYS02.200	Introductory Mechanics	4.s.h.

Computer Programming Elective (choose one):

CS01.104	Introduction to Scientific Programming	3 s.h.
or CS04.103	Computer Science and Programming	4 s.h.

Science Elective (choose one):

CHEM06.106	Adv. College Chemistry II	4 s.h.
or PHYS02.201	Introduction to Electricity and Magnetism	4 s.h.
or PHYS02.210	Introduction to Thermodynamics, Fluids, Waves, and Optics	4 s.h.
ENGR01.101	Freshman Engineering Clinic I	2 s.h.

(This course also fulfills the Rowan Seminar requirement.)

ENGR01.102	Freshman Engineering Clinic II	2 s.h.
ENGR01.201	Sophomore Engineering Clinic I	4 s.h.

(This course also fulfills the General Education requirement College Composition II)

ENGR01.202	Sophomore Engineering Clinic II	4 s.h.

(This course also fulfills the Rowan Experience Public Speaking requirement.)

ENGR01.301	Junior Engineering Clinic I	2 s.h.
ENGR01.302	Junior Engineering Clinic II	2 s.h.
ENGR01.401	Senior Engineering Clinic I	2 s.h.
ENGR01.402	Senior Engineering Clinic II	2 s.h.

(This course also fulfills the Rowan Experience Writing Intensive requirement.)

ENGR01.271	Statics	2 s.h.
ENGR01.272	Solid Mechanics	2 s.h.
ENGR01.281	Material Science	2 s.h.
ENGR01.291	Dynamics	2 s.h.
ENGR01.341	Fluid Mechanics I	2 s.h.
CEE08.382	Structural Analysis	3 s.h.
CEE08.383	Analysis and Design of Steel Frames	3 s.h.
CEE08.311	Environmental Engineering I	3 s.h.
CEE08.312	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	3 s.h.
CEE08.361	Transportation Engineering	3 s.h.
CEE08.203	Surveying & Engineering Graphics	4 s.h.
CEE08.102	Engineering Graphics	2 s.h.
CEE08.103	Field Surveying	2 s.h.
CEE08.474	Structural Mechanics	3 s.h.
CEE08.475	Fatigue and Fracture	3 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	3 s.h.
Civil Engineering Electives		3 s.h.
Technical Elective		3 s.h.
Total Credits in Program		131 s.h.

Department of Electrical and Computer Engineering

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The Rowan Electrical and Computer Engineering (ECE) curriculum combines both electrical engineering topics such as telecommunications & energy and computer engineering topics such as computer hardware & software design. Electrical and Computer engineers have made some remarkable contributions to our world ; they have pioneered the invention of cell phones, computers, digital cameras, MP3-players, television, and computer games, among many other things. ECEs play a huge part in the design of cars, airplanes, space-craft, home-appliances, life-saving medical equipment and so many other technologies that we have come to rely on.

Core courses taken by all ECE students include such topics as circuits, electronics, electromagnetics, digital design, microprocessors, control systems, communication systems, digital signal processing, data structures and computer architecture. Advanced senior-level electives provide opportunities to specialize in areas such as nanotechnology, bio-engineering, sustainable design, wireless communications, artificial intelligence, digital image processing, etc. All ECE courses have an included laboratory component. Eight semesters of Engineering Clinic provide students with a team-oriented, multidisciplinary design and research experience which is a unique opportunity to integrate the students' theoretical background into the solution of practical engineering problems.

The Electrical and Computer Engineering program creates effective engineers who can function in a variety of environments and sustain productivity throughout their career. We expect our graduates to:

1. Perform as agile problem solvers
2. Communicate capably
3. Possess an entrepreneurial spirit
4. Facilitate trans-disciplinary discourse
5. Be sensitized to contemporary issues
6. Be competent in essential engineering and ECE knowledge

Bachelor of Science in Electrical and Computer Engineering

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Program Requirements

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Required Courses for Electrical and Computer Engineering

COMP01.111	College Composition I	
MATH01.140	Accelerated Calculus I	
MATH01.141	Accelerated Calculus II	
MATH01.235	Math for Engineering Analysis I	4 s.h.
MATH01.236	Math for Engineering Analysis II	4 s.h.
CHEM06.105	Adv. College Chemistry I	
ECON04.102	Intro to Microeconomics	

(This also counts as a Social and Behavioral Sciences General Education course)

PHYS02.200	Introductory Mechanics I	
PHYS02.201	Introductory Electricity & Magnetism	
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 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.
ECE09.201	Network I	2 s.h.
ECE09.202	Network II	2 s.h.
ENGR01.291	Dynamics	2 s.h.
ECE09.241	Digital I	3 s.h.
ECE09.242	Digital II: Microprocessors	3 s.h.
ECE09.311	Electronics I	2 s.h.
ECE09.301	Engineering Electromagnetics I	2 s.h.
ECE09.302	Engineering Electromagnetics II	2 s.h.
ECE09.351	Digital Signal Processing	3 s.h.
ECE09.321	Systems and Control	3 s.h.
ECE09.331	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.
ECE09.360	Clinic Consultant: I	1 s.h.
ECE09.362	Clinic Consultant: II	1 s.h.
ECE09.460	Clinic Consultant: III	1 s.h.
ECE09.462	Clinic Consultant: IV	1 s.h.

EE Core Elective (1)
ECE Elective (1)
CpE Elective (1)
CpE Core Elective (1)

Technology Focus Electives (2)

Total Credits in Program **128 s.h.**

Minor in Electrical and Computer Engineering

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The Minor in Electrical and Computer Engineering (ECE) offers students majoring in disciplines other than ECE the opportunity to become familiar with principles and design practices used to meet the multidisciplinary needs of modern technology. This minor is offered by the faculty of the ECE program and is designed to serve students from other engineering disciplines as well as those students with majors outside of engineering. It is assumed that students who pursue the ECE minor will obtain a mathematics background that is comparable to that required for a major in engineering.

The ECE minor stipulates 14 semester hours of required courses that provide a fundamental grounding in ECE knowledge and design. These courses include an introduction to design practice, theory-based courses in both analog and digital circuit design, and an introduction to electrical and computer systems. In addition to these fundamental courses, 4 semester hours of elective courses assure the students an opportunity to emphasize a particular area of interest.

Required Courses		14 s.h.
ECE09.201	Network I	2 s.h.
Concurrent enrollment in or completion of either:		
MATH01.231	ODE	
or MATH01.235	MEA I*	
ECE09.202	Network II	2 s.h.
ECE09.241	Digital I	3 s.h.
or CS06.310	Principles of Digital Computers	
ECE09.311	Electronics I	2 s.h.
ECE09.321	Systems and Controls I	3 s.h.
or ECE09.331	Electrical Communications Systems	4 s.h.
Concurrent enrollment in or completion of:		
MATH01.210	Linear Algebra*	
ENGR01.301	Junior Engineering Clinic I (must have junior standing in major)	2 s.h.
Total		14 s.h.
Elective Courses		4 s.h.**
ECE09.242	Digital II	3 s.h.
ECE09.301	Engineering Electromagnetics I	2 s.h.
or PHYS02.430	Electricity and Magnetism I	
ECE09.302	Engineering Electromagnetics II	2 s.h.
ECE09.321	Electronics II / VLSI Design	3 s.h.
ECE09.331	Electrical Communications Systems	4 s.h.
ECE09.351	Digital Signal Processing	3 s.h.
ECE09.443	Computer Architecture I	2 s.h.

ECE09.444	Computer Architecture II	2 s.h.
ECE09.402	Topics in Electrical and Computer Engineering	3 s.h.
ENGR01.302	Junior Engineering Clinic2 s.h.	

(must have junior standing in major and approval from ECE Project Manager)

Program Total **18 s.h.**

*Non-engineering majors enrolled in the ECE minor must complete the following mathematics courses:

MATH01.130	Calc I
MATH01.131	Calc II
MATH01.230	Calc III
MATH01.210	Linear Algebra
MATH01.231	Ordinary Differential Equations

**Senior Elective courses may be used as electives in the ECE Minor with permission of the ECE Minor Advisor and the Elective Course instructor.

Biomedical Engineering Specialization

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The ECE department's biomedical engineering (BME) concentration is designed to be as flexible as possible while ensuring a meaningful depth and breadth in biomedical engineering.

1. All ECE students are required to take two core science classes (from an approved list of science classes) outside of Engineering. The list currently includes the following courses. Therefore, students who wish to concentrate on BME are advised to take one of these courses towards their regular science requirements:

BIOL01.210	Biological Systems and Applications
BIOL01.100	Biology I

2. Students need a minimum of 8 credits from an approved list of Biological Science Electives. The approved list of electives will be reviewed on a yearly basis depending on the courses offered on campus. In general, these courses are from the Anatomy / Physiology bank or from the Cellular, Molecular Biology bank of the Biology program, or from the Chemistry / Biochemistry program. The students are responsible for either obtaining the prerequisites, or making the necessary arrangements with the professor. The courses listed in (1) do count towards this requirement. In general, students need to satisfy this requirement during their sophomore or junior year.

3. No fewer than 4, no more than 8 credits of Junior / Senior clinic must come from BME related projects. Note that each Ju/Se clinic in ECE is 2 credits. Therefore, 2 ~ 4 semesters of clinic experience must come from BME related projects. Every semester, there are a number of projects that are BME related. Those projects that qualify for this category will be announced every semester.

4. Minimum of 3 credits (one course) from an approved list of Bio-related ECE electives. The list currently includes:

ECE09.404	Principles of Biomedical Systems and Devices

Additional courses will be added to this bank. Note that every semester the ECE department offers electives under the title "Special Topics in ECE" (0909.403.xx). Some of these classes are BME related and will count towards this requirement. Special Topics courses that qualify for BME concentration will be announced every semester. This course will be taken during the senior year.

5. Minimum of 3 credits from an approved list of Bio-related non-ECE engineering electives. Any course that is on the approved list of other engineering departments' BME bank will count towards this requirement. This course will also be taken during the senior year. Students are encouraged to discuss their intention to specialize in biomedical engineering as early as possible with the BME advisor in the ECE department. The advisor will be able to guide students on the correct sequence of required courses.

Department of Mechanical Engineering

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Mechanical Engineering involves the design and building of machines and devices. This includes the conversion of energy from one form to another, the dynamics of mechanical devices, and the control systems for operation of machines. Design of thermal and mechanical systems are integrated into the curriculum.

The Rowan Mechanical Engineering Program develops effective engineers who are well prepared for the next phase of their career, whether in industry or government or in graduate school. Our goals are as follows:

1. Create well-rounded engineers who possess theoretical and practical skills, and understand the significance of the 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 thinkers who possess an understanding of entrepreneurship
4. Develop engineers with scienctific, mathematical, analytical, computational, and experimental skills who can 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 engineers with the flexibility to adapt to changing technology and an understanding of the need for continuous improvement and lifelong learning.

Bachelor of Science in Mechanical Engineering

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Program Requirements

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Required Courses for Mechanical Engineering

COMP01.111	College Composition I (College Composition II and Public Speaking are integrated into Sophomore Engineering Clinic I and II, respectively)	
MATH01.130	Calculus I	
MATH01.131	Calculus II	
CHEM06.105	Adv. College Chemistry I	
CS04.103	Computer Science and Programming	
PHYS02.202	Physics I	
PHYS02.203	Physics II	
ECON04.102	Intro to Microeconomics	
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	Materials Science	2 s.h.
ENGR01.282	Manufacturing Processes	2 s.h.
ENGR01.291	Dynamics	2 s.h.
ME10.201	Vibrations	2s.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.

- At least one course must be from the thermal/fluid stem and at least one course must be from the mechanical systems stem.

Total Credits in Program	**128 s.h.**

Concentration in Bioengineering

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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 at least one be from the thermal/fluids stem and at least one be from the mechanical stem. For the concentration, the technical elective is 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 and Senior years and in the summer.

College of Fine and Performing Arts

Dr. Jon Robert Cart, Dean
Wilson Hall
856.256.4551
cart@rowan.edu

History

The College of Fine and Performing Arts (formerly, the School of Fine and Performing Arts at Glassboro State College) was founded in 1971. It was in 1997, during the transition from Glassboro State College to Rowan University, that the School became the College of Fine and Performing Arts. Today, the College is comprised of the departments of Art, Music (including the Maynard Ferguson Institute of Jazz Studies) and Theatre & Dance. The College offers baccalaureate degrees in the fields of Art, Music and Theatre, and graduate degrees in Music and Theatre.

The College of Fine and Performing Arts boasts an enrollment of over 500 arts majors supported by 45 full-time faculty, 45 adjunct faculty, and 20 staff members who collectively shape the vibrant arts community at Rowan University. In addition to more than 250 performances and exhibitions on campus each year, the faculty, staff and students collaborate in scholarly and artistic activities at the international, national and regional levels.

The College is dedicated to fostering artistic and creative experiences for the campus and the surrounding community. Specifically, the College of Fine and Performing Arts provides professional training for arts majors and aesthetic experiences for all Rowan University students, enhancing the educational programs of the institution.

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 arts learning communities through rigorous degree programs that educate artists and arts educators for the future, while providing classroom and applied arts experiences for non-majors and enriching events for the public.

Accreditation Specialized, national arts accreditation has been granted by the following organizations:

- The National Association of Schools of Art & Design
- The National Association of Schools of Music
- The National Association of Schools of Theatre

Programs Offered

In the professional area, the College offers rigorous degree programs 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 provide extensive study of the fine and performing arts through Minor programs and general education offerings. 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 consists of some of the finest arts professionals in the nation, all dedicated to fostering a creative, productive atmosphere in which all of the arts can flourish.

Programs Majors and Minors Major programs consist of a Bachelor of Arts in Art, Music and Theatre Arts; a Bachelor of Fine Arts in Studio Art, and a Bachelor of Music and Bachelor of Music Education. 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 within each department.

Departments The College of Fine and Performing Arts consists of three departments: 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 Atlantic Brass Band is the ensemble-in-residence.

Department of Art

Susan Bowman, Chair
Westby Hall
856.256.4019
bowman@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

David E. Vaccaro, Advisor
Westby Hall
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, Drawing, Glass, Graphic Design, Illustration, Metals/Jewelry, Painting, Photography, Printmaking, and Sculpture.

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

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. Studio Choices 33 s.h.

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

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

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

E. Other Required courses

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

Program Total **120 s.h.**

Bachelor of Arts in Art

David E. Vaccaro, Advisor
Westby Hall
856.256.4091
vaccaro@rowan.edu

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

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the University Rowan Experience requirements as described on page 68

Major Requirements 39 s.h.

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

D. Free Electives 27 s.h.

E. ART09.401 Senior Show or Project

Program Total **120 s.h.**

Bachelor of Arts in Art - Art Education

Jane E. Graziano, Coordinator/Advisor - Art
Westby Hall
856.256.4500 x4045
graziano@rowan.edu

Keeley Powell, Advisor - Education
Education Hall
856.256.4761
powellk@rowan.edu

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

Further information about this program can be obtained from the Department of Art (856) 256-4520 and the Department of Teacher Education (856) 256-4738/4739.

Information for the Post-Baccalaureate Certification program can be obtained from The Graduate School (856) 256-4027.

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Art Major Requirements 39 s.h.

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.
ART02.220	Introduction to Painting	
ART02.240	Introduction to Sculpture	
or ART09.240	Introduction to Ceramics	
Art Major Studio Electives		5 s.h.
D. ART09.401	Senior Project Art	(0 s.h.)
Other Required Courses		30 s.h.
READ30.120	Literacies in Today's World	
SPED08.130	Human Exceptionality	
FNDS21.230	Characteristics of Knowledge Acquisition	
ART09.200	Theory & Analysis of Art Education	
PSY09.209	Child Development	
PSY09.210	Adolescent Development	
FNDS21.150	History of American Education	

- 6 additional s.h. from the History, Humanities and Languages Bank
- 3 additional s.h. from Artistic and Creative Experience Bank

Education Requirements		29 s.h.
EDUC01.270	Teaching in the Learning Communities I	
EDUC01.282	Teaching in the Learning Communities II-Art	
READ30.280	Teaching Literacy	
SMED33.420	Integrating Ed. Technology into Teaching	
SMED31.350	Elementary Art Methods:Teaching/Learning Art A: Art	
SECD03.330	Practicum Teaching/Learning A: Art	
SMED31.360	Secondary Art Methods: Teaching/Learning B: Art	
SECD03.332	Practicum Teaching/Learning B: Art	
SMED31.450	Clinical Practice in Art Education	
SMED31.451	Clinical Practice Seminar for Art Education	
SECD03.350	Teaching Students Cultural & Linguistic Diversity	
Total Credits		**120 s.h.**

Minor in Art

David E. Vaccaro, Advisor
Westby Hall
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 made up of five core courses and three studio electives, as follows:

Foundation Core

ART02.100	Representational Drawing
ART02.105	Color and Design-2D
ART02.200	Expressive Drawing
ART02.207	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	Metals/Jewelry 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	Metals/Jewelry II
ART09.344	Graphic Design II
ART09.241	Ceramics II
ART09.229	Illustration II
ART09.452	Computer Art II
INAR39.333	Advanced Photography

Bachelor of Fine Arts in Studio Art with Specialization in Graphic Design

David E. Vaccaro, Advisor
Westby Hall
856.256.4091
vaccaro@rowan.edu

A professional, studio-intensive, BFA specialization for students who wish to become graphic designers. The graphic design industry is highly competitive and broad ranging. This specialization allows Rowan University students who wish to enter the graphic design field the added advantage of demonstrating to potential employers that they have followed a sequential course of study. The curriculum consists of the seven graphic design courses offered by the 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: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the University General Education requirements as described on page 68

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.
Note: Not all courses are offered each semester.

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

Distributive studio electives include Ceramics, Computer Art, Drawing, Glass, Illustration, Metals/Jewelry, Painting, Photography, Printmaking, and Sculpture.

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

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

E. Other Required courses

- Additional 6 s.h. from the History/Humanities Language Bank (Foreign Language suggested)
- Additional 3 s.h. from the artistic and creative experiences bank

Program Total **120 s.h.**

Minor in Art History

David E. Vaccaro, Advisor
Westby Hall
856.256.4091
vaccaro@rowan.edu

Eligibility
The Minor in Art History is open to any interested Rowan student. Transfer students are required to take a minimum of twelve credit hours toward the minor at Rowan University.

Program Requirements
The Minor in Art History consists of 18 semester hours. There are three required Art History core courses and three Art History electives, as follows:

Art History Core Courses:
Note: These courses are offered every semester.

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

Art History Electives (Choose three)
Note: If intermediate courses are selected, prerequisites listed in the catalog descriptions of these courses must be met. Courses marked with an asterisk (*) are not offered every semester.

ARHS03.310	History of American Art
ARHS03.220	Modern Art
ARHS03.252	Concepts in Art: Criticism (WI)(*)
ARHS03.340	Survey of Women Artists(*)
ARHS03.231	Survey of Asian Art(*)
ARHS03.520	Art Since 1945(*)
ARHS03.425	Special Problems Art History (course may be repeated)

Department of Music

Dr. Robert Rawlins, Chair
Wilson Hall
856.256.4557
rawlinsr@rowan.edu

The Music Department Mission

The Rowan University Department of Music invites students to develop their creativity through music as they deepen their knowledge, acquire new skills, and engage the many dynamic roles that musicians fulfill in the community.

Based on this philosophy, a program of study for the music major can lead to:

- a performing career in music
- a teaching career in music
- graduate study in music
- a broader cultural knowledge appropriate for many career options.

For music majors, Baccalaureate degrees are offered with the following program options:

- Performance
- Music Education
- Jazz Studies
- Jazz Studies-Music Education
- Composition

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, and composition.

The Jazz Studies-Music Education specialization option combines 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 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.

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) 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 within the Department of Music.

The Department of Music is a fully accredited member of the National Association of Schools of Music and sponsors chapters of Phi Mu Alpha Sinfonia, Sigma Alpha Iota, and MENC-National Association for Music Education.

Bachelor of Arts in Music

Dr. Donald Gephardt, Advisor
Wilson Hall
856.256.4557
gephardt@rowan.edu

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Major Requirements

Major Applied Instrument/Voice (Levels I-VI)

MUS97.100	Piano Class I
MUS97.101	Piano Class II
MUS04.130	Music Theory I - Written
MUS04.131	Music Theory II - Written
MUS04.132	Music Theory I - Aural
MUS04.133	Music Theory II - Aural
MUSG06.102	General Music History
MUSG06.447	Music in World Cultures
or MUSG06.115	Growth and Development of Jazz

Total Program **120 s.h.**

Student Recitals
Ensemble Choices
Choose two (2) from Musical Styles I-III
Choose five (5) 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

Dr. Rick Dammers, Advisor-Instrumental
Wilson Hall
856.256.4500 x3720
dammers@rowan.edu

Dr. Lili Levinowitz, Advisor-vocal
Wilson Hall
856.256.4500 x3716
levinowitz@rowan.edu

Keeley Powell, Advisor-education
Education Hall
856-256-4761
powellk@rowan.edu

Teacher Certification K-12 with specializations: Instrumental, Vocal

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Major Requirements 64-69 s.h.

COMP01.111	College Composition I
COMP01.112	College Composition II
CMS04.205	Public Speaking
SPED08.130	Human Exceptionality
READ30.120	Literacies in Today's World
FNDS21.230	Characteristics of Knowledge Acquisition
FNDS21.150	History of American Education
EDUC01.270	Teaching in Learning Communities I
EDUC01.272	Teaching in Learning Communities II
SMED33.420	Educational Technology
READ30.280	Teaching Literacy
EDUC01.104	Teaching: An Introduction to the Profession
SECD03.350	Teaching Students of Ling. & Cult. Diversity
EDUC01.270	Teaching in Learning Community I
EDUC01.284	Teaching in the Learning Community II (music)
SMED32.411	Clinical Practice in Music
SMED32.412	Clinical Practice Seminar in Music
SMED32.329	Teaching/Learning Music:Elem. General Music A
SMED32.330	Teaching/Learning Music:Vocal Methods and Tech(vocal only)B
SMED32.331	Teaching/Learning Music:Inst. Methods and Tech(inst. only)B
SMED33.420	Integrating Ed. Technology into Teaching
MUSG06.214	Development of Musical Styles I
MUSG06.215	Development of Musical Styles II
MUSG06.335	Development of Musical Styles III
MUS04.130	Music Theory I-Written
MUS04.132	Music Theory I-Aural
MUS04.131	Music Theory II-Written
MUS04.133	Music Theory II-Aural
MUS04.240	Music Theory III-Written
MUS04.242	Music Theory IIII-Aural
MUS04.241	Music Theory IV-Written
MUS04.243	Music Theory IV-Aural

Professional Applied Instrument or Voice I-VII (see Advisor)

MUS97.100	Piano Class I-IV
MUS97.101	Piano Class II
MUS97.200	Piano Class III
MUS97.201	Piano Class IV
MUS97.400	Voice Class (except vocal spec.)
MUS97.212	Instrumental I

MUS97.312	Instrumental II
MUS97.213	Choral Conducting I
MUS97.313	Choral Conducting II
MUS04.404	Orchestration
or MUS04.403	Choral Arranging

Ensemble I-VIII (determined by audition)

MUS04.050	Student Recitals I-VII
MUS04.118	Music Fundamentals
MUSG06.303	Choral Literature (except instrumental)

Language (vocal specialization only)
Instrument Classes (see Advisor)

SMED32.219	Piano Pedagogy (keyboard spec. only)
MUSG06.120	Keyboard Literature (keyboard spec. only)

Vocal Specialization Only

MUSG06.210	Vocal Literature or Ensemble VII-VIII

Bachelor of Music - Performance

Dr. Bryan Appleby-Wineberg, Advisor
Wilson Hall
856.256.4557
wineberg@rowan.edu

Applied Performance Keyboard, or Instrumental or Vocal **120 or 121 s.h.**

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Major Requirements 77-79 s.h.

MUSG06.214	Development of Musical Styles I
MUSG06.215	Development of Musical Styles II
MUSG06.335	Development of Musical Styles III
MUS04.130	Music Theory I - Written
MUS04.131	Music Theory II - Written
MUS04.132	Music Theory I - Aural
MUS04.133	Music Theory II - Aural
MUS04.240	Music Theory III - Written
MUS04.241	Music Theory IV - Written
MUS04.242	Music Theory III - Aural
MUS04.243	Music Theory IV - Aural

Professional Appl. Instrument/Appl. Voice
MUS04.121 MUS04.122 MUS04.221 MUS04.222 MUS04.321 MUS04.322 MUS04.421 MUS04.422 MUS04.180

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 MUS04.050
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

Dennis DiBlasio, Advisor
Wilson Hall
856.256.3528
diblasio@rowan.edu

Jazz Studies Curriculum **124 s.h.**

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Major Requirements 85 s.h.
Professional Applied Instrument Levels I-VIII (see Advisor)
Professional Applied Improvisation Levels I-VIII

MUS04.129	
MUS04.130	Music Theory Written I
MUS04.132	Music Theory Aural I
MUS04.131	Music Theory Written II
MUS04.133	Music Theory Aural II
MUS04.240	Music Theory Written III
MUS04.242	Music Theory Aural III
MUS04.241	Music Theory Written IV
MUS04.243	Music Theory Aural IV
MUS97.100	Piano Class I
MUS97.101	Piano Class II
MUS04.229	Secondary Applied Piano I (Jazz)
MUS04.230	Secondary Applied Piano II (Jazz) Ensembles

Student Recitals (8 semesters)

MUS04.350	Computer Technology and Music I
MUS04.344	Audio Recording
MUS04.411	Project Audio Recording
SMED32.335	The Business of Music

MUS04.333	Stage Band Rehearsal Techniques
MUSG06.215	Development of Musical Styles II
MUSG06.335	Development of Musical Styles III
MUS04.363	Writing in Traditional and Contemporary Styles
MUS04.361	Arranging for Large/Small Jazz Ensembles

Bachelor of Music - Composition

Dr. Robert Rawlins, Advisor
Wilson Hall
856.256.4557
rawlinsr@rowan.edu

Music Composition 126 s.h.

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Major Requirements 79 s.h.

MUSG06.214	Development of Musical Styles I
MUSG06.215	Development of Musical Styles II
MUSG06.335	Development of Musical Styles III
MUS04.125	Music Composition I
MUS04.225	Music Composition III
MUS04.226	Music Composition IV
MUS04.325	Music Composition V
MUS04.326	Music Composition VI
MUS04.425	Music Composition VII
MUS04.426	Music Composition VIII
MUS04.130	Music Theory I - Written
MUS04.131	Music Theory II - Written
MUS04.132	Music Theory I - Aural
MUS04.133	Music Theory II - Aural
MUS04.240	Music Theory III - Written
MUS04.242	Music Theory III - Aural
MUS04.241	Music Theory IV - Written
MUS04.243	Music Theory IV - Aural
MUS04.147	Contemporary Music Ensemble
MUS97.100	Piano Class I
MUS97.101	Piano Class II
MUS97.200	Piano Class III
MUS97.201	Piano Class IV
	Secondary Applied Instrument or Voice I-VIII (see Advisor)
MUS97.212	Conducting - Intrumental I
MUS97.213	Conducting - Choral I
MUS04.450	Form/Score Analysis
MUS04.404	Orchestration
MUS04.350	Computer Technology and Music I

MUS04.455	Counterpoint
MUS04.403	Vocal Arranging
MUS04.050	Student Recitals
MUS04.309	Chamber Music I
MUS04.310	Chamber Music II

Minor in Music

Dr. Robert Rawlins, advisor
Wilson Hall
856.256.4557
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Music Minor (for Non-Music Majors) 25-29 s.h.

A. Requirements 16/17 s.h.

Secondary Applied Instrumental
or Vocal I-VI (see Advisor)
Music Fundamentals & Sight Singing MUS04.118, MUS04.110
Music Theory I MUS04.130, MUS04.132
or Music Theory I and II MUS04.131 MUS04.133
Piano Class I and II (except Piano SAI) MUS97.100, MUS97.101
General Music History MUSG06.102
Ensemble I-VI (by audition, see Advisor)
Student Recitals I-VI MUS04.050

B. Electives

Choose 9 s.h. from the following:
Ensemble Choice
Music Theory III, IV MUS04.240, MUS04.242, MUS04.241, MUS04.243
Musical Styles I, II, III MUSG06.214, MUSG06.215, MUSG06.335
Form and Analysis MUS04.450
Conducting I, II (Instrumental or Choral) MUS97.212, MUS97.312, MUS97.213, MUS97.313
Orchestration MUS04.404
Vocal Arranging MUS04.403
Acoustics of Music MUS04.332
Music in World Cultures I, II MUSG06.447, MUSG06.448
Computers and Music Technology I MUS04.350
Selected Topics in Music
Growth and Development of Jazz MUSG06.115
Stage Band Rehearsal Techniques MUS04.333
New Jazz Structures MUSG06.439

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 and see the Music Minor advisor.

Bachelor of Music in Jazz Instrument and Bachelor of Arts in Education

Richard Dammers, Advisor
Wilson Hall
856.256.4500 X3720

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Dennis DiBlasio, Advisor
Wilson Hall
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Jazz Education **144.5 s.h.**

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

See your advisor for Major and Education Requirements

Department of Theatre and Dance

David Sullivan, Chair
Edgar F. Bunce Hall
856.256.4034
sullivand@rowan.edu

The Department of Theatre and Dance educates students in the contemporary practice of theatre and dance through a liberal arts curriculum. True learning requires excitement. For students, excited by theatre and dance, our programs offer a path to intellectual growth and development surrounded by things they love. Accredited by the National Association of Schools of Theatre, the Department provides a broad-based education that integrates physical, vocal, and technical performance technique with the intellectual skill and training necessary for life long learning. Undergraduate students from other majors may also share in our interdisciplinary activities by choosing to minor, or concentrate, in theatre or dance.

A Bachelor of Arts in Theatre consists of 39 credits in our major and 30 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 three tracks within the major: Acting/Directing, Design/Technical, and Dance. The three tracks share a core curriculum of theatre arts courses while allowing students to extend study in their specific field of interest.

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 Theatre. These groups produce approximately 10 events per year, ranging from full-scale mainstage performances to student directed and choreographed workshops. These projects provide students with 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 Department of Theatre and Dance. We present our main theater and dance season in Bunce Hall's historic 450-seat Tohill Theatre, as well as additional shows and events in the Bunce Studio Theatre. Bunce Hall also contains rehearsal spaces, a well-equipped costume and scene shop, prop and costume storage, a computer-equipped design studio, and 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 Acting/Directing Track present two contrasting one-minute monologues or one monologue and a song. Students auditioning for the Dance Track present a three-minute dance. Students seeking admission to the Design/Technical track will present, in an interview, a portfolio or folder demonstrating their experience and ability. For specific information on interview or audition requirements, call or write the Department of Theatre and Dance.

In order to gain the maximum benefit from the academic flexibility of these degree tracks, students must arrange for regular and careful academic advisement with department faculty. The Department of Theatre and Dance values the process of academic advisement and believes that effective mentorship leads to successful careers. Students must 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 must formally apply and be advised before completing the course requirements.

The **Minor in Theatre Arts** consists of 19 semester hours of study: 10 semester hours of required courses, plus 9 hours of electives.

The **Minor in Dance** provides a flexible program of study that combines technique with theory courses. The minor consists of 18-24 hours of study: the core course, Elements of Dance, plus 6-12 hours of technique and 6-12 hours of theory.

The **Dance Concentration** is designed for students in the related arts and humanities disciplines interested in pursuing dance as a career. The courses provide a solid framework through which students may pursue selected interests in the areas of performance, history, research and education.

The **Theatre Design Concentration** provides an art major with sufficient background in theatre to seek a position as a set and/or lighting designer or general theatrical technician.

Contact our department for advisement.

Bachelor of Arts in Theatre

David Sullivan, Advisor
Edgar F. Bunce Hall
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sullivand@rowan.edu

The Rowan Bachelor of Arts in Theatre features three distinct tracks which prepare students to work in the professional field with training focused for acting/directing, design/technical, or dance.

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Major sequence of required courses:		39 s.h.
Core Courses all tracks:		**27 s.h.**
THD07.111	Colloquium I	
THD07.112	Colloquium II	
THD07.113	Colloquium III	
THD07.114	Colloquium IV	

THD07.115	Colloquium V	
THD07.116	Colloquium VI	
THD07.201	Introduction to Theatre and Dance	
THD07.230	Stagecraft I	
THD07.231	Stagecraft II	
THD07.203	Costuming I	
THD07.205	Costuming II	
THD07.105	Introduction to Performance	
THD08.140	Dance Improvisation I	
THD08.141	Dance Improvisation II	
Any three (3) of the following courses:		
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)	
THD08.436	Dance History	
Acting/Directing Track:		12 s.h.
THD07.103	Speech for the Stage	
THD08.126	Movment for the Actor	
THD07.235	Acting I	
Plus one (1) of the following:		
THD07.236	Acting II	
THD07.430	Directing I	
Design/Tech Track:		12 s.h.
THD07.232	Stagecraft III	
THD07.233	Stagecraft IV	
THD07.310	Foundations of Theatrical Design	
Select one of the following:		
THD07.300	Drawing and Rendering for the Theatre	
THD07.305	Drafting and Model Making	
Select one of the following:		
THD07.350	Scenic Design	
THD07.353	Lighting Design	
THD07.356	Costume Design	
Dance Track:		12 s.h.
THD08.465	Dynamics of Human Movement	
THD08.237	Modern Dance II	
THD08.377	Modern Dance III	
THD08.225	Dance Composition I	
Additional non-program courses		9 s.h.
Free Electives		30 s.h.
Total Credits in Theatre 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, plus 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 Performance	
THD07.230	Stage Craft I	
and THD07.231	Stage Craft II	
or THD07.203	Costuming I	
and THD07.205	Costuming II	
Electives Choose two (2) of the following:		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	
THD07.430	Directing I	
THD07.365	Theatre Management	
THD07.356	Costume Design	
THD07.310	Foundations of Design	
THD07.435	Creative Dramatics	
THD08.135	Elements of Dance	
THD07.215	Experiencing Acting	
History/Literature Elective Choose one (1) of the following:		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
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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 dance technique and 6-12 hours of dance 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.
THD08.225	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
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The dance concentration is a required 24 s.h. course sequence designed expressly for students in the related arts and humanities disciplines interested in pursuing dance as a career. The courses provide a solid framework through which students may pursue selected interests in the areas of performance, history, research and education.

Dance Concentration Sequence		24 s.h.
THD08.135	Elements of Dance	
THD08.236	Modern Dance I	
THD08.237	Modern Dance II	
THD08.246	Ballet I	
THD08.247	Ballet II	
THD08.225	Dance Composition I	
THD08.337	Choreography	

THD08.436	Dance History

Theatre Design Concentration

Bartholomew Healy, Advisor
Edgar F. Bunce Hall
856.256.4232
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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
THD07.440	Contemporary World Theatre

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

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Our Mission

The College of Liberal Arts & Sciences celebrates and affirms the humanities, natural sciences, and social sciences as the core of liberal education and the basis for professional preparation. Our coursework promotes rigorous inquiry, analytical and integrative reasoning, and decision-making. Internships, field experiences, special programs of the College's Institute, and technological advances extend the liberal arts and sciences beyond the limits of the classroom and of the campus. In all of its offerings, the college plays an essential role in Rowan's mission to help students become life-long learners and responsible citizens.

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 several Interdisciplinary majors: Africana Studies, American Studies, Economics, Environmental Studies, Liberal Studies: Humanities and Social Science and Liberal Studies: Math & Sciences. The college also offers minors in most of the disciplines, and concentrations in several disciplines such as African American Studies, Asian Studies, Cartography and Geography Information Systems, Ethics, International Studies, Urban Studies, and Women's and Gender Studies. The minors and concentrations, along with free elective courses allow students to complete 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, English, Foreign Languages and Literatures, Geography and Anthropology, History, Law and Justice Studies, Mathematics, Philosophy and Religion Studies, 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. The International Center supports all initiatives through its programs and activities, as well as provides leadership for the community and cultural enrichment and international education.

Department of Biological Sciences

Luke T. Holbrook, Chair
Science Hall
856.256.4834
holbrook@rowan.edu

The Biological Sciences Department offers a liberal arts major which leads to a Bachelor of Science degree in Biology. While the Department's major program ensures that students become well-rounded, it is also flexible enough that students can specialize in a particular area of interest. The Department emphasizes excellence and innovation in teaching in the classroom as well as in the laboratory and in the field. Coursework for the major emphasizes preparing students for career success, including both development of skills and understanding of biological principles.

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 modern 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 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
BIOL01.112	General Biology: Environmental Focus
BIOL01.113	General Biology: Human Focus
BIOL01.115	General Biology: Plants & People
BIOL01.105	Essentials of Biology
BIOL20.401	Principles of Ecology
BIOL01.210	Biological Systems and Applications

Biology majors should be aware that the above courses may not be counted towards the Biology major.

Bachelor of Science 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. An average grade of C is also required for the chemistry, physics, math, and statistics courses listed below. Majors must take at least 15 s.h. of their Biology electives at Rowan University in order to be awarded a degree.

The Department of Biological Sciences advises all students that all Biology courses may require observation of, dissection of, manipulation of and experimentation with living or preserved organisms. These exercises are an integral part of biology courses and provide an essential experience.

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.

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 only in night courses.

Program Requirements

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Required courses for the Bachelor of Science in Biology

*BIOL01.104	Biology 1:Diversity, Evolution, & Adaptation
*BIOL01.106	Biology 2:Concepts in Genetics
*BIOL01.203	Biology 3:Introduction to Cell Biology
BIOL01.204	Biology 4:Global Ecology
CHEM06.100	Chemistry I
CHEM06.101	Chemistry II
CHEM07.200	Organic Chemistry I
CHEM07.201	Organic Chemistry II
PHYS02.202	Physics I
PHYS02.203	Physics II
PHIL09.369	Philosophy of Science
MATH01.130	Calculus I
STAT02.280	Biometry

*Transfer students who have taken the equivalent of BIOL01.100 (Biology I) and BIOL01.101 (Biology II) at another institution are required to take BIOL01.202 (Biology 3T: Biological Skills and Methods), which will allow them to take BIOL01.204. This will complete the introductory sequence and allow them to take most Biology electives.

Biology Electives 22 s.h

Additional Required Courses

BIOL01.445	Special Topics (Senior Seminar)	
or BIOL01.475	Lab/Field Research)	3 s.h.

Students may choose electives from any 300 or higher-level Biology courses, as well as BIOL10.210 (Human Anatomy and Physiology I) and BIOL10.212 (Human Anatomy and Physiology II)

Total credits in program **120 s.h.**

Minor in Biological Sciences

The Minor in Biology consists of 23-24 semester hours, with a minimum of 15 of these to be taken at Rowan University. The 300- or 400-level courses may be taken in any order. In keeping with the policy of the Biology major, any Biology grade below a C will not count towards the Minor.

BIOL01.104	Biology 1:Diversity, Adaptation, & Evolution
BIOL01.106	Biology 2:Concepts in Genetics
BIOL01.203	Biology 3:Introduction to Cell Biology
BIOL01.204	Biology 4:Global Ecology

Two (2) additional Biology courses, both of which must be 300-level or above.

Environmental Studies Concentration

Dr. Terry O'Brien, Coordinator
Science Hall
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This Interdisciplinary Concentration provides an instructional framework through which students may pursue interests in the areas of Environmental Planning, Environmental Sciences, and Environmental Testing and Technology. The concentration involves 18-24 s.h. of coursework, and is

described in more detail within the Interdisiplinary Studies Concentration in this catalog.

Pre-Medical Concentration

Catherine Dayton, Program Advisor
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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
	One Psychology Course

Plus one of the following:

CHEM09.250	Quantitative Analysis
BIOL07.301	Comparative Anatomy
BIOL27.403	Embryology
BIOL11.330	Microbiology

Bachelor of Science in Nursing

Virginia R. Wilson, Director
College of Professional and Continuing Education
Education Hall
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The Bachelor of Science Degree in Nursing is offered jointly by Rowan University in the College of Professional and Continuing Education (CPCE) and the University of Medicine and Dentistry of New Jersey. It is designed to give additional professional education at the baccalaureate level to practicing nurses. The BSN degree prepares registered nurses to work in the ever-expanding field of nursing. This degree allows nurses to augment their knowledge base and thus enhance their careers. The Bachelor of Science Degree also acts as a stepping stone for the nurse who wishes to pursue a Master of Science Degree in Nursing with six graduate nursing credits included in the program curriculum. The program is designed as a part-time program to accommodate professional¿s schedules while still completing the degree in a timely manner.

Joint RN to BSN Curriculum The complete curriculum includes 121 credits and incorporates both Rowan University and the University of Medicine and Dentistry of New Jersey - School of Nursing requirements. Students graduating from a National League for Nursing Accrediting Commission (NLNAC) associate degree or diploma program are awarded 30 pre-licensure nursing credits upon matriculation into the program. Students transfer credits for coursework completed prior to admission to the program.

Degree candidates are encouraged to plan a course of study that meets both the programmatic criteria as well as courses that meet their individual needs and interests. The BSN program will incorporate available minors into the program to give students additional opportunities for career advancement.

- Students may transfer up to 90 credits.
- Students must fulfill the general education requirements of Rowan University, either through the transfer of credits or completion of courses at Rowan University.
- Additional coursework may be required, depending on the amount of credits transferred to Rowan University.
- Program may be completed on a part-time basis.

Course of Study Rowan University requires 121 credits taken within approved general education and major coursework in order to graduate with a Bachelor's degree. To obtain the BSN all students complete the following coursework:

- 31-32 credits (9 courses) in the major sequence
- 60 credits in general education requirements
- 30 credits awarded for pre-licensure nursing coursework

General Education 60 general education courses required / transfer credits and remaining coursework to be determined with the RN to BSN Program Coordinator

Basic Admission Requirements

- Graduation from a National League for Nursing Accrediting Commission (NLNAC) associate degree or diploma program
- One official transcript from *all* colleges attended
- Minimum cumulative GPA of 2.5
- Licensure or eligibility to be licensed as a Registered Nurse (RN) in the State of New Jersey

Program Exit Program exit includes successful completion of all required coursework totaling 121 credits. Student will receive a Bachelor of Science in Nursing degree, jointly awarded by Rowan University and the University of Medicine and Dentistry of NJ-School of Nursing.

Program Degree Requirements

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Nursing Concentration		31-32 s.h.
NURS03.303	Comprehensive Health Assessment	3 s.h.
NURS03.304	Nursing Informatics	3 s.h.
NURS03.404	Research, Applications in Nursing Practice (Prereq: Statistics)	3 s.h.
NURS03.401	Community Health Nursing	6 s.h.
NURS03.405	Healthcare Policy & Finance	3 s.h.
NURS03.403	Nursing Care Delivery Systems	4 s.h.
NURS03.504	Advanced Pathophysiology (Graduate Course)*	3 s.h.
NURS03.505	Advanced Pharmacology (Graduate Course)*	3 s.h.

One Nursing Elective		3-4 s.h.
NURS03.309	Ethics in Healthcare	
or NURS03.503	Nursing Research (Graduate Course, Prereq: NURS 03.404)	
Pre-Licensure Nursing Courses in Transfer		30 s.h.
Consult an academic advisor for policies relating to awarding of prior nursing credit		
Program Total		**121-122 s.h.**

*These course descriptions can be viewed in the Graduate Catalog.
Note: Elective course offerings are subject to change from semester to semester and year to year

Department of Chemistry and Biochemistry

Catherine Yang, Chair
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The Department of Chemistry and Biochemistry offers a Bachelor of Science in Chemistry and a Bachelor of Science in Biochemistry and also co-offers a Bachelor of Science in Physical Sciences with the Department of Physics and Astronomy.

Our goal is to prepare students to be contributing members of the scientific community and society at large. We believe this is essential to each student's success in his/her professional career. We believe in rigorous, employment-base learning. It is also important to the students' potential employers and graduate faculty and to society in general as well as to Rowan University and the Department of Chemistry and Biochemistry. We 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

Bachelor of Science in Physical Sciences (with Physics and Astronomy)

Physical Science-Physics Specialization
Ernst Knoesel, Program Coordinating Advisor
Science Hall
856-256-4366
Knoesel@rowan.edu

Physical Science-Chemistry Specialization
Robert Newland, Program Coordinating Advisor
Science Hall
856.256.4502
newland@rowan.edu

See the program description listed in the Department of Physics and Astronomy.

Bachelor of Science in Chemistry

Kandalam V. Ramanujachary, Coordinator
Science Hall
856.256.5451
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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.

Program Requirements

General Education: All students must complete the University General Education Requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Required Courses for the Chemistry Degree

PHIL09.369	Philosophy of Science-WI
MATH01.130	Calculus I
MATH01.131	Calculus II
MATH01.230	Calculus III
CS01.104	Intro to Scientific Programming
PHYS02.200	Introductory Mechanics
PHYS02.201	Introductory Electricity & Magnetism
CHEM06.100	Chemistry I
and CHEM06.101	Chemistry II
or CHEM06.105	Advanced Chemistry I
and CHEM06.106	Advanced Chemistry II
CHEM06.300	Advanced Inorganic Chemistry
CHEM07.200	Organic Chemistry I
CHEM07.201	Organic Chemistry II
CHEM07.348	Biochemistry
CHEM09.250	Quantitative Analysis

CHEM08.400	Physical Chemistry I
CHEM08.401	Physical Chemistry II
CHEM08.402	Physical Chemistry Lab I
CHEM08.403	Physical Chemistry Lab II
CHEM09.410	Instrumental Methods
CHEM05.435	Co-op
or CHEM05.440	Research I
CHEM05.450	Seminar I

Restricted Electives 12 s.h.

Chosen with the approval of your advisor. 8 s.h. must be in upper level Chemistry and must have a Physical Chemistry prerequisite. The remainder of the 12 s.h. may be chosen in chemistry or in subjects closely related to chemistry such as physics, biology or mathematics. Students planning graduate study would find a course in differential equations, linear algebra, or advanced physics helpful. See the list of Approved Restricted Electives below.

Free Electives 15 s.h

Chosen with the help of advisor and with consideration of future educational and career plans.

Total Credits in Program **120 s.h.**

List of Approved Restricted Electives

CHEM05.430	Advanced Topics in Chemistry
CHEM07.405	Introduction to Polymer Chemistry
CHEM07.410	Medicinal Chemistry
CHEM07.470	Organic Spectroscopic Analysis (Lecture and Lab)
CHEM07.408	Advanced Biochemistry
CHEM07.431	Advanced Topics in Biochemistry
CHEM07.464	Advanced Organic Chemistry I (Lecture) - WI
CHEM07.475	Polymer Synthesis
CHEM07.478	Polymer Characterization
CHEM05.310	Independent Study (if taken as a junior or senior)
CHEM05.441	Research II
MATH01.210	Linear Algebra
MATH01.231	Ordinary Differential Equations
PHYS02.300	Modern Physics (Lecture and Lab)
PHYS02.305	Optics and Light (Lecture and Lab)
PHYS02.315	Analytical Mechanics (Lecture Only)
PHYS02.325	Mathematical Physics (Lecture Only)
PHYS02.399	Electric Circuits (Lecture and Lab)
PHYS02.430	Electricity and Magnetism I
INTR01.486	Interdisciplinary Materials Science

Bachelor of Arts in Chemistry

Cathy Yang, Coordinator
Science Hall
856-256-5455
yang@rowan.edu

The B.A. degree in Chemistry prepares students for teaching careers in high school or science businesses or law careers. Laboratories are equipped with modern instrumentation and computers for hands-on

use by students at all levels. Each student is expected to carry out a laboratory based research project.

Program Requirements

General Education: All students must complete the University General Education Requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Required Courses for the Chemistry Degree

PHIL09.369	Philosophy of Science-WI
MATH01.130	Calculus I
MATH01.131	Calculus II
PHYS02.200	Introductory Mechanics
PHYS02.201	Introductory Electricity & Magnetism
CHEM06.100	Chemistry I
and CHEM06.101	Chemistry II
CHEM07.200	Organic Chemistry I
CHEM07.201	Organic Chemistry II
CHEM07.348	Biochemistry
CHEM09.250	Quantitative Analysis
CHEM08.400	Physical Chemistry I
CHEM05.435	Co-op
or CHEM05.440	Research I
CHEM05.450	Seminar I
CHEM06.300	Advanced Inorganic Chemistry
or CHEM09.410	Instrumentation Methods

Free Electives 39 s.h
Chosen with the help of the advisor and with consideration of future educational and career plans.

Total Credits in Program 120 s.h.

Minor in Chemistry

Catherine Yang, Advisor
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 I
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.

Bachelor of Science in Biochemistry

George Caputo, Coordinator
Science Hall
856-256-5453
caputo@rowan.edu

The B.S. Degree in Biochemistry, an interdisciplinary program, is designed to prepare students for a career in biochemistry or graduate studies. Completion of the degree requirements can also increase a student's chances of success in medical, dental or other related health programs by helping students develop a strong academic foundation needed for success in such professional schools. The program combines the value of a liberal education with appropriate classroom and laboratory training in chemistry, biology, math and physics. The focus is on a molecular approach to studying living systems.

The biochemistry major can choose to specialize in related areas of chemistry, 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.

Program Requirements

General Education: All students must complete the University General Education Requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Required Courses for the Biochemistry Degree

PHIL09.369	Philosophy of Science-WI
MATH01.130	Calculus I
MATH01.131	Calculus II
or STAT02.260	Statistics I
CS01.104	Intro to Scientific Programming
PHYS02.200	Introductory Mechanics
PHYS02.201	Introductory Electricity & Magnetism
CHEM06.100	Chemistry I
and CHEM06.101	Chemistry II
or CHEM06.105	Advanced Chemistry I
and CHEM06.106	Advanced Chemistry II
CHEM07.200	Organic Chemistry I
CHEM07.201	Organic Chemistry II
CHEM07.348	Biochemistry
CHEM09.250	Quantitative Analysis
CHEM08.305	Introduction to Biophysical Chemistry
BIOL01.203	Biology III
CHEM07.408	Advanced Biochemistry
CHEM05.440	Research I
or CHEM05.435	Co-op
CHEM05.450	Seminar I

Restricted Electives 20 s.h.

Chosen with approval of advisor. Choose at least two chemistry courses from the approved list. Two biology courses from the following:

BIOL22.450	Molecular Genetics
or BIOL22.410	Human Genetics
BIOL01.430	Cell Biology
or BIOL01.428	Developmental Biology
BIOL11.330	Microbiology

Free Electives 13 s.h. (14 s.h.)
Chosen with the help of advisor and with consideration for future educational and career plans.

Total Credits in Program 120 s.h.

Department of Computer Science

Nancy Lynn Tinkham, Chair
Robinson Hall
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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 Bachelor of Science 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	Software Engineering I
CS07.322	Software Engineering II
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	Software Engineering I
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
CS04.401	Compiler Design
CS07.321	Software Engineering I

Artificial Intelligence

STAT02.290	Probability and Statistical Inference for Computing Systems
CS07.210	Foundations of Computer Science
PHIL09.130	Introduction to Symbolic Logic
CS07.450	Artificial Intelligence
CS04.315	Programming Languages
CS07.460	Computer Vision
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	Introduction to Computer Graphics
CS07.370	Introduction to Information Visualization
CS07.380	Introduction to Computer Animation

Bachelor of Science in Computer Science

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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.

Program Requirements

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Required Courses for Computer Science Degree To complete the B.S. degree in computer science, students must complete all courses in the list of required courses and 12 s.h. from the list of restricted electives.

A. Required Courses 69 s.h.

MATH03.160	Discrete Structures
MATH01.130	Calculus I
MATH01.131	Calculus II
MATH01.210	Linear Algebra
STAT02.290	Probability and Statistical Inference for Computing Systems
INTR01.265	Computers and Society

or INTR01.266	Computers and Society (WI)

Lab Science Elective Choose a two-semester sequence and a third course from the following list:

BIOL01.104	Biology I
BIOL01.106	Biology II
PHYS02.200	Introductory Mechanics
PHYS02.201	Introductory Electricity and Magnetism
CHEM06.100	Chemistry I
CHEM06.101	Chemistry II
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	Software Engineering I
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.

CS01.395	Topics in Computer Science
CS04.305	Web Programming
CS04.325	Programming in Ada
CS04.327	Power Java
CS04.380	Object Oriented Design
CS04.391	Concurrent Programming
CS04.392	System Programming and Operating System Internals
CS04.394	Distributed Systems
CS04.401	Compiler Design
CS04.430	Database Systems:Theory and Programming
CS06.410	Data Communications and Networking
CS06.412	Advanced Computer Architecture
CS06.415	Wireless Networks, Protocols and Applications
CS06.416	TCP/IP and Internet Protocols and Technologies
CS06.420	Embedded Systems Programming
CS07.310	Robotics
CS07.322	Software Engineering II
CS07.350	Computer Cryptography
CS07.360	Introduction to Computer Graphics
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	Software Engineering I
CS04.380	Object Oriented Design
CS07.322	Software Engineering II
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 (CS04.113) may be substituted for the two courses Computer Science and Programming (CS04.103) and Java for Object-Oriented Programmers (CS04.112).

Department of Economics

In Economics, students acquire skills for analyzing important and stimulating national and global problems. Various possible solutions are developed. Economics deals with many current issues facing our society, such as energy, inflation, unemployment, pollution, urban decay, as well as foreign trade and government budget deficits.

The study of Economics prepares students for graduate studies or careers in the private sector, government services, teaching or research. Graduates with the Bachelor of Arts degree find that employment opportunities are greatest in business and government.

There are two programs of study: (1) B.A. program requiring 36 hours in economics; and (2) a minor requiring 21 hours in economics.

Bachelor of Arts in Economics

Program Requirements Students are required to earn a C- or better in all Economics required and elective courses applied towards the major and take MATH03.125 Calculus T & A or MATH03.130 Calculus I and earn a C- or better. Students must take at least 30 of the 120 credits required for graduation and 21 of their required 36 credits in the major at Rowan University.

I. General Education: All students must complete the University General Education Requirements as described on page 257

II. Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

III. Major in Economics **36 s.h.**

Required Courses 18 s.h.

ECON04.101	Introduction to Economics: Macroeconomics
ECON04.102	Introduction to Economics: Microeconomics
ECON04.282	Economic Statistics
or ECON04.292	Statistics for Economists
ECON04.301	Intermediate Macroeconomics
ECON04.302	Intermediate Microeconomics
ECON04.492	Seminar in Economics (WI)

IV. Economic Electives 18 s.h.

One Multi-cultural/Global (MG) course is required:

ECON04.307	Economic Development (MG)
and ECON04.320	Contemporary Economic Systems (MG)
ECON04.200	History of Economic Ideas
ECON04.205	American Economic History
ECON04.210	Environmental Economics
ECON04.215	Current Economic Problems and Policies
ECON04.225	Women in the Economy
ECON04.269	Selected Topics in Economics
ECON04.303	Principles of Economics: A Survey (not for majors)
ECON04.305	Money and Banking
ECON04.310	Global Economics (MG)
ECON04.315	Public Finance
ECON04.345	Labor Economics
ECON04.351	Health Economics
ECON04.360	Urban Economics
ECON04.395	Economics of Personal Financial Planning
ECON04.410	Internship in Economics
ECON04.495	Independent Study in Economics

V. Free Electives 29 s.h.

Total Credits in Program **120 s.h.**

Minor in Economics

I. Required Courses 6 s.h.

ECON04.101	Introduction to Economics-Macroeconomics
ECON04.102	Introduction to Economics-Macroeconomics

II. Economic Electives 15 s.h.

The student, in consultation with his/her Economics' Advisor must select the remaining 15 s.h. from the courses offered by the Economics Curriculum. No less than six s.h. must be at the junior/senior level. Principles of Economics: Global Perspective (ECON04.303) is not counted as a junior/senior level elective course. Both Intermediate Macroeconomics (ECON04.301) and Intermediate Microeconomics (ECON04.302) are strongly recommended.

Total Credits in Program 21 s.h.

Department of English

Catherine W. Parrish, Chair
Bunce Hall
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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.

Bachelor of Arts in English

Tanya N. Clark, Advisor
Edgar F. Bunce Hall
856.256.3473
clarkt@rowan.edu

General Education: All students must complete the University General Education Requirements as described on page 257

Rowan Requirements: All students must complete the Rowan Experience requirements as described on page 68

Major Requirements 36 s.h.

A. Required

ENGL02.101	Literary Studies for English Majors
ENGL02.309	British Literature to Romanticism
ENGL02.311	British Literature Since Romanticism
ENGL02.313	US Literature to Realism
ENGL02.315	US Literature Since Realism
ENGL02.345	Shakespeare I
ENGL02.393	English Seminar I - WI
ENGL02.394	English Seminar II-WI

Of the remaining courses needed to fill the major requirements, at least two must be at the 300- or 400-level.

B. Electives

Total Credits in Program 121 s.h.

Minor in English

Tanya N. Clark, Advisor
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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.

ENGL02.101	Literary Studies for English Majors
ENGL02.345	Shakespeare I
ENGL02.393	Seminar I
	200-level elective
	300/400-level elective
	3-course survey sequence (Option A or Option B, below)

Option A

ENGL02.309	British Literature to Romanticism (Fall only)
ENGL02.311	British Literature Since Romanticism (Spring only)
ENGL02.113	Readings in US Literature

Option B

ENGL02.313	US Literature to Realism (Fall only)
ENGL02.315	US Literature Since Realism (Spring only)
ENGL02.110	Readings in British Literature

Department of Foreign Languages and Literatures

Anthony J. Robb, Chair
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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.) as well as offers the Applied Spanish for the Liberal Studies: Humanities / Social Sciences degree. French courses are offered beyond the 18 s.h. minor providing students with the opportunity to accumulate credits toward a second certification.

Bachelor of Arts 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.

All incoming Spanish majors (Freshmen, Internal Transfers and Transfer Students) are required to take the "STAMP" Spanish Placement Examination and to schedule an interview through the Academic Advisement Coordinator, Dr. Anthony Robb, prior to registration. Students of Appreciation of Hispanic Literature (SPAN05.301) are required to take the STAMP Placement Exam a second time for advisement purposes in the major.

Program Requirements:

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Major Requirements 45 s.h.

6 s.h. of a Foreign Language other than Spanish are required. Both courses must be in the same language.

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 *or* Introduction to Spanish Translation SPAN 05.340. Prerequisite: SPAN 05.212 *or* Waiver. These courses can be taken as a 300- or 400- level elective in the major.

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 recommended 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
FREN02.440	Special Topics in Foreign Languages & Literatures

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

Sonia B. Spencer, Advisor
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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 recommended 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
GERM03.440	Special Topics in Foreign Languages & Literatures

Any two upper level courses offered in German

Minor in Spanish

Dr. Roverto Madero, Advisor
Bunce Hall
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madero@rowan.edu

The Spanish Minor is an intensive program of study which offers courses in Spanish language, civilation and culture. This 18-hour minor is open to all students and is of particular benefit to those majoring in the humanities such as art, music, geography, anthropology, history, business or education. It is also useful to students interested in pursuing the International Studies Concentration or a career where knowledge of a second language is desireable. Previous high school preparation in the language is recommended but not required. A placement exam is strongly recommended so that the student begins the minor at the appropriate level. For placement exam information, please contact Dr. Marilyn Manley at manlet@rowan.edu.

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

Department of Geography and Anthropology

Maria Rosado, Chair
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The Department offers six programs in geography. These include a major leading to the bachelor of arts, a minor in geography, a concentration in GIS, a concentration in planning, 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.

Bachelor of Arts in Geography (Liberal Arts Track, Dual Major Track, Planning Track, Cartography and GIS Track)

Denyse Lemaire, Program Advisor
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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.

Major Requirements

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Program Requirements 41 s.h.

GEOG06.103	Geology I

A. Common Core: Required 16 s.h.

GEOG06.110	Investigations in Physical Geography

Two of the following courses:

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	Senior Seminar in Geography - WI

B. Specialized Electives 21 s.h.

1. Liberal Arts Track

A. Geographic Techniques
Choose at least one of the following:

GEOG06.308	Remote Sensing/Air Photo
GEOG06.315	Field Studies in Geography
GEOG06.320	Cartography
GEOG06.327	New Jersey Applied Planning Practice
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
GEOG06.326	The Geoscience of Natural Disasters
GEOG06.328	Environmental Sustainable Planning

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. Dual Major Track (Elementary Education and Geography)

A. Geographic Techniques
Choose one of the following:

GEOG06.308	Remote Sensing/Air Photo
GEOG06.320	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.\n

3. Geographical Information Systems and Cartography Track

A. Geographic Techniques 18 s.h.

GEOG06.308	Remote Sensing/Air Photo
GEOG06.320	Cartography
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 and Resource Development	
GEOG06.313	Transportation Geography	
GEOG06.326	The Geoscience of Natural Disasters	
GEOG06.327	New Jersey Applied Planning Practice	
GEOG06.328	Environmental Sustainable Planning	

4. Planning Track

A. Geographic Techniques		12-15 s.h.
GEOG06.308	Remote Sensing/Air Photo	
GEOG06.320	Cartography	
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 and Resource Development	

Choose one of the following:

GEOG06.301	Economic Geography
GEOG06.303	Political Geography
GEOG06.304	Population Geography
GEOG06.305	Climatology
GEOG06.325	Geomorphology
GEOG06.326	The Geoscience of Natural Disasters
GEOG06.327	New Jersey Applied Planning Practice
GEOG06.328	Environmental Sustainable Planning

C. Additional Geography Electives (not required)

GEOG06.355	Metropolitan/Regional Planning Internship
GEOG06.491	Independent Study in Geography

Free Electives sufficient to graduate with 120 s.h.

Total Credits in Program 120 s.h.

Minor on Geography

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The Minor in Geography requires students to take two of the following introductory courses (6-7 s.h.):

GEOG06.110	Investigations in Physical Geography (Lab)	4 s.h.

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

Students then select four (4) additional 300 or 400 level geography courses selected in consultation with the minor advisor.

Concentration in Geographical Information Systems [GIS]

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This GIS concentration provides a solid foundation in GIS for students of various majors who are interested in GIS for its analytical and land-based management capabilities.

Students are required to take any one of the following introductory Geography courses to provide a disciplinary foundation:

GEOG06.100	Introduction to Geography and Earth Studies (M/G)
GEOG06.102	Cultural Geography (M/G)
GEOG06.111	World Regional Geography (M/G)

All minors take:

GEOG06.193	Intro to Mapping and Geographic Information Sciences
and GEOG06.360	GIS I

Select three (3) courses from the following list:

GEOG06.308	Remote Sensing
GEOG06.320	Cartography
GEOG06.322	Remote Sensing II
GEOG06.350	Quantitative Methods in Geography
GEOG06.415	GIS II
GEOG06.493	Senior Research Seminar

Concentration in Planning

John Hasse, Advisor
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The planning minor provides a solid foundation in planning for students of various majors who are interested in gaining a background in planning.

Students take one of the following courses:

GEOG06.100	Introduction to Geography and Earth Studies (M/G)
GEOG06.102	Cultural Geography (M/G)
GEOG06.111	World Regional Geography (M/G)

Then select five courses from the following list:

GEOG06.193	Intro to Mapping and Geographic Information Sciences
GEOG06.302	Urban Geography

GEOG06.304	Population Geography
GEOG06.308	Remote Sensing
GEOG06.310	Land Use and Resource Development
GEOG06.313	Transportation Geography
GEOG06.315	Field Studies
GEOG06.326	Geoscience of Natural Disasters
GEOG06.327	New Jersey Applied Planning Practice
GEOG06.328	Environmental / Sustainable Planning
GEOG06.355	Metropolitan and Regional Planning
GEOG06.493	Senior Research Seminar

Minor in Anthropology

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The Minor in Anthropology consists of six 3-credit courses. The first three courses constitute a common core taken by all minors. These are:

ANTH02.202	Cultural Anthropology
ANTH02.221	Human Variation
ANTH02.203	Archaeology

Minors select the remaining three courses in consultation with their minor advisor (whom the student may choose at any point prior to taking the final three courses). Each student will be encouraged to concentrate in a particular subfield of anthropology (cultural, physical or archaeology). Those who have an interest in which no class is offered may elect an independent study or research course as a final course choice. Interested students may elect to take more courses than the minimum required by the minor. If graduate studies in anthropology are anticipated, the student is encouraged to take a minimum of 8 courses.

Certificate and Concentration in Cartography and Geographical Information Systems

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These inter-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:

MIS02.150	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	Intro to Mapping and Geographical Information Sciences
GEOG06.320	Cartography
GEOG06.308	Remote Sensing/Air Photo
GEOG06.310	Land Use & Resource Development
GEOG06.313	Geography of Transportation
GEOG06.315	Field Studies
GEOG06.320	Computer Cartography
GEOG06.350	Quantitative Methods in Geography
GEOG06.355	Metropolitan & Regional Planning
GEOG06.360	Geographical Information Systems I
GEOG06.415	Geographical Information Systems II

Concentration in Urban Studies

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

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

Core Courses

Economics Courses:

ECON04.360	Urban Economics
ECON04.210	Environmental Economics

Geography Courses:

GEOG06.302	Urban Geography
GEOG06.355	Metropolitan and Regional Planning

History Courses:

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

Political Science:

TBA

Sociology Courses:

SOC08.320	Urban Sociology
SOC08.431	Social Psychology of City Life

Disciplinary Clusters

Economics:
Sanae Tashiro, Advisor

ECON04.102	Introduction to Microeconomics
ECON04.302	Intermediate Microeconomics
ECON04.345	Labor Economics
ECON04.215	Current Economic Problems and Policies
ECON04.307	Economic Development

Geography:
John Hasse and Richard Scott, Advisors

GEOG06.193	Intro to Mapping and Geographic Information Science
GEOG06.304	Population Geography
GEOG06.360	Geographic Information Systems I
GEOG06.415	Geographic Information Systems II
GEOG06.310	Land Use and Resource Development
GEOG06.313	Transportation Geography
GEOG06.323	Geography of New Jersey
GEOG06.327	New Jersey Planning Practice
GEOG 06.328	Environmental / Sustainable Planning
GEOG06.355	Metropolitan and Regional Planning Internship

History:
William Carrigan, Advisor

HIST05.101	Western Civilization since 1660
HIST05.151	United States History after 1865
HIST05.329	History of the Gilded Age and Progressive Era
HIST05.377	African American History since 1865
HIST05.351	Modem Japan
HIST05.475	History of New Jersey
HIST05.429	Proseminar in History
HIST05.443	Global Proseminar in History

Note: For both Proseminar and Global Proseminar, approval of Advisor in History and Coordinator of Urban Studies is required and will be contingent upon topic of the course.

Law and Justice:
Michael Weiss, Advisor

LAWJ05.175	Survey of Criminal Justice
LAWJ05.201	Introduction to Courts
LAWJ05.200	Introduction to Corrections
LAWJ05.202	American Police
LAWJ05.255	Criminal Law
LAWJ05.335	Criminal Procedure I
LAWJ05.312	Criminal Procedure II
LAWJ05.395	Incarceration Experience
LAWJ05.274	Criminal Justice & Community Relations
LAWJ05.220	Victimology
LAWJ05.205	Minorities, Crime & Criminal Justice
LAWJ05.322	Illegal Drugs & Crime in America

Political Science:
Bruce Caswell, Advisor

EDPA02.320	Public Administration
EDPA02.410	Public Policy
POSC07.220	State and Local Government
POSC07.323	Politics of Race, Poverty and Welfare in the U.S.
POSC07.324	Black Americans and American Politics
POSC07.340	Civil Rights and Civil Liberties
POSC07.370	Special Topics in Political Science

Note: Approval of Advisor in Political Science and Coordinator of Urban Studies required and contingent upon topic of course.

EDPA02.412	Administrative Law and Regulatory Process

Sociology:
Mark Hutter and Demond Miller, Advisors

SOC08.120	Introduction to Sociology
SOC15.322	Sociology of Population
SOC08.336	Sociology of Education
SOC08.230	Sociology of Minority Groups

Electives:

BIOL01.112	General Biology: Environmental Focus
STAT02.100	Elementary Statistics
STAT02.260	Statistics I
STAT02.261	Statistics II
INTR01.130	Women in Perspective
AFST11.104	Introduction to Africana Studies

Department of History

Joy D. Wiltenburg, Chair
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With faculty specialties ranging from ancient to modern history, covering U.S, Europe, Latin America, East Asia, Africa, Russia, and the Middle East, the History Department offers students the opportunity both to develop an understanding of broad currents in history and to specialize in a particular area. Students learn how to do historical research, analyze and synthesize information, and present their ideas orally and in writing. Majors are also required to take six semester hours of a foreign language.

Students considering a major in history are urged to consult a history advisor early in their academic program in order to build a logical program leading to their goal, be it graduate school, professional school, or post-baccalaureate employment. In addition, students are encouraged to earn up to 15 credits in a semester abroad program sponsored by the University. For further clarifications regarding the program, they may consult the department chairperson.

Student must submit their portfolio on a CD or DVD. It must include your Historical Methods and Seminar paper plus 4 of the fourteen items listed below. Your completed portfolio should have a total of 6 items. For more information about the portfolio requirements, visit the History Department Website, http://www.rowan.edu/history .

History majors must have a minimum 2.0 overall G.P.A. and minimum 2.5 in all history courses to qualify for graduation.

Students should submit the following portfolio materials on a CD-ROM at the end of Seminar:

1. Historical Essay
2. Research Proposal
3. Research Paper
4. Abstract
5. Critical Book Review
6. Peer Assessment
7. Film Review
8. Histographical Essay
9. Periodical Literature
10. Historical Fiction
11. Data Analysis
12. Image Analysis
13. Website Review

Bachelor of Arts in History

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Program Requirements

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Required Courses for the History Degree

Any Economics course from the Social & Behavioral bank
Any Political Science course from the Social & Behavioral bank
Any M/G Geography or Anthropology

ENGL02.116	Readings in Non-Western Lit

Foreign Language I (Foreign Language I and II must be in the same language)
Foreign Language II (Foreign Language I and II must be in the same language)

HIST05.100	Western Civilization to 1660
HIST05.101	Western Civilization Since 1660
or HIST05.120	World History After 1500

Any Level History Elective*

HIST05.306	Historical Methods-Writing Intensive (WI) (required before taking upper level electives)

Five Upper Level History Elective Courses (Two of the five courses must be in global history, Proseminars count as upper level histories)

HIST05.492	Seminar in History (Seniors only)

History Required Courses	48 s.h.
General Education, Rowan Experience, and/or Free Electives	72 s.h.
Total Credits	**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.

The curriculum consists 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 should plan their courses in collaboration with a Department of History advisor in addition to an advisor from their major.

Interdisciplinary Studies Programs

Africana Studies

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Rowan University's Africana Studies Program is a significant component of the Institution's commitment to multidisciplinary education and the inclusion of the study of the experiences of diverse peoples within its academic programs and services. The program offers a Bachelors Degree in Africana Studies and an undergraduate concentration in African American Studies, through cooperative arrangements with about 12 academic departments of the University.

Bachelor of Arts In Africana Studies

Africana Studies is an interdisciplinary major designed to engage undergraduate students in a critical examination of past and contemporary challenges, experiences and contributions of people of African descent and their relations with other groups throughout history. Hence the program is both national and international in scope. The program emphasizes two major goals: (1) discovering, mastering and creating knowledge and (2) using those understandings and skills in service to institutions and communities.

In addition to the foundational or core requirements, students in the major will select a specialization in one of the following areas: African American Studies, African Studies, Afro-Latin American and Caribbean Studies, or Africana Comparative Studies. To maximize their career path options, students will be able to take the Africana Studies Major with a minor in one of the academic disciplines or as a double major.

Graduates with a Bachelors Degree in Africana Studies will have the intellectual, technical, and social competencies to be competitive as applicants for employment and graduate or professional study in the US or abroad in a broad range of fields including: Education, law and justice, business, international affairs, federal and state public services, politics, social work, public administration, library and museum services, health sciences and public health, theatre, psychology and the social sciences, economic development, non-profit management, writing, journalism, ethnic studies, and the arts.

The program promotes regular academic advising and consultation with the program coordinator or other faculty and staff to enable students to follow a clear sequence of courses both in general education and the major. This is especially essential for students pursuing a double major, who will need assistance in fulfilling the requirements of both majors by utilizing the flexibility provided in the current model of general education.

General Education: All students must complete the University General Education Requirements as described on page 257

Rowan Experience: All students must complete the University Rowan Experience as described on page 68

Program Requirements:

Foundational or Core Requirements: 18 s.h.

AFST11.104	Introduction to Africana Studies (Spring)
HIST05.394	Sub-Saharan Africa to 1800
AFST11.304	Africana Social/Political Thought (Spring)
AFST11.305	Research Methods in Africana Studies
AFST11.310	Service Learning Seminar in Africana Studies
AFST11.450	Senior Seminar in Africana Studies

Tracks for Specialization 12 s.h.

Each Africana Studies Major will develop a specialization by selecting a minimum of 12 credit hours of courses in one of the four thematic areas below.

African Studies

ZULU16.101	Elementary Zulu I
ZULU16.102	Elementary Zulu II
ANTH02.311	Peoples & Cultures of Africa
ARAB12.101	Elementary Arabic I
ARAB12.102	Elementary Arabic II

GEOG06.345	Geography of Africa
HIST05.397	Sub-Saharan Africa Since 1800
HIST05.437	20th Century African Nationalism
HIST05.429	Proseminar in History: Women in African History
POSC07.441	Contemporary Problems of Modern Africa
SWHL17.101	Elementary Swahili I
SWHL17.102	Elementary Swahili II
	Special Topics on Africa

African American Studies

COSD01.406	African American Culture in Media
ECON04.225	Women in the Economy
ECON04.360	Urban Economics
ENGL02.216	African American Literature Through Harlem Renaissance
ENGL02.316	African American Literature Since Harlem Renaissance
HIST05.322	Civil War & Reconstruction
HIST05.376	African American History to 1865
HIST05.377	African American History Since 1865
HIST05.422	Women in American History
LAWJ05.205	Minorities, Crime, & Justice
LAWJ05.346	Women, Crime & Criminal Justice
MUSG06.220	The Music of African Americans
MUSG06.115	Growth & Development of Jazz
POSC07.324	Black Americans & American Politics
POSC07.311	Women in American Politics
POSC07.340	Civil Rights and Civil Liberties
POSC07.323	Politics of Race, Poverty & Welfare
PSY01.235	African American Psychology
RTF03.280	African American Film History
RTF03.272	Images/Women in Film
THD08.311	African Influences in American Dance
	Special Topics in African American Studies

Comparative Studies

ECON04.310	Global Economics
ENGL02.116	Readings in Non-Western Literature
ENGL02.200	Women in Literature
GEOG06.111	World Regional Geography
HIST05.120	World History Since 1500
HIST05.304	Islamic Civilization
HIST05.417	Women in Islam
HIST05.413	Comparative Race Relations: S. Afr/Brazil/US
HIST05.425	History of Feminisms
HIST05.441	Imperialism & Colonialism
INTR01.130	Women in Perspective
INTR01.200	Issues in Women's Health
LAWJ05.330	Problems in World Justice
LAWJ05.415	Law & Human Rights
MKT09.379	International Marketing
MUSG06.448	Music in World Cultures

POSC07.230	Comparative Political Systems
POSC07.321	Contemporary World Problems
PSY01.105	Psychology of Ethnic Identity & Community
PSY01.310	Psychology of Racism & Ethnocentrism
PSY01.200	Psychology of Women & Cultural Experience
RTF03.272	Images of Women in Film
SOC08.120	Sociology of Minority Groups
SOC08.330	Sociological Stratification in Contemporary Societies
THD07.301	African, African-American Theatre
	Special Topics in Africana Comparative Studies

Afro-Latin American & the Caribbean Studies

ANTH02.210	Natives of South America
ENGL02.217	U.S. Literature of Latino & Hispanic Peoples
GEOG06.344	Geography of Latin America
HIST05.347	Traditional Latin America
HIST05.350	Modern Latin America
HIST05.409	Latin America Revolution & Reform
HIST05.362	History of Mexico & the Caribbean
HIST05.411	Topics in Latin American History
SPAN05.323	Spanish American Literature
SPAN05.324	Spanish American Civilization & Culture
SPAN05.327	Spanish American Poetry
SPAN05.328	Spanish American Theatre
SPAN05.326	Spanish American Novel
	Special Topics in Afro-Latin Amer/Caribbean Studies

Program Electives 9 s.h.

Students majoring in Africana Studies must elect a minimum of nine credit hours from courses offered under any of the areas above. At least two (2) of these electives must be at the 300 or 400 level.

Other Requirements

In addition to the hours needed to fulfill the Rowan University General Education Requirements, Africana Studies majors must take the following additional credits from the courses listed under the Social and Behavioral Sciences Banks and the History, Humanities and Language Banks.

Courses

Social and Behavioral Sciences	6 s.h.
Foreign/World Language (Zulu, Swahili, Arabic, French, Spanish, or Portuguese)	6 s.h.
Non-Program Electives	8-9 s.h.

Study Abroad: Students will be required to earn between 3 and 15 Credit Hours of a Study Abroad Experience in Africa, the Americas, the Caribbean, or elsewhere in the African Diaspora, during which they can complete course electives in their major to complement their career interests

Students may apply for and undertake a traditional semester or academic year experience within the program that the University offers for study abroad in a number of countries, including Egypt, Ghana, Kenya, the Republic of South Africa, and South and Central America. Students may also participate for course credit in faculty-led two to four-week summer institutes and two-week intersession or mid-year study abroad programs.

Students who are unable to undertake either the semester, year-long, summer or intersession study abroad alternatives for documented reasons, will be able to fulfill the requirement through domestic internships which enables them to approximate some of the important intercultural benefits of international study.

Students who have had travel, work or formal program experience in another country, (for example, within another major) that may be equivalent to the study abroad as outlined above, may apply with appropriate documentation to the Coordinator of Africana Studies for exemption from the requirement.

Grade-Point Average: Students who choose to major and graduate in Africana Studies must have and maintain a cumulative 2.0 Grade-Point Average as a minimum, with no grade lower than a 2.0 in courses in the major.

Free Electives 21 s.h.

Concentration in African American Studies

The African American Studies Concentration consists of interdisciplinary curricular offerings that engage faculty and students in critical analysis, reflection and transformational thinking about African Americans within the framework of the multicultural diversity and global connectedness of American society.

The African American Studies Program dates back to the late 1960s when the Civil Rights Movement across the nation and the Southern New Jersey region led to the establishment of the King Scholar Program (The Educational Opportunity Fund or EOF Program) in the Fall of 1968. Following the offering of the first Black History course by the History Department in 1969 in response to Black student demands, a slow but steady growth in African American and African curricular offerings over the course of the next two decades culminated in the formal establishment of the African American Studies Concentration in 1989.

See the requirements for this concentration listed under the Interdisciplinary Studies Concentrations section of this catalog.

Bachelor of Arts in American Studies

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The American Studies major is a guided interdisciplinary program that combines structure with choice. The Introduction to American Studies (AMST13.201) will help you to synthesize the varying approaches and methods you will master during your college career. You will study in most of the departments in the College of Liberal Arts & Sciences addressing issues in American society, culture, history, and geography.

The program will introduce you to the diversity of peoples who comprise America. Courses such as Contemporary Sociological Theory, American Philosophy, Religion in America, and The American Novel will build upon the foundation in American literature and history that the major provides. The

highlight of every student's career is the Senior Seminar in American Studies (AMST13.402), an intense, discussion-led, 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 best apply to your specific career goals.

Except for free electives, no course can be taken as Pass/Fail and all courses must be completed with a C- or better. Students must either complete the course in Computer Literacy or test out of it by 30 hours. Students who have not completed it by 45 hours will be placed on academic suspension. Students who are not transfers must also take a Rowan Seminar.

The American Studies program is housed in the Department of Philosophy & Religion.

General Education: All students must complete the University General Education Requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Required Courses

- Contemporary Mathematics OR Discrete Math OR Pre-Calculus (this course also satisfies a Mathematics Gen. Ed. Requirement)
- One free elective in Mathematics or Science (this course also satisfies a Math/Science Gen. Ed. Requirement)
- American Government (this course also satisfies an SBS Gen. Ed. Requirement)
- Geography of the U.S. and Canada (this course also satisfies an SBS Gen. Ed. Requirement)
- Introduction to Sociology OR Social Problems (this course also satisfies an SBS Gen. Ed. Requirement)
- United States History to 1865 (this course also satisfies a Humanities Gen. Ed. Requirement)
- United States History Since 1865 (this course also satisfies a Humanities Gen. Ed. Requirement)
- Readings in U.S. Literature (this course also satisfies a History/Humanities/Language Gen. Ed. Requirement and the Rowan Experience broad-based literature requirement)
- History of American Art (this course also satisfies a Rowan Experience in Art Requirement)

Required courses in the major

AMST13.201	Introduction to American Studies
AMST13.402	Senior Seminar in American Studies (this course also satisfies Rowan's Writing Intensive requirement)

A. Core Choices Two courses from among:

ECON04.205	American Economic History *signed permission of the instructor required
PHIL09.325	American Philosophy
POSC07.400	American Political Thought
HIST05.412	Intellectual History of the U.S.
or HIST05.472	Cultural History of the U.S.
HIST05.473	American Military History
HIST05.328	Colonial North America
HIST05.475	History of New Jersery
HIST05.322	Civil War and Reconstruction

HIST05.413	Urban History of the U.S.
HIST05.324	Twentieth Century U.S. History
HIST05.474	U.S. Labor History
HIST05.375	America Since 1945: The Modern Era
HIST05.438	History of the Vietnam War
HIST05.470	Issues in American History
HIST05.301	American Revolution and Early Republic 1775-1820
HIST05.471	History of the American West
HIST05.321	U.S. History 1820-1861
HIST05.407	History of World War II
HIST05.329	Gilded Age and Progressive Era 1877-1914
HIST05.338	America from War to War
HIST05.436	U.S. Home Front 1941-1945

1 course from among:

POSC07.340	Civil Rights & Civil Liberties
POSC07.308	Current Problems in American Politics
SOC08.331	Classical Social Theory
SOC08.332	Contemporary Sociological Theory
LAWJ05.312	Trial Procedure and Supreme Court
LAWJ05.322	Drugs & Crime in America
POSC07.310	American Constitutional Law
PHIL09.240	Philosophy & Society
PHIL09.392	Contemporary Moral Problems
PHIL09.393	Contemporary Moral Problems WI (this course also satisfies Rowan's Writing Intensive requirement)

2 courses from among:

ENGL02.313	U.S. Literature to Realism
ENG02.315	U.S. Literature Since Realism
ENGL02.423	The American Novel
ENGL02.327	Modern American Poetry
THD07.360	Musical Theater
ENGL02.424	American Dramatists
RTF03.372	American Film Directors
ENGL02.322	Literature of the American Renaissance
ENGL02.228	The Modern Short Story
ENGL02.425	Contemporary Literature
ENGL02.301	American English Grammar

B. Gender, Diversity & Class

1 course from among:

PHIL09.329	Philosophy & Gender WI, M/G (this course also satisfies Rowan's Writing Intensive and Multicultural/Global requirements)
PSY01.200	Psychology of Women and Cultural Experience
HIST05.422	Women in American History
RTF03.272	Images of Women in Film
SOC08.493	Gender Roles Seminar
SOC08.370	Sociology of Women in Society

POSC07.311	Women and American Politics M/G (this course also satisfies Rowan's Multicultural/Global requirement)
ENGL02.200	Women in Literature
LAWJ05.346	Women, Crime, & Criminal Justice

1 course from among:

SOC08.230	Sociology of Minority Groups (this course also satisfies Rowan's Multicultural/Global requirement)
POSC07.323	Politics of Race, Poverty & Welfare in the U.S.
ENGL02.216	Afro-American Lit. to the Harlem Renaissance (this course also satisfies Rowan's Multicultural/Global requirement)
ENGL02.316	Afro-American Lit. Since the Harlem Renaissance (this course also satisfies Rowan's Multicultural/Global requirement)
ANTH02.350	Comparative Cultures
ANTH02.310	Indians of North America (this course also satisfies Rowan's Multicultural/Global requirement)
ENGL02.217	U.S. Literature of Latino & Hispanic Peoples *signed permission of the instructor required
REL10.210	Religion in America (this course also satisfies Rowan's Multicultural/Global requirement)
HIST05.376	Afro-American History to 1865
HIST05.377	Afro-American History Since 1865

1 course from among:

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	Socialization of the Child through Adolescence

C. United States and International Relations:

2 courses from among:

HIST05.414	U.S. Diplomatic History I
HIST05.415	U.S. Diplomatic History II
POSC07.320	International Relations
POSC07.421	International Organizations
ECON04.310	Global Economics
POSC07.420	International Law
POSC07.330	Contemporary U.S. Foreign Policy
HIST05.441	Imperialism/Colonialism
ECON04.307	Economic Development (this course also satisfies Rowan's Multicultural/Global requirement)
POSC07.230	Comparative Political Systems
POSC07.321	Contemporary World Problems (this course also satisfies Rowan's Multicultural/Global requirement)
ECON04.320	Contemporary Economic Systems (this course also satisfies Rowan's Multicultural/Global requirement)

GEOG06.303	Political Geography (this course also satisfies Rowan's Multicultural/Global requirement)
SOC08.327	Comparative Education in Sociological Perspective

Bachelor of Arts in Environmental Studies

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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, geography and social sciences, as well as the application of basic science and research methodology to environmental issues are the strengths of the program. The program emphasizes the interdisciplinary aspects of the environment, providing graduates with the necessary background for 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 major has a requirement of 28 s.h. in a common core, including a one-year Senior Seminar project. The 120 s.h. 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

General Education: All students must complete the University General Education Requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience Requirements as described on page 68

Program Requirements

STAT02.260	Statistics I ¿	
PHYS02.150	Physics of Everyday Life ¿	
ANTH02.202	Cultural Anthropology ¿	
ANTH02.221	*or* Human Variation ¿	
ECON04.101	Macroeconomics ¿	
GEOG06.102	Cultural Geography (MG) ¿	
PHIL09.369	Philosophy of Science (WI) ¿	
	Foreign Language Course §	
	Foreign Language Course §	
Scientific Foundations		8 s.h.
CHEM05.102	Chemistry of Everyday Life	
BIOL01.112	General Biology Environmental Focus	
Social Science Foundations		6 s.h.
GEOG06.193	Introduction to the Mapping and Geographic Information Science	
SOC08.120	Intro to Sociology	
or SOC08.221	Social Problems	
Common Core		28 s.h.
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	
ENST94.400	Environmental Impact Assessment	
GEOG06.360	Geographic Information Systems (GIS) I	
ENST94.401	Senior Seminar in Environmental Studies I ¢	
ENST94.402	Senior Seminar in Environmental Studies II ¢	

Environmental Studies Electives (At least one course from each bank) 18 s.h.
Courses not on these lists may also be counted. See the Program Director.

Natural Science Bank

CHEM05.301	Chemistry of the Environment
BIOL20.330	Environmental Science *
GEOG06.305	Climatology
GEOG06.325	Geomorphology
GEOG06.103	Geology I
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 *

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 s.h.
Chosen with the help of advisor and with consideration for future educational and career plans.

Program Total **120 s.h.**

¿ Can be counted towards General Education requirements.
§ Both courses must be in the same language.
¢ An internship may also fulfill this requirement
* The Prerequisite for these courses is Biology 4

Bachelor of Arts in Liberal Studies: Humanities/Social Science

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The Liberal Studies: Humanities/Social Science major is a quality liberal arts program that offers students the opportunity to pursue multiple areas of study in the humanities and social sciences. The ability to combine diverse areas of interest is highly desired by traditional as well as non-traditional students to enrich their lives and prepare for productive rewarding careers. This structured yet versatile major provides an excellent interdisciplinary education for increased marketability upon graduation.

Bachelor of Arts in Liberal Studies: Humanities/Social Science

Program Requirements

Major courses will be completed in a minimum of two program areas. Students must choose one subject from approved Program A Sequences and one from approved Program B Sequences or two may be chosen from Program A Sequences. A minimum number of Free Electives is also required and dependent upon the combined total credits earned in the Program Sequences. The Free Elective requirement may also be completed as a third Program Sequence. Courses used to fulfill the requirements of Program A Sequences may not be used to fulfill requirements for Program B Sequences. Courses eligible for Program A Sequence requirements but not used to fulfill that requirement may be used to fulfill Program B Sequence requirements. Courses used toward Program A and B Sequence completion are not eligible to complete General Education Requirements.

General Education: All students must complete the University General Education Requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Other Requirements

Additional History/Humanities/Language courses	6 s.h
Additional Social and Behavioral Science courses	6 s.h.
Additional Non-Program courses	11 s.h.

The Liberal Studies: Humanities/Social Science major promotes regular academic advising and consultation with the program coordinator for students to follow a clear sequence of courses both in general education and the major Program Sequences for degree completion.

Program Sequence A Choices:

Applied Spanish

Required credits **18-21 s.h.**
Dependent upon previously completed prerequisite and/or placement exam (12-15 credits must be earned at Rowan University)

Required Pre-Requisite Courses: SPAN05.201 Spanish 3 or placement exam.

Introductory Level Courses		3-6 s.h.
SPAN05.211	Spanish Reading and Conversation	
	or placement exam results indicating placement into:	
SPAN05.212	Spanish Reading and Composition	
Advanced Level Courses		12 s.h.
Choose four courses from:		
SPAN05.300	Spanish Phonetics	
SPAN05.305	Oral Spanish	
SPAN05.312	Spanish for Business	
SPAN05.313	Spanish for Medical Personnel	
SPAN05.340	Intro to Spanish Translation	
SPAN05.411	Advanced Spanish Conversation	
Senior Level Capstone		3 s.h.
SPAN05.409	Advanced Spanish Grammar WI	

Cartography & Geographic Information Systems

Required credits **21 s.h.**
(18 credits must be earned at Rowan University)

Introductory Level Courses		3 s.h.
GEOG06.193	Introduction to Mapping and Geographical Information Sciences	
Advanced Level Courses		15 s.h.
GEOG06.360	Geographic Information Systems I	
GEOG06.415	Geographic Information Systems II	
GEOG06.308	Remote Sensing/Air Photo Interpretation	
GEOG06.350	Quantitative Methods in Geography	
GEOG06.320	Cartography	
Senior Level Capstone		3 s.h.
GEOG06.493	Senior Seminar WI	

English

Required credits **21 s.h.**
(15 credits must be earned at Rowan University)

Introductory Level Courses 9 s.h.

ENGL02.101	Literary Studies for English Majors
ENGL02.313	US Literature to Realism
ENGL02.315	US Literature since Realism

Advanced Level Courses 9 s.h.

ENGL02.350	Shakespeare II

And choose two courses from:

ENGL02.316	African-American Literature since Harlem Renaissance
ENGL02.327	Modern American Poetry
ENGL02.301	American English Grammar
ENGL02.423	American Novel

Senior Level Capstone 3 s.h.

ENGL02.393	Seminar I WI

History

Required credits **18 s.h.**
(12 credits must be earned at Rowan University)

Introductory Level Courses 6 s.h.
Choose two courses from:

HIST05.150	US History to 1865
HIST05.151	US History since 1865
HIST05.100	Western Civilization to 1660
HIST05.101	Western Civilization since 1660
HIST05.120	World History to 1500

Advanced Level Courses 9 s.h.

HIST05.306	Historical Methods WI

Choose one 300/400 level Global History Elective
Choose one 300/400 level History Elective

Senior Level Capstone 3 s.h.

HIST05.492	Seminar in History WI

Law & Justice Studies

Required credits **21 s.h.**
(12 credits must be earned at Rowan University)

Introductory Level Courses 3-9 s.h.

LAWJ05.175	Survey of Criminal Justice

And choose up to two (2) courses from:

LAWJ05.201	Intro to Courts
LAWJ05.255	Criminal Law
LAWJ05.202	American Police

LAWJ05.200	Introduction to Corrections
LAWJ05.120	Introduction to Security
LAWJ05.285	Criminal Investigation
LAWJ05.290	Forensic Law
LAWJ05.276	Parole/Probation & Corrections
LAWJ05.274	Criminal Justice and Community Relations

Advanced Level Courses 9-15 s.h

Choose three to five courses from:

LAWJ05.369	Theories of Crime & Criminality
LAWJ05.380	Criminal Justice Research
LAWJ05.401	Law & Human Rights
LAWJ05.335	Criminal Procedure I
LAWJ05.312	Criminal Procedure II
LAWJ05.361	Introduction to Juvenile Justice
LAWJ05.320	Civil Aspects of Law Enforcement
LAWJ05.310	Criminal Jurisprudence
LAWJ05.305	Law and Evidence
LAWJ05.367	Theories of Justice
LAWJ05.205	Minorities and Criminal Justice
LAWJ05.346	Women and Criminal Justice
LAWJ05.315	Criminal Justice and Social Conflict
LAWJ05.330	Problems in World Justice
LAWJ05.337	Treatment of the Offender
LAWJ05.342	Counseling and Guidance of the Offender
LAWJ05.395	Incarceration Experience

Senior Level Capstone 3 s.h.

Choose one course from:

LAWJ05.479	Seminar in Police Science WI
LAWJ05.469	Seminar in Law WI
LAWJ05.465	Seminar in Social Justice WI
LAWJ05.461	Seminar in Corrections WI

Philosophy

Required credits **21 s.h.**

(12 credits must be earned at Rowan University)

Introductory Level Courses 6-9 s.h.

PHIL09.120	Introductory to Philosophy
or PHIL09.121	Introductory to Philosophy WI

And choose one or both of the following:

PHIL09.110	Logic of Everyday Reasoning
PHIL09.130	Introduction to Symbolic Logic

Advanced Level Courses 9-12 s.h.

And choose two or three philosophy courses at the 200, 300 or 400 level

Senior Level Capstone 3 s.h.

PHIL09.440	Selected Topics in Philosophy

Political Science

Required credits **21 s.h.**
(12 credits must be earned at Rowan University)

Introductory Level Courses 3-6 s.h.

POSC07.110	American Government (required)
POSC07.200	Survey of Western Political Theory (optional)

Advanced Level Courses 12-15 s.h.

POSC07.360	Methodology and Statistics in Political Science Research

And choose three or four Political Science courses at the 200, 300 or 400 level, with the exception of EDPA02.490 Public Service Internship which is ineligible for this Program Sequence.

Senior Level Capstone 3 s.h.

POSC07.489	Seminar in Political Science WI

Sociology
Required credits **18 s.h.**
(12 credits must be earned at Rowan University)

Introductory Level Courses 3 s.h.

SOC08.120	Introduction to Sociology

And choose one course from:

SOC08.221	Social Problems
SOC08.230	Minority Groups
SOC08.223	Sociology of Social Welfare
SOC08.220	Sociology of the Family
SOC08.269	Self and Society

Advanced Level Courses 9 s.h.

SOC08.331	Classical Social Theory

And choose two courses from:

SOC08.401	Human Service Organizations
SOC08.323	Sociology of Social Work
SOC08.339	Sociological Practice
SOC08.333	Sociology of Work
SOC08.336	Sociology of Education
SOC08.370	Sociology of Women
SOC08.400	Environment, Policy and Society
SOC08.325	Deviant Behavior and Social Control
SOC08.431	Social Psychology of City Life
SOC08.323	Sociology of Crime and Criminal Law
SOC08.330	Social Stratification
SOC08.440	Selected Topics
SOC08.320	Urban Sociology

Senior Level Capstone 3 s.h.

SOC08.427	Sociological Imagination WI

Women's Studies

Required credits **18 s.h.**
(12 credits must be earned at Rowan University)

Introductory Level Course 3 s.h.

INTR01.130	Women in Perspective

Advanced Level Courses 12 s.h.
Choose four (4) courses from:

HIST05.425	History of Feminism
HIST05.422	Women in American History
SOC08.370	Sociology of Women
SOC08.493	Seminar on Gender Roles
ENGL02.200	Women in Literature
LAWJ05.346	Women, Crime and Criminal Justice
ANTH02.322	Sex and Sex Roles in Anthropological Perspective

And choose a minimum of one writing intensive (WI) from:

PHIL09.329	Philosophy and Gender WI
PHIL09.346	Feminist Ethics WI

Or any Selected Topics WI (course number varies) course approved by the Women's Studies Council

Senior Level Capstone 3 s.h.

INTR01.430	Women, Sex and Power: Capstone Seminar in Women's Studies

Or any other senior level seminar accepted at the discretion of the Women's Studies Council

Program Sequence B Choices:

Advertising in the Workplace

Required credits **21 s.h.**
(12 credits must be earned at Rowan University)

Introductory Level Course 3 s.h.

CMS04.210	Mass Media

Advanced Level Courses 15 s.h.

ADV04.330	Introduction to Advertising
ADV04.331	Print Media
ADV04.430	Electronic Media Copywriting
PR06.310	Introduction to Public Relations and Advertising Research
ADV04.360	Integrated Marketing Communication

Senior Level Capstone 3 s.h.

ADV04.432	Media Planning

Business

Required credits **21 s.h.**
(9 credits must be earned at Rowan University)

Introductory Level Courses 9 s.h.

MGT98.242	Legal Environments of Business
ACC03.210	Principles of Accounting I

MKT09.200	Principles of Marketing	
Advanced Level Courses		9 s.h.
ACC03.211	Principles of Accounting II	
MGT06.300	Organizational Behavior	
And choose one course from:		
MIS02.334	Management Information Systems	
FIN04.300	Principles of Finance	
MGT06.305	Operations Management	
Senior Level Capstone		3 s.h.
BUS01.303	Business Practicum	

Computer Science

Required credits		**24 s.h.**
(9 credits must be earned at Rowan University)		
Introductory Level Courses		12 s.h.
Choose one course from:		
CS04.113	Introduction to Object Oriented Programming	
CS04.103	Computer Science and Programming	
And complete the following two courses:		
CS04.114	Object Oriented Programming and Data Abstraction	
CS04.222	Data Structures and Algorithms	
Advanced Level Courses		9 s.h.
Choose three courses from:		
CS06.205	Computer Organization	
CS07.210	Foundations of Computer Science	
CS04.315	Programming Languages	
CS07.340	Design and Analysis of Algorithms	
CS06.310	Principle 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	
CS07.450	Artificial Intelligence	
CS06.410	Data Communications and Networking	
CS04.380	Object Oriented Design	
CS04.392	System Programming and Operating System Internals	
CS01.205	Computer Laboratory Techniques	
CS04.305	Web Programming	
Senior Level Capstone		3 s.h.
Choose one course from:		
CS99.300	Computer Field Experience	
CS07.321	Software Engineering I	
CS04.400	Senior Project	

Dance

Required Credits		24 s.h.
Introductory Level Courses		6 s.h.
THD08.135	Elements of Dance	
THD08.140	Dance Improvisation I	
THD08.141	Dance Improvisation II	
Advanced Level Courses		18 s.h.
THD08.465	Dynamics of Human Movement	
THD08.225	Dance Composition I	
And choose 12 s.h. from:		
THD08.236	Modern Dance I	
THD08.237	Modern Dance II	
THD08.377	Modern Dance III	
THD08.378	Modern Dance IV	
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	
THD08.202	Tap Dance I	
THD08.203	Tap Dance II	
THD08.222	Dance-Musical Theatre	
THD08.146	World Dance Forms	
THD08.436	Dance History	
THD08.315	Creative Dance for Children	
THD08.337	Choreography	
Senior Level Capstone		0 s.h.
THD07.460	Senior Project in Theatre Arts	

Journalism

Required credits		**21 s.h.**
(15 credits must be earned at Rowan University)		
Introductory Level Course		3 s.h.
JRN02.205	Journalism Principles and Practices	
Advanced Level Courses		15 s.h.
JRN02.310	News Reporting I	
JRN02.318	Enterprise Journalism	
And choose three courses from:		
JRN02.320	Broadcast Journalism Radio	
JRN02.341	Broadcast News Writing	
JRN02.335	Communication Law	
JRN02.411	Copyediting	
JRN02.313	Magazine Article Writing	
JRN02.319	Media Ethics	
JRN02.312	Newspaper Feature Writing	

JRN02.311	News Reporting II	
JRN02.321	Online Journalism I	
Senior Level Capstone		3 s.h.
JRN02.410	Problems in Contemporary Journalism	

Mathematics

Required credits **22 s.h.**
(9 credits must be earned at Rowan University)

Introductory Level Courses 8 s.h.

MATH01.130	Calculus I
MATH01.131	Calculus II

Advanced Level Courses 11 s.h.
Choose eleven (11) credits from: Rowan University courses offered by the Mathematics Department at the 200 (or higher) level with the exception of MATH01.202 Intro to Geometry and STAT02.260 Statistics I, which are not eligible for the Mathematics Liberal Studies Program Sequence

Senior Level Capstone 3 s.h.

Choose one course from: Rowan University courses offered by the Mathematics Department at the 300 (or higher) level

Physical Sciences-Chemistry

Required credits **23-24 s.h.**
(12 credits must be earned at Rowan University)

Introductory Level Course 4 s.h.

CHEM06.100	Chemistry I

Advanced Level 16 s.h.

CHEM06.101	Chemistry II
CHEM07.200	Organic Chemistry I
CHEM07.201	Organic Chemistry II
CHEM09.250	Quantitative Analysis

Senior Level Capstone 3-4 s.h.
Choose Chemistry course that extends student knowledge beyond the advanced level courses listed above and is approved by the Program Sequence Advisor

Physical Sciences-General (Chemistry & Physics)

Required credits **24 s.h.**
(8 credits must be earned at Rowan University)

Introductory Level Course 8 s.h.

CHEM06.100	Chemistry I

And choose one course from:

PHYS02.200	Introductory Mechanics
PHYS02.202	Physics I (No Calc)

Advanced Level Courses 8 s.h.

CHEM06.101	Chemistry II

And choose one course from:

PHYS02.201	Introductory Electricity and Magnetism	
PHYS02.203	Physics II (No Calc)	

Senior Level Capstone 8 s.h.

PHYS02.300	Modern Physics	
CHEM09.250	Quantitative Analysis	

Physical Sciences-Physics

Required credits **20 s.h.**
(8 credits must be earned at Rowan University)

Introductory Level Course 4 s.h.

PHYS02.150	Physics of Everyday Life	

Advanced Level Courses 12 s.h.
Choose one course from:

PHYS02.200	Introductory Mechanics	
PHYS02.202	Physics I (No Calc)	

And choose one course from:

PHYS02.201	Introductory Electricity and Magnetism	
PHYS02.203	Physics II (No Calc)	

And choose one course from:

ASTR11.241	Astronomy and Astrophysics	
PHYS02.305	Optics and Light	

Senior Level Capstone 4 s.h.

PHYS02.300	Modern Physics	

Physics

Required credits **18-19 s.h.**
(6 credits must be earned at Rowan University)

Introductory Level Course 4 s.h.

PHYS02.200	Introductory Mechanics	

Advanced Level Courses 11-12 s.h.

PHYS02.201	Inroductory Electricity and Magnetism	
PHYS02.300	Modern Physics	

And choose one course from:

PHYS02.315	Analytical Mechanics	
PHYS02.430	Electricity and Magnetism	
PHYS02.401	Quantum Mechanics	
PHYS02.387	Statistical Physics	
PHYS02.305	Optics and Light	

Senior Level Capstone 3 s.h.
Choose one course from:

PHYS02.440	Advanced Laboratory	
PHYS02.311	Physics Research	

Public Relations in the Workplace (12 credits must be earned at Rowan University)

Required Credits		18 s.h.
Introductory Level Course		3 s.h.
PR06.350	Intro to Public Relations	
Advanced Level Courses		
ADV04.330	Introduction to Advertising	
PR06.310	Introduction to Public Relations and Advertising Research	
PR06.301	Basic Public Relations Writing	
ADV04.360	Integrated Marketing Communication	
Senior Level Capstone		3 s.h.
PR99.362	Public Opinion	

Theatre

Required credits		22 s.h.
Introductory Level Courses		7 s.h.
THD07.111-.116	Colloquium I and II	
THD07.201	Intro to Theatre and Dance	
THD07.105	Intro to Performace	
Advanced Level Choose 12 s.h. from:		12 s.h.
THD07.230	Stagecraft I	
THD07.232	Stagecraft II	
THD08.140	Dance Improvisation I	
THD08.141	Dance Improvisation II	
THD07.235	Acting I	
THD07.236	Acting II	
THD07.339	Theatre History to 1700	
THD07.340	Theatre History 1700-1956	
THD07.440	Contemporary World Theatre	
THD08.436	Dance History	
THD07.203	Costuming I	
THD08.436	Costuming II	
THD07.310	Foundation of Theatrical Design	
THD08.237	Modern Dance II	
THD08.377	Modern Dance III	
THD08.378	Modern Dance IV	
THD08.225	Dance Composition I	
THD08.337	Choreography	
THD07.430	Directing	
Senior Level Capstone		3 s.h.
THD07.440	Contemporary World Theatre	

Urban Studies

Required Credits (12 credits must be earned at Rowan University)		**18 s.h.**
Introductory Level Courses Choose one or two courses from:		3-6 s.h.

HIST05.151	United States History since 1865
INTR01.130	Women in Perspective
SOC08.120	Introduction to Sociology
ECON04.102	Intro to Economics-Micro
GEOG06.193	Intro to Mapping and Geographic Information Systems

Advanced Level Courses 9-12 s.h.

ECON04.360	Urban Economics
ECON04.210	Environmental Economics
GEOG06.302	Urban Geography
GEOG06.355	Metropolitan and Regional Planning
HIST05.334	Urban History of the US
HIST05.474	US Labor History
SOC08.320	Urban Sociology
SOC08.431	Social Psychology of City Life

Senior Level Capstone 3 s.h.

Choose one course from:

GEOG06.355	Metropolitan and Regional Planning Internship
HIST05.474	US Labor History

Or other senior level course approved by Urban Studies Coordinator and the Liberal Studies: Humanities/Social Science Board.

Total credits for B.A. in Liberal Studies: Humanities/Social Science 120 s.h.

Bachelor of Arts in Liberal Studies: Math/Science

Karen Heinz, Coordinator
Math Department
Robinson Hall
856.256.4500 Ext. 33436
heinz@rowan.edu

The Math/Science specialization of the Liberal Studies major is an interdisciplinary program in mathematics, biological science, earth science, chemistry, computer science, physics, and psychology. The specialization is structured to offer students introductory, synthesizing, and culminating experiences, as is recommended by the Association of American Colleges and Universities. The specialization requires both lower and upper level courses that build on the University's general education and Rowan experience requirements.

Program Requirements

General Education: All students must complete the University General Education Requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Required Courses for the Liberal Studies: Math/Science Degree

PSY01.106	Psychology of Scientific Thinking
CHEM05.102	Chemistry of Everyday Life
PHYS02.150	Physics of Everyday Life
PHIL09.110	Logic of Everyday Reasoning

ASTR17.110	Principles of Earth Science
BIOL01.105	Essentials of Biology
MATH03.150	Discrete Math
MATH01.201	Structures of Math
CS01.200	Computing Environments
STAT02.260	Statistics I
ASTR11.221	Exploration of the Solar System
MATH03.305	Patterns in Nature I: Visual Geometry
MATH03.315	Patterns in Nature II: Projects in Calculus
CHEM05.301	Chemistry of the Environment
BIOL20.401	Principles of Ecology
INTR02.492	Math/Science Senior Seminar

Total Credits in Program 120 s.h.

Department of Law and Justice Studies

Dr. Michael S. Weiss, Chair
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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.

Bachelor of Arts in Law and Justice Studies

Students are required to earn a C- or better in all Law and Justice Studies major courses.
Students are also required to earn a C- or better in the following required courses:

PHIL09.110	The Logic of Everyday Reasoning
or PHIL09.241	Philosophy and Society
SOC08.221	Social Problems
PSY01.106	Psychology of Scientific Thinking
or PSY01.107	Essentials of Psychology
POSC07.110	American Government
or POSC07.100	Introduction to Government & Politics

No courses in which the student has earned a grade of less than C- can be applied towards completing 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: All students must complete the University General Education Requirements as described on page 257

The Rowan Experience: All students must complete the University General Education Requirements as described on page 68

Other Required Courses 18 s.h.

SOC08.221	Social Problems
POSC07.110	American Government
or POSC07.100	Introduction to Government and Politics
PHIL09.110	The Logic of Everyday Reasoning
or PHIL09.241	Philosophy and Society
PSY01.106	Psychology of Scientific Thinking
or PSY01.107	Essentials of Psychology

Outside Free Electives 23 s.h.

Note: It is strongly recommended that the student consult a faculty advisor for assistance in making these choices.

Major Requirements 36 s.h.

Students must take a minimum of 36 semester hours, including 24 semester hours of core course requirements and 12 semester hours of electives within the major.

Required Core Courses 24 s.h.

LAWJ05.175	Survey of Criminal Justice
LAWJ05.255	Criminal Law
LAWJ05.356	Criminal Justice Internship I
LAWJ05.369	Theories of Crime & Criminality
LAWJ05.380	Criminal Justice Research
LAWJ05.401	Law and Human Rights
LAWJ05.469	Seminar WI

One of the following:

LAWJ05.202	American Police
LAWJ05.201	Intro Courts
LAWJ05.200	Intro Corrections

Note: Criminal Justice Internship - LAWJ05.356: Under special and unusual circumstances, this course maybe 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
LAWJ05.335	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
LAWJ05.325	Comparative Criminal Justice
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

Dr. Christine Saum, Advisor
Wilson Hall
856.256.4500, x3541
saum@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
LAWJ05.401	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

LAWJ05.202	American Police (required)

Plus 9 s.h. from these courses:

LAWJ05.201	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)

Plus 9 s.h. from these courses:

LAWJ05.201	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	*or* Minorities, Crime and Criminal Justice

Plus 9 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

LAWJ05.200	Introduction to Corrections (required)

Plus 9 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

E. General Law and Justice Minor All students are required to complete the following five courses:

LAWJ05.202	American Police
LAWJ05.201	Introduction to Courts
LAWJ05.200	Introduction to Corrections
LAWJ05.369	Theories of Crime and Criminality
LAWJ05.401	Law and Human Rights

The remaining 6 s.h. are student's choice to be taken from other course offerings of the department.

Total semester hours for Minor program **21 s.h.**

Department of Mathematics

Hieu D. Nguyen, Chair
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The Department offers a Bachelor of Arts and a Bachelor of Science 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, operations research, analysis, algebra, discrete mathematics, 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.

Bachelor of Arts in Mathematics

The Mathematics major consists of 120 semester hours. The major requires students to take courses in logic, physics, computer science and applied and theoretical mathematics. Students in consultation with faculty advisors can construct flexible and comprehensive programs.

The program prepares students to find careers in business, industry, government or education in positions such as actuaries, statisticians, analysts or teachers.

Three years of high school mathematics are required for admission; a fourth year of mathematics and at least one programming course is highly recommended. Advanced placement credit is accepted; waivers are available.

Majors must pass all required and restricted elective courses needed for graduation with no grade lower than a C-.

General Education: All students must complete the University General Education Requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

A. Required Courses (may also fulfill General Education Requirements)

MATH03.150	Discrete Mathematics
PHYS02.200	Introductory Mechanics
PHYS02.201	Introduction to Electricity and Magnetism
CS01.104	Introduction to Scientific Programming
PHIL09.130	Introduction to Symbolic Logic

Math majors are also required to complete 7 s.h. of Non-Program courses beyond the 6 s.h. requirement needed to fulfill the Rowan University General Education requirement.

B. Required Courses in the Major

Core Courses:

MATH01.130	Calculus I
MATH01.131	Calculus II
MATH01.230	Calculus III
MATH01.210	Linear Algebra
MATH01.231	Ordinary Differential Equations
MATH01.330	Introduction to Real Analysis I
MATH01.340	Modern Algebra I
STAT02.360	Introduction to Probability & Statistics I
MATH01.498	Mathematics Seminar (WI) (satisfies Writing Intensive requirement)

Restricted Electives Nine (9) s.h. selected from the following:

MATH01.205	Technological Tools for Discovering Math
MATH01.310	College Geometry
MATH01.331	Introduction to Real Analysis II
MATH01.332	Numerical Analysis
MATH01.341	Modern Algebra II
MATH01.352	Theory of Numbers
MATH01.354	Introduction to Topology
MATH01.386	Introduction to Partial Differential Equations
MATH01.410	History of Mathematics
MATH01.430	Introduction to Complex Analysis
STAT02.361	Introduction to Mathematical Statistics
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.

Bachelor of Science in Mathematics

The B.S. in Mathematics consists of 120 semester hours. The major requires students to take courses in logic, physics, computer science, and applied and theoretical mathematics.

The Bachelor of Science degree in mathematics is, first of all, designed to give the increasing number of our mathematics majors that do not intend to be teachers the opportunity to prepare more thoroughly for graduate work in mathematics and other disciplines, such as engineering, the physical sciences, computer science, and other areas requiring extensive mathematical training. The requirements for this degree are also flexible enough so that students intending to seek employment in business, industry, or government can pursue courses of study that will allow them to enter their professions familiar with more of the relevant mathematics. The program is designed to allow students to study the mathematics that they will need with flexibility, breadth, and depth.

At least a 3.0 GPA in Calculus I, Calculus II, and Linear Algebra is required for admission. Majors must pass all required and restricted elective courses needed for graduation with no grade lower than a C-.

General Education: All students must complete the University General Education Requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

A. Required Courses (may also fulfill General Education Requirements)

MATH03.150	Discrete Mathematics
PHYS02.200	Introductory Mechanics
PHYS02.201	Introduction to Electricity and Magnetism
CS01.104	Introduction to Scientific Programming
PHIL09.130	Introduction to Symbolic Logic

Math majors are also required to complete 7 s.h. of Non-Program courses beyond the 6 s.h. requirement needed to fulfill the Rowan University General Education requirement.

B. Required Courses in the Major

Core Courses

MATH01.130	Calculus I
MATH01.131	Calculus II
MATH01.230	Calculus III
MATH01.210	Linear Algebra
MATH01.231	Ordinary Differential Equations
MATH01.330	Introduction to Real Analysis I
MATH01.340	Modern Algebra I
STAT02.360	Introduction to Probability & Statistics I
MATH01.430	Introduction to Complex Analysis
MATH01.498	Mathematics Seminar (WI) (satisfies Writing Intensive requirement)

Restricted Electives: Twenty-seven (27) s.h. selected from the following:

MATH01.205	Technological Tools for Discovering Math
MATH01.310	College Geometry
MATH01.331	Introduction to Real Analysis II
MATH01.332	Numerical Analysis
MATH01.341	Modern Algebra II
MATH01.352	Theory of Numbers
MATH01.354	Introduction to Topology
MATH01.386	Introduction to Partial Differential Equations
MATH01.410	History of Mathematics
MATH01.421	Mathematics Field Experience
STAT02.361	Introduction to Mathematical Statistics
STAT02.371	Design of Experiments I
STAT02.372	Design of Experiments II
MATH03.400	Applications of Mathematics
MATH03.411	Deterministic Models in Operations Research
MATH03.412	Stochastic Models in Operations Research

A maximum of two courses from the following list can be counted as restricted electives toward the B.S. in Mathematics:

CHEM08.401	Physical Chemistry I
CHEM08.402	Physical Chemistry II

CS07.340	Design and Analysis of Algorithms
CS07.422	Theory of Computing
PHYS02.300	Modern Physics
PHYS02.315	Analytical Mechanics
PHYS02.387	Statistical Physics
PHYS02.401	Quantum Mechanics I
PHYS02.430	Electricity & Magnetism I

Total Credits in Program: **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

Electives Two courses (at least 6 semester hours) chosen from:

MATH01.231	Differential Equations
MATH01.310	College Geometry
MATH01.330	Introduction to Real Analysis I
MATH01.331	Introduction to Real Analysis II
MATH01.332	Introduction to Numerical Analysis
MATH01.340	Modern Algebra I
MATH01.341	Modern Algebra II
MATH01.352	Theory of Numbers
MATH01.354	Topology
MATH01.386	Introduction to Partial Differential Equations
MATH01.430	Introduction to Complex Analysis
STAT02.360	Probability and Random Variables
STAT02.361	Mathematical Statistics
MATH03.400	Applications of Mathematics
MATH03.411	Deterministic Models in Operations Research
MATH03.412	Stochastic Models in Operations Research

Track 2 (Engineering)

Required courses: 16 s.h.

MATH01.130	Calculus I
MATH01.131	Calculus II
MATH01.235	Math/Eng. Analysis I
MATH01.236	Math/Eng. Analysis II

Electives Two courses (at least 6 s.h.) chosen from:

MATH01.231	Differential Equations
MATH01.310	College Geometry
MATH01.330	Introduction to Real Analysis I
MATH01.331	Introduction to Real Analysis II
MATH01.332	Introduction to Numerical Analysis
MATH01.340	Modern Algebra I
MATH01.341	Modern Algebra II
MATH01.352	Theory of Numbers
MATH01.354	Topology
MATH01.386	Introduction to Partial Differential Equations
MATH01.430	Introduction to Complex Analysis
STAT02.360	Probability and Random Variables
STAT02.361	Mathematical Statistics
MATH03.400	Applications of Mathematics
MATH03.411	Deterministic Models in Operations Research
MATH03.412	Stochastic Models in Operations Research

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 Random Variables
MATH03.400	Applications of Mathematics
CS01.xxx	One course in Computer Science (Not CS01.100)

Elective courses (one): 3 s.h.

MATH01.430	Introduction to Complex Analysis
STAT02.361	Mathematical Statistics
MATH03.411	Deterministic Models in Operations Research
MATH03.412	Stochastic Models in Operations Research
PHYS02.315	Analytical Mechanics

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 actuarial exam P/1, and the training necessary to teach AP statistics. It consists of 18 credit hours. Nine hours of required courses and nine hours of electives as listed below:

Required courses:		9 s.h.
STAT02.260	Statistics I	
STAT02.261	Statistics II	
STAT02.360	Probability and Random Variables	
Electives:		9 s.h.
STAT02.361	Mathematical Statistics	
STAT02.371	Statistical Design of Experiments I	
STAT02.372	Statistical Design of Experiments II	
MATH03.411	Deterministic Models in Operations Research	
MATH03.412	Stochastic Models in Operations Research	

Department of Philosophy and Religion Studies

Youru Wang, Chair
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856.256.4077
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The study of philosophy and religion acquaints students with some of the world's great intellectual, cultural and religious traditions, equips them with skills in critical thinking, and engages them in reflection on values, ideas and practices crucial to the modern world. Students graduating with a major in these disciplines are well prepared for a variety of careers, as well as for admission to graduate study in Philosophy or in Religion Studies. They also regularly score in the top percentiles on various graduate admission tests, including the Graduate Record Examination, the Law School Admission Test, and the Graduate Management Admission Test.

The department offers an interdisciplinary Bachelor of Arts in Philosophy and Religion Studies, with specializations in either Philosophy or Religion Studies. All majors get a foundation in both disciplines by taking Introduction to Philosophy and Introduction to Religion Studies, and must take at least one additional course from the departmental discipline in which they are not specializing, as well as the interdisciplinary Senior Seminar in Philosophy and Religion Studies.

Other department programs include a minor in Philosophy, a concentration in Philosophy and Religion Studies, and a concentration in Ethics.

Bachelor of Arts in Philosophy and Religion Studies

Program Requirements

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Specialization in Philosophy

David Clowney, Advisor
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856.256.4211
clowney@rowan.edu

Foundational requirements: **27 s.h.**

GEOG06.111	World Regional Geography

(This also counts as a Social and Behavioral Sciences General Education course.)

HIST05.100	Western Civilization to 1660
or HIST05.101	Western Civilization since 1660
or HIST05.120	World History since 1500

(Any of these courses also counts as a Humanities General Education course.)

PHIL09.120	Introduction to Philosophy
or PHIL09.121	Introduction to Philosophy - WI
REL10.100	Introduction to Religion Studies
PHIL09.110	Logic of Everyday Reasoning
or PHIL09.130	Introduction to Symbolic Logic
PHIL09.250	Introduction to Ethics
or PHIL09.251	Introduction to Ethics WI
PHIL09.211	World Philosophy I
PHIL09.213	World Philosophy II
PHIL09.370	Epistemology
or PHIL09.371	Epistemology
or PHIL09.226	Philosophy of Mind
or PHIL09.227	Philosophy of Mind - WI

Mid-level requirements: 15 s.h.

PHIL09.372	Topics in the History of Philosophy (may be taken more than once)

Three 300+ level Philosophy (PHIL 09) electives 9 s.h.

One 200+ level Religion Studies course or one interdisciplinary Philosophy and Religion Studies (PHRE 11) course (e.g., Asian Thought, Philosophy of Religion, or Selected Topics in Philosophy and Religion Studies)(3 s.h.)

Service learning component (not for credit)
Arranged by consultation between the departmental advisor, the student, and the Office of Service Learning and Volunteerism.

Capstone requirements 3 s.h.

PHRE11.490	Senior Seminar in Philosophy and Religion Studies

Portfolio (not for credit) In consultation with his or her advisor, the student prepares a portfolio of best work from his or her work in the department, together with reflections on the service learning experience and on his or her progress in the major.

Total Departmental Requirements:	45 s.h.
Total General Education, Rowan Experience, and electives:	75 s.h.
Total Credits in Program:	**120 s.h.**

Specialization in Religion Studies

Youru Wang, Advisor
Edgar F. Bunce Hall, Suite 315
856.256.4077
wang@rowan.edu

Foundational requirements: 24 s.h.

GEOG06.111	World Regional Geography

(This also counts as a Social and Behavioral Sciences General Education course.)

HIST05.100	Western Civilization to 1660

(This also counts as a Humanities General Education course.)

SOC08.120	Introduction to Sociology
or ANTH02.202	Cultural Anthropology
or ANTH02.350	Comparative Cultures

(This also counts as a Social and Behavioral Sciences General Education course.)

ENGL02.116	Readings in non-Western Literatures
ARHS03.103	Art History Survey I
or ARHS03.104	Art History Survey II
or ARHS03.205	Art History Survey III
or ARHS03.310	History of American Art
or THD08.146	World Dance Forms
or MUSG06.447	Music in World Cultures: Asia and Oceania
or MUSG06.448	Music in World Cultures: Africa, India, Near and Middle East
PHIL09.120	Introduction to Philosophy - WI
or PHIL09.121	Introduction to Philosophy
REL10.100	Introduction to Religion Studies
PHIL09.110	Logic of Everyday Reasoning
or PHIL09.130	Introduction to Symbolic Logic

Mid-level requirements: 27 s.h.

Nine courses from the following list, or approved substitutes (5 must be 300 level or above).

One must be a philosophy course, one must be an ethics course (the same course can fulfill both requirements).

REL10.200	Religions of the World
REL10.214	Religions of the Western World
REL10.230	Religions of Asia
REL10.220	Introduction to Buddhism
PHIL09.330	Asian Thought
REL10.110	Introduction to the Bible
REL10.301	Introduction to Judaism
REL10.320	Introduction to Christianity
REL10.330	Introduction to Daoism
REL10.210	Religion in America
SOC08.120	Sociology of Religion
ANTH02.310	Indians of North America

ANTH02.210	Indians of South America
HIST05.307	Ancient Mediterranean World
HIST05.304	Islamic Civilization
HIST05.377	African American History Since 1865
HIST05.417	Women in Islam
HIST05.394	Sub-Saharan Africa to 1800
HIST05.397	Sub-Saharan Africa since 1800
PHIL09.310	Aesthetics
or PHIL09.311	Aesthetics - WI
REL10.300	Philosophy of Religion
REL10.340	Selected Topics in Religion Studies (repeatable)
PHRE11.340	Selected Topics in Philosophy and Religion Studies (repeatable)
PHIL09.250	Existentialism
or PHIL09.251	Existentialism
PHIL09.392	Contemporary Moral Problems
or PHIL09.393	Contemporary Moral Problems WI
PHIL09.250	Introduction to Ethics
or PHIL09.251	Introduction to Ethics - WI
PHIL09.341	Business Ethics
PHIL09.346	Feminist Ethics
INTR01.174	Ethics and the Professions

Service learning component (not for credit) Arranged by consultation between the departmental advisor, the student, and the Office of Service Learning and Volunteerism.

Capstone requirements		3. s.h.
PHRE11.490	Senior Seminar in Philosophy and Religion Studies	

Portfolio (not for credit) In consultation with his or her advisor, the student prepares a portfolio of best work from his or her work in the department, together with reflections on the service learning experience and on his or her progress in the major.

Total Departmental Requirements	54 s.h.
Total General Education, Rowan Experience, and electives	66 s.h.
Total Credits in Program:	**120 s.h.**

Minor in Philosophy

David Clowney, Advisor
Edgar F. Bunce Hall, Suite 315
856.256.4211
clowney@rowan.edu

Program Requirements:		21 s.h.
PHIL09.120	Introduction to Philosophy	
or PHIL09.121	Introduction to Philosophy - WI	
PHIL09.110	Logic of Everyday Reasoning	
or PHIL09.130	Introduction to Symbolic Logic	
PHIL09.211	World Philosophy I	
or PHIL09.213	World Philosophy II	

Three (3) philosophy electives: 9 s.h.

PHRE11.490	Senior Seminar in Philosophy and Religion Studies

Concentration in Philosophy and Religion Studies

Youru Wang, Advisor
Edgar F. Bunce Hall, Suite 315
856.256.4077
wang@rowan.edu

Program Requirements including: 18 s.h.

PHIL09.120	Introduction to Philosophy
or PHIL09.121	Introduction to Philosophy - WI
REL10.100	Introduction to Religion Studies

Four (4) additional courses in Philosophy and/or Religion Studies 12 s.h.
(These may include interdisciplinary PHRE11 courses.)

Concentration in Ethics

Ellen Miller, Advisor
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856.256.4835
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The Ethics Concentration is a multi-departmental program designed to complement and enhance a student's major program, as well as to prepare students for graduate studies and professional careers. The Concentration is open to all Rowan undergraduate and graduate students.

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

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

Program Requirements including: 18 s.h.

PHIL09.250	Introduction to Ethics
or PHIL09.251	Introduction to Ethics - WI
PHIL09.392	Contemporary Moral Problems
or PHIL09.393	Contemporary Moral Problems - WI

Two of the following courses:

PHIL09.328	Philosophy and Gender
PHIL09.240	Philosophy and Society
PHIL09.322	Business Ethics
REL10.200	Religions of the World
REL10.210	Religion in America

ENST94.301 Environmental Ethics

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

Two of the following courses:

- Any course from the previous list.
- Approved service learning activity (up to 6 s.h.)
- Choice of courses from interdisciplinary bank, available at:

www.rowan.edu/colleges/las/departments/ethics/courses.html

Portfolio The portfolio will be used to evaluate a student's personal growth and academic progress in the study of Ethics. A portfolio provides a comprehensive record of experiences, achievements, and demonstration of competencies.

Department of Physics and Astronomy

Karen Magee-Sauer, Chair
Science Hall
856.256.4395
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David Klassen, Associate Chair
Science Hall
856.256.4391

The Department offers two majors; a Bachelor of Science in Physics and a Bachelor of Science in Physical Science. The Physics program allows the possibility of a Specialization in Photonics. The Physical Science program, which is an interdisciplinary program between the departments of Physics and Astronomy and Chemistry and Biochemistry, allows the possibility of two specializations, one in Physics and one in Chemistry. Minors in Physics and Astronomy are also offered for those interested in adding some science content to your program.

Physics majors learn significant subject content, develop many marketable skills, and develop well-defined analytical skills. Graduates from the Physics program have moved on to graduate programs in physics, engineering, and mathematics. Some have entered professional schools such as law school, medical physics programs, MBA programs or public relations. The remainder has entered the work force as engineers, teachers, computer scientists, and technicians as well as others that have been hired by banks and insurance companies. The diversity of the professions selected by our graduates reflects the versatility of the Physics degree and the importance of analytical skills in almost any area.

The Physical Science major is a very flexible major since many courses can be selected depending on career plans. Perhaps the most important benefit of the program applies to future teachers. The course work allows for students to acquire state certification to teach all physical science subjects at the secondary level in the state of New Jersey by earning a second degree from the College of Education. However, with the breadth of this program, it offers an excellent preparation for areas where breadth is as important as depth of content knowledge such as journalism or technical writing, technical sales or product representative, or forensic science.

Bachelor of Science in Physics

Ernst Knoesel, Program Coordinating 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.

Program Requirements

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Required Courses

PHIL09.368	Philosophy of Science (WI) (or other approved)
MATH01.130	Calculus I
MATH01.131	Calculus II
MATH01.230	Calculus III
MATH01.210	Linear Algebra
MATH01.231	Differential Equations
CS01.104	Intro. Sci. Prog.
or CS04.103	Comp. Science & Programming
CHEM06.100	Chemistry I
CHEM06.101	Chemistry II
PHYS02.200	Introductory Mechanics (Rowan Seminar)
PHYS02.201	Introductory Electricity & Magnetism
PHYS02.210	Introductory Thermodynamics, Fluids, Waves, & Optics
PHYS02.300	Modern Physics
PHYS02.315	Analytical Mechanics
PHYS02.430	Electricity & Magnetism I
PHYS02.401	Quantum Mechanics I
PHYS02.387	Statistical Physics
PHYS02.440	Advanced Lab

Physics Electives-Choose at least two (6-8 s.h.) courses from:

PHYS02.305	Optics and Light
PHYS02.499	Independent Study - Physics
PHYS02.333	ZEMAX
PHYS02.399	Electric Circuits

PHYS02.402	Quantum Mechanics II
PHYS02.431	Electricity & Magnetism II
PHYS02.470	Selected Topics in Advanced Physics
PHYS02.211	Physics Research I
PHYS02.212	Physics Research II
PHYS02.311	Physics Research III
PHYS02.411	Physics Research IV
or ASTR11.209	Astronomy Research I
ASTR11.212	Astronomy Research II
ASTR11.312	Astronomy Research III
ASTR11.412	Astronomy Research IV

(For Physics or Astronomy Research - Maximum of 3 s.h. count for Physics Electives)

Restricted Electives Choose at least one approved course (3-4 s.h.) from: Physics, Astronomy, Atmospheric Science, Earth Science, Materials Science, Engineering, Math, Chemistry, Computer Science, Biology, or Education, or any Physics Electives listed above

Free Electives	13-15 s.h.
Total credits in program:	**120 s.h.**

B.S. in Physics with a Specialization in Photonics

Ernst 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.

To earn the specialization, choose the following free and restricted electives within the program above.

PHYS02.305	Optics and Light
PHYS02.431	Electricity and Magnetism II
PHYS02.333	Introduction to Optical Design Program ZEMAX

Four semester hours of the following:

PHYS02.211	Physics Research (in optics)
PHYS02.212	Physics Research (in optics)
PHYS02.311	Physics Research (in optics)
PHYS02.411	Physics Research (in optics)

Bachelor of Science in Physical Science

Physical Science-Physics Specialization
Ernst Knoesel, Program Coordinating Advisor
Science Hall
856-256-4366
Knoesel@rowan.edu

Physical Science-Chemistry Specialization
Robert Newland, Program Coordinating Advisor
Science Hall
856.256.4502
newland@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.

Program Requirements

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Required Courses:

PHIL09.368	Philosophy of Science (Writing Intensive) (or other approved)
MATH01.130	Calculus I
MATH01.131	Calculus II
GEOG06.103	Geology I
CS01.104	Intro. Sci. Prog.
or CS04.103	Comp. Sci. & Prog.
CHEM06.100	Chemistry I
CHEM06.101	Chemistry II
CHEM07.200	Organic Chemistry I
CHEM09.250	Quantitative Analysis
PHYS02.200	Introductory Mechanics (Rowan Seminar)
PHYS02.201	Introductory Electricity & Magnetism
PHYS02.210	Introductory Thermodynamics, Fluids, Waves, & Optics
PHYS02.300	Modern Physics
	Approved Astronomy, Atmospheric Science or Geology course 3-4 s.h.
	Approved Career Track Course 3-4 s.h.
	Approved Career Track Course 3-4 s.h.

Physics Specialization

ASTR11.241	Astronomy and Astrophysics
	Approved Physics Elective 300+ level 4 s.h.
	Approved Physics Elective 300+ level 3-4 s.h.
	Approved Physics Elective 3-4 s.h.

Chemistry Specialization

CHEM07.201	Organic Chemistry II
CHEM08.400	Physical Chemistry I
CHEM07.348	Biochemistry
	An approved Chemistry Elective 3-4 s.h.

Free Electives:	12-16 s.h.
Total credits in program:	**120 s.h.**

Minor in Astronomy

Eddie Guera, Program Coordinating Advisor
Science Hall
856.256.4323
guerra@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.

Requirements 21-22 s.h.

ASTR11.221	Exploration of the Solar System
ASTR11.231	Methods and Techniques in Modern Astronomy
ASTR11.241	Astronomy & Astrophysics

Three semester hours of research from:

ASTR11.209	Astronomy Research I
ASTR11.212	Astronomy Research II
ASTR11.312	Astronomy Research III
ASTR11.412	Astronomy Research IV
PHYS02.305	Optics and Light

Choice of any 1 Physics or Astronomy course at the 300 level or above or approved math/science elective 3-4 s.h.

Minor in Physics

Ernst Knoesel, Program Coordinating Advisor
Science Hall
856.256.4366
knoesel@rowan.edu

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 19-20 s.h.

PHYS02.200	Introductory Mechanics
PHYS02.201	Introductory Electricity and Magnetism
PHYS02.210	Introductory Thermodynamics, Fluids, Waves, & Optics
PHYS02.300	Modern Physics
	And any Physics course at or above the 300 level (does not include Physics Research courses)

Concentration in Materials Science

Jeffrey Hettinger, Program Advisor
Science Hall
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hettinger@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...3 s.h.) and two addition materials related courses outside their major. (Abbreviated lists depending on major are provided below. These courses were selected since you likely have the prerequisites for these courses in your major. Many other courses contain a materials science component and can be selected with the help of your advisor.)

If your major is Physics, select two courses from the following partial list:

CHEM06.300	Advanced Inorganic Chemistry
CHEM07.405	Introduction to Polymer Chemistry
ECE09.413	Principles of Nondestructive Evaluation
CHE06.468	Principles of Electrochemical Engineering
CHE06.474	Fundamentals of Particle Technology

If your major is Physical Science/Physics Specialization, select two courses from the following partial list:

PHYS02.387	Statistical Physics
PHYS02.440	Advanced Laboratory
CHEM06.300	Advanced Inorganic Chemistry
CHEM07.405	Introduction to Polymer Chemistry
CHEM07.405	Introduction to Polymer Chemistry
ECE09.413	Principles of Nondestructive Evaluation
CHE06.468	Principles of Electrochemical Engineering
CHEM08.400	Physical Chemistry I
CHE06.474	Fundamentals of Particle Technology

If your major is Physical Science/Chemistry Specialization, select two courses from the following partial list:

PHYS02.300	Modern Physics
CHEM06.300	Advanced Inorganic Chemistry
CHEM07.405	Introduction to Polymer Chemistry
ECE09.413	Principles of Nondestructive Evaluation
CHE06.468	Principles of Electrochemical Engineering
CHE06.474	Fundamentals of Particle Technology

Department of Political Science

R. Lawrence Butler, Chair
Robinson Hall
856.256.4500 Ext. 3985
butlerl@rowan.edu

The Political Science Department offers a major program of 39 credits leading to a Bachelor of Arts degree, and a minor program consisting of 21 credits. These programs are open to all students who envision careers as government managers and administrators, public policy analysts, lawyers, journalists, intelligence officers, diplomatic service officers, teachers, lobbyists, public opinion analysts, legislative aides, campaign professionals, or any other career in government or business which requires a broad liberal arts background. The major program aims to provide both breadth of knowledge of the discipline and in-depth studies in areas of the student's greatest interest. A grade of C- or better must be

earned in all Political Science courses.

Program Requirements

General Education: All students must complete the University General Education Requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Required Courses

Political Science

POSC07.110	American Government
POSC07.200	Survey of Western Political Theory
POSC07.230	Comparative Political Systems
POSC07.320	International Relations
POSC07.360	Methodology and Statistics in Political Science Research
POSC07.310	American Constitutional Law
POSC07.489	Seminar in Political Science

Applied Politics Majors must complete 6 s.h. in applied politics utilizing one of the following three options:

EDPA02.490	Public Service Internship
or EDPA02.320	Public Administration

and one of the following:

POSC07.220	State & Local Government
POSC07.415	In-depth Study of the Supreme Court
POSC07.421	International Organizations
or EDPA02.490	Public Service Internship

and any 3 s.h. Political Science elective listed below:

Political Science Electives Distribution of electives: a minimum of 6 s.h. (two courses) in one of the three areas below and 3 s.h. (one course) in each of two other areas.

A. American Politics/Public Administration (each course is 3 s.h.)

POSC07.220	State and Local Government
POSC07.303	Campaigns, Political Parties and Interest Groups
POSC07.305	The Legislative Process
POSC07.306	The Presidency
POSC07.308	Current Problems in American Politics
POSC07.311	Women and American Politics
POSC07.323	Politics of Race, Poverty, and Welfare in the U.S.
POSC07.324	Black American and American Politics
POSC07.370	Special Topics in Political Science (according to topic)
POSC07.380	American Politics on Film
POSC07.400	American Political Thought
POSC07.401	Contemporary Political Thought
POSC07.491	Independent Study in Political Science (according to topic)
EDPA02.320	Public Administration
EDPA02.410	Public Policy

B. Multicultural/Global Studies and International and Comparative Politics (each course is 3 s.h.)

POSC07.321	Contemporary World Problems
POSC07.330	Contemporary U.S. Foreign Policy
POSC07.346	Politics and Society of Great Britain
POSC07.350	Introduction to Asian Political Systems
POSC07.370	Special Topics in Political Science (according to topic)
POSC07.420	International Law
POSC07.421	International Organizations
POSC07.491	Independent Study in Political Science (according to topic)

C. Constitutional Law and the Legal Process (each course is 3 s.h.)

POSC07.312	Freedom of Expression
POSC07.340	Civil Rights and Civil Liberties
POSC07.370	Special Topics in Political Science (according to topic)
POSC07.375	Politics and the Judicial Process
POSC07.410	Selected Problems in Constitutional Law
POSC07.415	In-depth Study of the Current Supreme Court
POSC07.491	Independent Study in Political Science (according to topic)

Other Required Courses:

STAT02.100	Elementary Statistics
STAT02.260	*or* Statistics I
ECON04.101	Introduction to Macroeconomics
ECON04.102	Introduction to Microeconomics
GEOG06.111	World Regional Geography
HIST05.100	Western Civilization I
or HIST05.150	US History I
HIST05.101	Western Civilization II
or HIST05.151	US History II
PHIL09.110	Logic of Everyday Reasoning
or PHIL09.130	Intro. to Symbolic Logic

Total Credits in Program **120 s.h.**

Minor in Political Science

R. Lawrence Butler, Chair
Robinson Hall
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butlerl@rowan.edu

The minor program in political science supplements the curriculum of students majoring outside of political science; it helps students expand their career options into such fields as law, journalism, social studies teaching, business, government and intelligence. The minor requires 21 s.h. of political science courses. Twelve of those semester hours are in basic courses which are required of all who pursue a political science minor, while the other nine are political science electives which students can tailor to their particular career or intellectual interests.

Required Courses

POSC07.110	American Government

POSC07.200	Survey of Western Political Theory
POSC07.230	Comparative Political Systems
POSC07.320	International Relations

Political Science Electives Any three courses (each is 3 s.h.) from the following list:

POSC07.220	State and Local Government
POSC07.303	Campaigns, Political Parties and Interest Groups
POSC07.305	The Legislative Process
POSC07.306	The Presidency
POSC07.308	Current Problems in American Politics
POSC07.311	Women and American Politics
POSC07.312	Freedom of Expression
POSC07.321	Contemporary World Problems
POSC07.323	Politics of Race, Poverty, and Welfare in the U.S.
POSC07.324	Black American and American Politics
POSC07.330	Contemporary U.S. Foreign Policy
POSC07.340	Civil Rights and Civil Liberties
POSC07.346	Politics and Society of Great Britain
POSC07.350	Introduction to Asian Political Systems
POSC07.370	Special Topics in Political Science (according to topic)
POSC07.375	Politics and the Judicial Process
POSC07.380	American Politics on Film
POSC07.400	American Political Thought
POSC07.401	Contemporary Political Thought
POSC07.410	Selected Problems in Constitutional Law
POSC07.415	In-depth Study of the Current Supreme Court
POSC07.420	International Law
POSC07.421	International Organizations
POSC07.491	Independent Study in Political Science (according to topic)
EDPA02.320	Public Administration
EDPA02.410	Public Policy

Department of Psychology

Janet Cahill, Chair
Robinson Hall
856.256.4870
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 such as counseling, education, management, social work, labor relations, etc., or a general area such as human services.

All Psychology majors are expected to meet with their psychology department advisors 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 major course work. Transfer students must complete a minimum of 54 s.h. including a minimum of 26 s.h. in Psychology coursework at Rowan University to earn a Psychology degree. The Psychology Department does not accept transfer credits earned more than 25 years ago. All Psychology majors are strongly urged to take all of their psychology courses at Rowan University. Students should consult with their advisor before taking courses at other institutions to ensure they will transfer to Rowan.

Psychology majors may take up to 10% of their credit hours pass/no credit, including 6 s.h. in Psychology (students may not take Research Methods in Psychology, Statistics in Psychology, Advanced Research, laboratory core courses, nor any Senior Requirement course pass/no credit).

Bachelor of Arts in Psychology

Rory O'Brien McElwee, Advisor
Robinson Hall
856.256.4500 x3776
mcelwee@rowan.edu

Program Requirements

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Required Courses for the Psychology Degree

MATH01.122	Pre-Calculus
or MATH01.202	Intro to Geometry
or MATH01.115	Contemporary Math

(this also counts as the Mathematics course in the Science and Mathematics General Education requirement, 3 s.h.)

STAT02.260	Statistics

(this also counts as a Math/Science elective in General Education, 3 s.h.)

BIOL01.113	General Biology: Human Focus
or BIOL01.100	Biology I

(this also counts as the Laboratory Science course in the Science and Mathematics General Education requirement) (4 s.h.)

Three additional credits in the Science and Math General Education List: (3 s.h.)

ANTH02.202	Cultural Anthropology
or ANTH02.221	Human Variation
or ANTH02.312	Anthropological Perspectives on Human Growth and Development

(this course also counts as a Social and Behavioral sciences General Education Course, 3 s.h.)

Six additional credits in the Social and Behavioral Sciences General Education List (6 s.h.)

PHIL09.110	Logic of Everyday Reasoning
or PHIL09.227	Philosophy of Mind
or PHIL09.369	Philosophy of Science

or PHIL09.211 World Philosophy I
or PHIL09.213 World Philosophy II
(this course also counts as a History/Humanities and Language General Education Course, 3 s.h.)

Six additional credits in the History/Humanities and Language General Education List (6 s.h.)

PSY01.107 Essentials of Psychology
(this course also counts as a Social and Behavioral Sciences General Education Course, 3 s.h.)

PSY01.106 The Psychology of Scientific Thinking
(this course also counts as a Social and Behavioral Sciences General Education Course, 3 s.h.)

PSY07.201 Research Methods in Psychology
PSY07.202 Statistics in Psychology
PSY01.420 Advanced Research
(This course also fulfills the Rowan Experience Writing Intensive requirement.)

PSY02.257 Psychology as a Profession and Practice
PSY01.308 Lifespan Development
PSY02.310 Learning and Behavior
PSY01.327 Cognitive Psychology
or PSY05.206 Social Psychology (M/G)
PSY01.230 Psychology of Personality
or PSY10.315 Physiological Psychology
PSY01.326 Perception
or PSY03.200 Abnormal Psychology
or PSY09.305 Developmental Psychopathology

9 additional s.h. of approved psychology electives, 3 of which **must** be from List A below, 3 of which can be from List A *or* B, and 3 of which can be from List A *or* C.

Psychology Electives List

List A: Specialized Core Courses

PSY01.105 Psychology of Ethnic Identity and Community in America
PSY01.200 Psychology of Women and Cultural Experience
PSY01.235 African-American Psychology
PSY01.305 Psychology and Law
PSY01.310 Psychology of Racism and Ethnocentrism
PSY01.316 Behavioral Assessment and Measurement
PSY01.423 Seminar in Psychology (various topics)
PSY01.429 History and Systems in Psychology
PSY02.305 Applied Behavior Analysis
PSY03.205 Intake and Interviewing Skills in Psychology
PSY05.205 Environmental Psychology
PSY05.310 Psychology of Human Sexuality
PSY05.402 Psychology of Conflict and Conflict Resolution
PSY05.410 Community Psychology
PSY06.300 Psychological Tests and Measurement
PSY08.215 Consumer Psychology
PSY08.220 Personnel Psychology
PSY08.310 Industrial/Organizational Psychology

PSY22.215	Educational Psychology	

List B: Independent Study and Field Experience

PSY01.419	Independent Study in Psychology	
PSY01.422	Field Experience in Psychology	

List C: Additional Coursework in Basic Core Areas

PSY01.230	Psychology of Personality	
PSY01.326	Perception	
PSY01.327	Cognitive Psychology	
PSY02.310	Learning and Behavior	
PSY03.200	Abnormal Psychology	
PSY05.206	Social Psychology (M/G)	
PSY09.305	Developmental Psychopathology	
PSY10.315	Physiological Psychology	
Nonprogram electives		12 s.h.
Free electives		21 s.h.
Total Credits in Program:		120 s.h.

Minor in Psychology

Rory O'Brien McElwee, Advisor
Robinson Hall
856.256.4500 x3776
mcelwee@rowan.edu

The Department offers a 21 s.h. minor in Psychology. The program is designed for students desiring a substantial background in Psychology while majoring in another field. The minor is designed to allow students the flexibility to choose courses that will further their career goals. Courses should be selected in consultation with the Academic Advising Coordinator. Minors may transfer a maximum of 6 s.h. in Psychology courses from other institutions.

Foundational Courses:		6 s.h.
PSY01.107	Essentials of Psychology	
PSY01.106	Psychology of Scientific Thinking	
	Two 300/400 level Psychology courses	6 s.h.
	Electives (any Psychology courses)	9 s.h.

Specialization in Behavioral Services for Children and their Families

Michelle Ennis Soreth, Advisor
Robinson Hall
856.256.4500 x3115
soreth@rowan.edu

http://www.rowan.edu/colleges/las/departments/psychology/sbsctf/

The Specialization in Behavioral Services for Children and their Families is designed to train Psychology majors to provide effective services for children with behavior problems and/or developmental disabilities. The specialization curriculum emphasizes learning theory, the application of behavioral principles, knowledge of types of problems and issues for which children may need services, interviewing techniques, and supervised experience working with children and their families in the community. Upon completion of the specialization and additional supervised experience students are eligible to apply to become a Board Certified Assistant Behavior Analyst. This specialization is available

only to matriculated Psychology majors; however, other students may take courses within the specialization. Students are encouraged to apply for the specialization as early as possible. Applications are available in the Psychology Department.

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.

State of New Jersey Certified Alcoholism & Drug Counselor (CADC)

The Center for Addition Studies, through the Liberal Arts and Sciences Institute, offers six courses (19 s.h.) that are only available online in partnership with CPCE. The coursework satisfies the 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.

CAS01.125	Introduction to the Study of Alcoholism/Drug Abuse
CAS01.215	The Study of Adolescent Alcoholic/Drug Abuser
CAS01.217	The Study of Gender and Alcoholism/Drug Abuse
CAS01.250	Psychopharmacology
CAS01.350	The Study of Treatment and Counseling of the Alcoholic / Drug Abuser
CAS01.425	The Study of Family and Alcoholism/Drug Abuse

Department of Sociology

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Students majoring in sociology receive a Bachelor or Arts in Sociology upon completion of all requirements. A major in sociology seeks to develop competence in the understanding and analysis of the effect which social factors have on all levels of interaction between individuals, between individuals and groups, and between groups. Overall the program affords its majors a strong Liberal Arts undergraduate degree as well as providing a rich foundation for most graduate degree programs.

The Bachelor of Arts Degree in Sociology consists of the original General Program and the Applied Sociology sequence. Both require the same CORE courses and a minimum of 120 semester hours for the degree. The General Program allows the student flexibility in deciding which lower and upper level electives will be part of their own unique structuring of their program. It consists of a total of 33 semester hours.

The Specialization in Applied Sociology is a new and growing part of the undergraduate program. 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 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.

As for the General Program, the CORE consists of Introduction to Sociology, Classical Theory, Social Statistics, Sociological Research Methods and Senior Seminar. 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 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 (This rule applies to Sociology and non-Sociology 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.

Program Requirements

General Education: All students must complete the University General Education requirements as described on page 257

Rowan Experience: All students must complete the Rowan Experience requirements as described on page 68

Required Courses

STAT02.100	Elementary Statistics
PSY01.107	Essentials of Psychology
ANTH02.202	Cultural Anthropology

Geography Choose one of the following:

GEOG06.102	Cultural Geography
or GEOG06.111	World Regional Geography

Economics or Political Science Choose one of the following:

ECON04.101	Intro to Macroeconomics
ECON04.102	Intro to Microeconomics
POSC07.100	Intro to Government and Politics
POSC07.110	American Government
POSC07.230	Comparative Political Systems
POSC07.321	Contemporary World Problems

History Choice from Approved General Education Courses (3 s.h.) Religion or Philosophy Choice from Approved General Education Courses (3 s.h.)

SOC08.120	Introduction to Sociology
SOC08.331	Classical Sociological Theory (upper level)
SOC08.375	Sociological Research Methods (upper level)
SOC08.376	Social Statistics (upper level)
SOC08.425	Senior Seminar (upper level)
Sociology Choice	(any level)
Sociology Choice	(any level)
Sociology Choice	(any level)
Sociology Choice	(any level)
Sociology Choice	(300-400 level)
Sociology Choice	(300-400 level)

Total Credits: **120 s.h.**

Required Courses for a Degree in Sociology with a Specialization in Applied Sociology

STAT02.100	Elementary Statistics
PSY01.107	Essentials of Psychology
ANTH02.202	Cultural Anthropology

Geography Choose one of the following:

GEOG06.102	Cultural Geography
GEOG06.111	World Regional Geography

Economics or Political Science Choose one of the following:

ECON04.101	Intro to Macroeconomics
ECON04.102	Intro to Microeconomics
POSC07.100	Intro to Government and Politics
POSC07.110	American Government
POSC07.230	Comparative Political Systems
POSC07.321	Contemporary World Problems

History Choice from Approved General Education Courses (3 s.h.) Religion or Philosophy Choice from Approved General Education Courses (3 s.h.)

SOC08.120	Introduction to Sociology
SOC08.221	Social Problems
SOC08.331	Classical Sociological Theory
SOC08.339	Sociological Practice
SOC08.375	Sociological Research Methods
SOC08.376	Social Statistics
SOC08.425	Senior Seminar
SOC08.494	Field Experience in Sociology
Sociology Choice	(any level)
Sociology Choice	(Practice Bank)
Sociology Choice	(Applied Bank)
Sociology Choice	(Specialization Bank)

Total Credits: 120 s.h.

College of Professional and Continuing Education

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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 profit and not-for-profit agencies and organizations. The college offers Continuing Credit Units (CEU) and Professional Development Hours (PDH) in selective areas of

study. Rowan University offers degree completion programs at its partner institutions, visit Camden County College-Blackwood and Cumberland County College.

For further details visit http://www.rowan.edu/cpce/

General Education Course Listing

Following is a list of all approved General Education courses for the five areas of study. Courses that have at least one prerequisite are denoted with a ^.

Communication

Writing Arts

COMP01.111	College Composition I
HONR01.111	Honors Writing Arts: College Composition I
COMP01.112^	College Composition II
HONR01.112	Honors Writing Arts: College Composition II

Science and Mathematics

In addition to meeting the minimum of 7 total semester hours of Science and Mathematics; all students must take at least one math course (3 or more semester hours) and at least one 4 semester hour laboratory-based science course (LAB). Students must also demonstrate computer literacy at the time of admission to the university or complete a course in computer literacy. Some programs may also require a level of computer competency higher than that provided by the computer literacy exam and may require one of the computing courses listed below (3 semester hours) in addition to the mathematics and LAB course.

Biological Sciences

BIOL01.100	Biology I (LAB)
BIOL01.101	Biology II (LAB)
BIOL01.104	Biology 1: Diversity Evolution & Adaptation (LAB)
BIOL01.106	Biology 2: Concepts in Genetics (LAB)
BIOL01.110	Human Biology
BIOL01.112	Biology: Environ. Focus (LAB)
BIOL01.113	Biology: Human Focus (LAB)
BIOL01.115	General Biology: Plants & 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
CS01.210^	Intro to Computer Networks & Data Communications
CS04.103	Computer Science & Programming
CS04.110^	Intro to Programming Using Robots

CS04.140	Enterprise Computing I

Geography

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

Health and Exercise Science

INAR06.200	Basic Nutrition

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
HONR05.180	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	Introductory Mechanics (LAB)
PHYS02.201^	Introductory Electricity & Magnetism (SAB)
PHYS02.210^	Introductory Thermo Fluids Waves Optics (LAB)
PHYS02.202^	Physics non-Calculus I (LAB)
PHYS02.203^	Physics non-Calculus II (LAB)
ASTR11.120	Introduction to Astronomy (LAB)
ASTR11.221	Exploration of the Solar System
ASTR11.231^	M/T in Modern Astronomy (LAB)
ASTR11.241	Astronomy & Astrophysics (LAB)
ASTR13.101	Meteorology (LAB)
ASTR17.110	Principles of Earth Science

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)
INTR01.200	Issues in Women's Health

HONR05.285	Honors Natural Sciences (H)(Lab 4cr.)

Social and Behavioral Sciences

Communication

CMS04.200	Intro to Communication Studies
CMS04.210^	Mass Media and Influence
CMS04.211^	Mass Media and Influence (WI)
CMS04.220	Interpersonal Communication
CMS04.250	Communication Theory
CMS04.270	Persuasion & Social Influence
PR99.362^	Public Opinion

Economics

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

Foundations of Education

FNDS21.230	Characteristics of Knowledge Acquisition

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
ANTH02.202	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)
ANTH02.221	Human Variation (M/G)
ANTH02.301	Human Evolution (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

Law and Justice

LAWJ05.175	Survey of Criminal Justice
LAWJ05.315	Criminal Justice/Social Conflict
LAWJ05.330	Problems in World Justice

Management of Management and Entrepreneurship

ENT06.240	Entrepreneurship and Innovation

Political Science

POSC07.100	Intro to Government Politics (M/G)
POSC07.110	American Government
POSC07.230^	Comparative Political Systems (M/G)
POSC07.310^	American Constitutional Law
POSC07.321	Contemporary World Problems (M/G)

Psychology

PSY01.106	Psychology of Scientific Thinking
PSY01.107	Essentials of Psychology
PSY09.209	Child Development
PSY09.210	Adolescent Development

Sociology

SOC08.120	Introduction to Sociology
SOC08.220	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)

Special Education

SPED08.130	Human Exceptionality

Interdisciplinary

INTR01.102	Intro to the Social Sciences: Self, Society & Power
AFST11.104	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), LIT, M/G)
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 20th 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)

HONR05.290	Honors Social Sciences (H)

History, Humanities and Language

Communication Studies

CMS04.225^	Semantics
CMS04.226^	Semantics (WI)
CMS04.325	Linguistics

Reading

READ30.120	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)
ENGL02.123	Experiencing Literature (LIT)
ENGL02.151	Readings in Shakespeare (LIT)

Foreign Languages and Literature

ZULU16.101	Zulu I
ZULU16.102	Zulu II
ARAB12.101	Elementary Arabic I
ARAB12.102	Elementary Arabic II
CHIN07.101	Elementary Chinese I
CHIN07.102	Elementary Chinese II
CHIN07.201	Intermediate Chinese I
CHIN07.211^	Intermediate Chinese II
FREN02.101	Elementary French I
FREN02.102	Elementary French II
FREN02.201	Intermediate French I
FREN02.205	Intermediate French II
GERM03.101	Elementary German I
GERM03.102	Elementary German II
GERM03.201	Intermediate German I
GERM03.211	Intermediate German II
ITAL04.101	Elementary Italian I
ITAL04.102	Elementary Italian II
LAT09.101	Elementary Latin I
LAT09.102	Elementary Latin II
JAPA08.101	Elementary Japanese I
JAPA08.102	Elementary Japanese II
SPAN05.101	Spanish I
SPAN05.102	Spanish II
SPAN05.201	Spanish III
SPAN05.211	Spanish Reading & Conversation
SPAN05.212^	Spanish Reading & Composition

SPAN05.312^	Spanish for Business
RUSS06.101	Elementary Russian I
RUSS06.102	Elementary Russian II
RUSS06.201	Intermediate Russian I
RUSS06.211	Intermediate Russian II
RUSS06.345	Russian Literature in Translation
SWHL17.101	Elementary Swahili I
SWHL17.102	Elementary Swahili II

Foundations of Education

FNDS21.150	History of American Education

History

HIST05.100	Western Civilization to 1660
HIST05.101	Western Civilization since 1660
HIST05.120	World History since 1500 (M/G)
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

Philosophy

PHIL09.110	Logic of Everyday Reasoning
PHIL09.120	Introduction to Philosophy (M/G)
PHIL09.121^	Introduction to Philosophy (M/G, WI)
PHIL09.130	Introduction to Symbolic Logic
PHIL09.211	World Philosophy I (WI, M/G)
PHIL09.213	World Philosophy II (WI, M/G)
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)
PHIL09.328	Philosophy and Gender (M/G)
PHIL09.341	Biomedical Ethics (WI)
PHIL09.346	Feminist Ethics (WI)
PHIL09.368	Philosophy of Science (M/G)
PHIL09.369^	Philosophy of Science (M/G, 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

Religion

REL10.100	Introduction to Religion

REL10.110	Introduction to the Bible (LIT)
REL10.200	Religions of the World
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)
REL10.230	Religions of Asia (M/G)
REL10.330	Introduction to Daoism (M/G)

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

INTR01.120	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, LIT, M/G)
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-20th 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 20th 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)
HONR05.205	Honors Humanities (H)
HONR05.217	Honors Literature (H)

Rowan Experience Course Listing

An abridged list of approved courses that meet the Rowan Experience requirements are listed below. Courses that have at least one pre-requisite are denoted with an ^.

Artistic and Creative Experience Courses (ACE)

Note: Courses listed under (ACE) with LIT, RS, WI, or M/G designation also fulfill the Literature, Rowan Seminar, Writing Intensive, or Multicultural/Global requirement in addition to the ACE requirement. Typically, the (ACE) course fulfills an area of study currently listed in General Education as Artistic and Creative Experience.

Art

ART02.300	Workshop in Art
ARHS03.130	Art Appreciation
ARHS03.220	Modern Art
ART09.110	Experiencing Art

Music

MUS04.118	Music Fundamentals
MUS04.140	Wind Ensemble
MUS04.141	String Ensemble
MUS04.142	College Band
MUS04.143	Jazz Band
MUS04.144	Orchestra
MUS04.145	Lab Band
MUS04.146	Concert Choir
MUS04.147	Contemporary Music Ensemble
MUS04.148	Percussion Ensemble
MUS04.149	Guitar Ensemble
MUS04.150	Flute Ensemble
MUS04.151	Opera Company
MUS04.152	Saxophone Ensemble
MUS04.153	Clarinet Ensemble
MUS04.154	Women's Chorus
MUS04.155	Men's Chorus
MUSG06.102	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
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
THD08.315^	Creative Dance for Children
THD08.436^	Dance History

Radio/TV/Film

RTF03.270-.271^	Film History & Appreciation I, II
RTF03.273	The Movie industry

Interdisciplinary

INTR01.152	Beyond Face Value:Critical Analysis of Texts & Image (RS)
INTR01.166	Rhetoric of Music (RS)
INTR01.172	Songs of Praise/Protest (RS)
INTR01.176	Historical Aesthetics of Suffering (RS)
HONR05.214	Honors Artistic and Creative Experience

Literature Courses (LIT)

English

ENGL02.105	Masterpieces of Western Literature I
ENGL02.107	Masterpieces of Western Literature II
ENGL02.110	Readings in British Literature
ENGL02.112	Readings in Asian Literature (M/G)
ENGL02.113	Readings in U.S. Literature
ENGL02.116	Readings in Non Western Literature
ENGL02.123	Experiencing Literature
ENGL02.151	Readings in Shakespeare (M/G)

Interdisciplinary

INTR01.140	Diverse Approaches to Environmental Lit (RS, M/G)
HONR05.217	Honors Literature (H)

Philosophy and Religion

PHIL09.240	Philosophy and Society
PHIL09.241^	Philosophy and Society (WI)
PHIL09.250	Introduction to Ethics
PHIL09.251^	Introduction to Ethics (WI)
PHIL09.310	Aesthetics (LIT)

PHIL09.311^	Aesthetics (WI)
REL10.110	Introduction to the Bible

Multicultural/Global (M/G)

The courses listed below all fulfill the requirement of one Multicultural/Global course:

Biological Sciences

BIOL20.150	Human Ecology: Evolution Approach

Communication

CMS04.360	Intercultural Communication

Economics

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

English

ENGL02.112	Readings in Asian Literature
ENGL02.116	Readings in Non Western Literature
ENGL02.216	African American Lit Through Harlem Renaissance
ENGL02.217	U.S. Literature of Latino and Hispanic Peoples
ENGL02.200	Women in Literature
ENGL02.338	Special Topics in Non-Western Literature

Foreign Languages and Literature

SPAN05.324	Spanish American Civilization & Culture

Finance

FIN04.435^	International Finance Management

Geography and Anthropology

ANTH02.202	Cultural Anthropology
ANTH02.203	Introduction to Archaeology
ANTH02.210	Natives of South America
ANTH02.215^	Medical Anthropology
ANTH02.221	Human Variation
ANTH02.301	Human Evolution
ANTH02.310	Indians of North America
ANTH02.312^	Anthropological Perspectives in Physical Growth & Develop
ANTH02.350	Comparative Cultures
GEOG06.100	Intro to Geography & Earth Science
GEOG06.102	Cultural Geography
GEOG06.111	World Regional Geography
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

HIST05.120	World History After 1500
HIST05.425^	History of Feminism

Law and Justice

LAWJ05.401	Law and Human Rights

Management of Management and Entrepreneurship

MGT06.330^	Managing International Business

Marketing and Business Information Systems

MKT09.379^	International Marketing

Music

MUSG06.115	Growth & Development of Jazz
MUSG06.220	Singing Music of African-Americans

Philosophy

PHIL09.120	Introduction to Philosophy
PHIL09.121^	Introduction to Philosophy
PHIL09.211	World Philosophy I
PHIL09.213	World Philosophy II
PHIL09.328	Philosophy and Gender
PHIL09.330	Asian Thought
PHIL09.368	Philosophy of Science
PHIL09.369	Philosophy of Science
PHIL09.392	Contemporary Moral Problems

Political Science

POSC07.100	Intro to Government Politics

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

Radio, TV and Film

RTF03.294	Contemporary International Cinema

Religion

REL10.210	Religion in America
REL10.220	Introduction to Buddhism
REL10.301	Introduction to Judaism
REL10.320	Introduction to Christianity
REL10.330	Introduction to Daoism
REL10.230	Religions of Asia

Sociology

SOC08.220	The Family
SOC08.230^	Sociology of Minority Groups
SOC08.327^	Comparative Education in Sociological Perspective
SOC08.399^	Sociology of the Holocaust

Interdisciplinary

AFST11.104	Intro to African American Studies
INTR01.120	Biology, History & Human Societies
INTR01.140	Diverse Approaches to Environment Literature

Public Speaking Courses (PS)

Note: Currently, CMS 04.202 Public Speaking is typically included in the Communication Area of Study under General Education and ENF 01.202 Sophomore Engineering Clinic meets a major requirement for students majoring in Civil, Chemical, Electrical and Computer, and Mechanical Engineering.

Communication Studies

CMS04.205	Public Speaking

Engineering

ENGR01.202	Sophomore Engineering Clinic

Rowan Seminar Courses (RS)

Rowan Seminar courses are designed to enhance the first-year experience for freshmen at the university. Because the primary goal of Rowan Seminar is to ensure a smooth transition to the college environment from high school, this requirement is waived for transfer students who already have enough college experience to enter with Sophomore, Junior or Senior standing. Selected sections of introductory courses within majors as well as general education courses may be designated as Rowan Seminars. In addition, courses designed specifically to serve as Rowan Seminars are:

Interdisciplinary

INTR01.132	Biology, History & The Fate of Human Societies
INTR01.138	Issues in Sustainable Development
INTR01.140	Diverse Approaches to Environmental Lit
INTR01.144	Human Ecology: An Evolutionary Approach
INTR01.148	Environmental Ethics: Through the Lens of Diversity
INTR01.142	Three Generations of Family Life: Diversity and Democracy through Family
INTR01.146	Identity, Culture, & Democracy: Being An American
INTR01.154	Emotions in Organizations
INTR01.158	From Nancy Drew to Lara Croft-Historical & Critical Dimensions of Female Detective Genre
INTR01.160	Growing Up Female in 20th Century America
INTR01.162	The Leadership of Ideas
INTR01.168	What's Wrong With Normal?
INTR01.170	Law and Order
INTR01.178	In Search for Democracy: The Quest for Civil Liberties

Writing Intensive Courses (WI)

The following courses satisfy the requirement of one writing intensive course. The Writing Intensive requirement MUST be completed at Rowan University. The student has to have completed College Composition I and II before enrolling in any course designated as WI.

Art

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

CMS04.211^	Mass Media and Influence
CMS04.241	Small Group Communication
CMS04.226^	Semantics
CMS04.450^	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

HIST05.306	Intro to Historical Methods

Law/Justice

LAWJ05.370	Theories of Crime & Criminality
LAWJ05.469	Seminar in Law/Justice

Liberal Studies

AMST13.402^	Senior Seminar in American Studies

Management of Management and Entrepreneurship

MGT06.309^	Organizational Behavior
HRM98.337^	Legal Aspects of Human Resource Management

Marketing and Business Information Systems

MIS02.333	E-Business: I.S. Perspective

MKT09.384^	Research Methods in Marketing

Mathematics

MATH01.498^	Mathematics Seminar

Philosophy

PHIL09.121^	Introduction to Philosophy
PHIL09.211	World Philosophy I
PHIL09.213	World Philosophy II
PHIL09.227^	Philosophy of Mind
PHIL09.241^	Philosophy and Society
PHIL09.251^	Introduction to Ethics
PHIL09.311^	Aesthetics
PHIL09.328	Philosophy and Gender
PHIL09.341	Biomedical Ethics
PHIL09.346	Feminist Ethics
PHIL09.369^	Philosophy of Science
PHIL09.393^	Contemporary Moral Problems

Political Science

POSC07.303	Campaigns, Political Parties & Interest Groups
POSC07.489^	Seminar in Political Science

Psychology

PSY01.420	Advanced Research In Psychv

Public Relations and Advertising

ADV04.434^	Advertising Campaigns
PR06.353^	Case Studies in Public Relations
PR06.454^	Public Relations Planning

Radio, TV and Film

RTF03.433^	TV Program Packaging

Reading

READ30.421	School Reading Problems

Sociology

SOC08.325^	Deviant Behavior/Social Control
SOC08.326^	Socialization of the Child Through Adolescence
SOC08.399^	Sociology of the Holocaust
SOC08.494^	Field Experience Seminar in Sociology

Theatre and Dance

THD07.440	Contemporary World Theatre (LIT)

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
Interdisciplinary	
INTR01.266^	Computers and Society

Nomenclature of Courses

ACC	Accounting	Accounting and Finance
ADV	Advertising	Public Relations and Advertising
AFRI	African Languages	Foreign Languages and Literature
AFST	Africana Studies	Africana Studies
ALTH	Athletic Training	Health and Exercise Science
AMST	American Studies	American Studies
ANTH	Anthropology	Geography and Anthropology
ARAB	Arabic	Foreign Languages and Literature
ARHS	Art History	Art
ART	Art	Art
ASTR	Astronomy	Physics and Astronomy
BIOL	Biology	Biological Science
CEE	Civil and Environmental Engineering	Civil Engineering
CHE	Chemical Engineering	Chemical Engineering
CHEM	Chemistry	Chemistry and Biochemistry
CHIN	Chinese	Foreign Languages and Literature
CMS	Communication Studies	Communication Studies
COMP	Composition	Writing Arts
CRWR	Creative Writing	Writing Arts
CS	Computer Science	Computer Science
ECE	Electrical and Computer Engineering	Electrical and Computer Engineering
ECED	Early Childhood Education	Teacher Education
ECON	Economics	Economics
EDSU	Educational Supervision	Educational Leadership
EDUC	Education	Teacher Education or Foundations
EDPA	Public Administration Education	Political Science
ELEM	Elementary Education	Teacher Education
ENGL	English	English
ENGR	Engineering	
ENST	Environmental Studies	Environmental Studies
ENT	Entrepreneurship	Management and Entrepreneurship
FIN	Finance	Accounting and Finance
FNDS	Foundations of Education	Foundations of Education
FREN	French	Foreign Languages and Literature
GEOG	Geography	Geography and Anthropology
GERM	German	Foreign Languages and Literature
HIST	History	History
HLTH	Health	Health and Exercise Science
HONR	Honors	
HRM	Human Resources Management	Management and Entrepreneurship
INAR	Industrial Arts	Health and Exercise Science
INTR	Interdisciplinary	
ITAL	Italian	Foreign Languages and Literature
JAPA	Japenese	Foreign Languages and Literature
JRN	Journalism	Journalism
LAT	Latin	Foreign Languages and Literature

LAWJ	Law and Justice Studies	Law and Justice Studies
MATH	Mathematics	Mathematics
MGT	Management	Management and Entrepreneurship
ME	Mechanical Engineering	Mechanical Engineering
MILS	Military Science	ROTC
MIS	Management Information Systems	Marketing and Business Information Systems
MKT	Marketing	Marketing and Business Information Systems
MUS	Music	Music
NURS	Nursing	Biological Science
PHED	Physical Education	Health and Exercise Science
PHIL	Philosophy	Philosophy and Religion Studies
PHYS	Physics	Physics and Astronomy
POSC	Political Science	Political Science
PR	Public Relations	Public Relations and Advertising
READ	Reading	Reading
REL	Religion Studies	Philosophy and Religion Studies
RTF	Radio/TV/Film	Radio/Television/Film
RUSS	Russian	Foreign Languages and Literature
SMED	Subject Matter Education	Various
SNUR	School Nursing	Special Education Services and Instruction
SPAN	Spanish	Foreign Languages and Literature
STAT	Statistics	Mathematics
SPED	Special Education	Special Education Services and Instruction
SWHL	Swahili	Foreign Languages and Literature
THD	Theater/Dance	Theater and Dance
WA	Writing Arts	Writing Arts

Course Descriptions

Accounting and Finance

ACC 03200: Accounting Mentorship 0 S.H.

Prerequisites: Any undergraduate or graduate business major or permission from instructor.

The Accounting Mentorship Program links College of Business students who are interested in an accounting career with working professionals in the field of accounting. Students enrolling in this course are matched with a mentor who is presently working in an area of accounting in which the student expresses an interest, (such as public accounting, corporate accounting, tax, government, forensic). Students and mentors communicate via email, phone and in-person meetings, in order for students to obtain a better understanding of the challenges and rewards of Accounting as a profession from those presently working as accounting practitioners. This enhanced understanding should help solidify the choice of profession and allow students to begin developing professional networking skills.

ACC 03210: Principles of Accounting I 3 S.H.

This course includes accounting theory and practice in the analysis of business transactions and the recording of business data; complete accounting cycle; interpretation of financial data for sole proprietorship, partnerships, corporations and public agencies.

ACC 03211: Principles of Accounting II 3 S.H.

Prerequisites: ACC 03210

This course includes accounting theory and practice applied to corporations and public agencies; budgeting and estimating; analysis and comparison of cost and financial data.

ACC 03300: Supervised Internship in Accounting 3 S.H.

Prerequisites: ACC 03310 and 57 Credits Required

This course includes accounting field experience in government, industry or non-profit organizations. Interns are given assignments that prepare them for productive employment upon graduation. The learning process is monitored by an Accounting faculty member.

ACC 03310: Intermediate Accounting I 3 S.H.

Prerequisites: ACC 03210, ACC 03211 and 57 Credits Required

This course includes a review of the accounting process, the preparation of each of the financial statements - i.e., Statement of Financial Position, Statement of Income, Statement of Changes in Owner's Equity, and Statement of Cash Flows - and the specific principles related to the accounting for current assets, current liabilities and long-term liabilities. A special section is devoted to the time value of money as related to accounting.

ACC 03311: Intermediate Accounting II 3 S.H.

Prerequisites: ACC 03310 and 57 Credits Required

This course includes the accounting principles related to investments, operating assets, current and long-term liabilities and owner's equity accounts. In addition, special topics cover accounting for leases, pensions and current value accounting.

ACC 03316: Concepts in Federal Taxation 3 S.H.
Prerequisites: ACC 03310 and 57 Credits Required
This course presents an overview of the Federal Tax System in a conceptual framework with emphasis on transactions common to all entities. It exposes students to taxation and its interrelationship between individuals, corporations, partnerships and other business entities. Students will review recent tax legislation and will gain experience in research and preparation of tax returns in a manual and computerized environment.

ACC 03320: Accounting Information Systems 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 03326: Cost Accounting 3 S.H.
Prerequisites: ACC 03211 and 57 Credits Required
This course deals with techniques and systems used for internal control. It views the cost accounting system as the connecting link between planning and control functions of management. Topics include: cost accumulation procedures; job order and process cost accounting cycles; variance analysis; maser and flexible budgets; cost-volume-profit analysis; and transfer pricing.

ACC 03328: Entrepreneurial Accounting 3 S.H.
Prerequisites: FIN 04300
This course provides students with the accounting and financial tools essential for effective decision-making in starting and managing small to mid-sized businesses. It focuses on the measurement and evaluation of financial performance, effective cash management techniques, internal control concepts, good decision-making for growth and long-term solvency of the business. A hands on, project based learning experience is emphasized to integrate the various financial tools and to assist student in applying what they learn.

ACC 03330: Selected Topics in Accounting 3 S.H.
Prerequisites: ACC 03310
Students will investigate new areas and developments in theory, research, and practice of accounting. Specialized topics will vary each semester. The topics will be determined by the department and the instructor teaching the course. Course activities include in-depth study of selected topics, case analysis, and research.

ACC 03405: Foundations of Accounting 3 S.H.
This course presents an overview of accounting as an information system useful for decision making. It provides students with an understanding of the basic concepts of financial and managerial accounting from the perspective of a future user of accounting information.

ACC 03410: Auditing 3 S.H.
Prerequisites: ACC 03311 and STAT 02261
This course introduces students to the basic concepts underlying audit and assurance services and to demonstrate how to apply the concepts to these services. It studes the framework of an audit which includes pre-planning, planning, evidents gathering, considering and/or auditing internal control, performing various audit tests, audit completion, rendering audit opinions via audit reports, and the use

of statistics and audit software in the auditing process. The course also includes the application of auditing principles and procedures through the use of audit software.

ACC 03416: Advanced Accounting 3 S.H.
Prerequisites: ACC 03311
This course covers concepts and accounting for business combinations, and specialized financial statement disclosures. It also covers the accounting for inter-company transfers, segment reporting, and interim reporting. It provides an overall review of generally accepted accounting principles in producing consolidated financial statements for the business and non-business organization.

ACC 03428: Integrative Accounting Seminar 3 S.H.
Prerequisites: ACC 03311 or ACC 02311
This course provides an integrative experience in which students synthesize knowledge from the accounting content areas to interpret, evaluate, and analyze financial information in order to enhance planning and decision-making. The course uses case analyses to involve students in active rather than passive learning, and places emphasis on skills in analytical and critical thinking, technology, communication and teamwork. (Offered Spring Only)

ACC 03430: Individual Taxation 3 S.H.
Prerequisites: ACC 03311
Surveys the tax structure of the United States, emphasizing the Internal Revenue code and regulations that affect federal income tax liabilities of individuals. Basic tax research and preparation skills are a consistent theme throughout the course.

ACC 03431: Taxation of Business Entities 3 S.H.
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 98300: Law for Accountants 3 S.H.
Prerequisites: MGT 98242 and 57 Credits Required
This course includes the study of the legal aspects of sales, liability, secured transactions, commercial paper and consumer credit.

FIN 04300: Principles of Finance 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 04327: 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 04330: Finance Internship 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 04422: Financial Management I 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 04423: Financial Management II 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 04424: Seminar in Finance 3 S.H.
Having learned financial markets, financial management, and investment/portfolio analysis in previous finance courses, in this course, students will undertake integrative research on these subjects. This course will teach students the skills required to undertake independent research. They will select a topic, conduct a literature review, and collect and analyze data.

FIN 04425: Risk Management 3 S.H.
Prerequisites: FIN 04431
A comprehensive survey of the various financial instruments available in the financial markets followed by an in-depth study of practical use of the financial instruments in hedging financial risk. Hedging will be performed from the perspectives of a financial manager and an investor or an investor consultant. Topics include options, futures, swaps, and other hybrid securities and how these securities are used to hedge the risk in a firm or specific financial transaction.

FIN 04431: Investment/Portfolio Analysis 3 S.H.
Prerequisites: FIN 04300 and STAT 02261
The basic decision-making processes for investment decisions are outlined in this course in terms of investors' needs and market opportunities, security market operations, security valuation, investment time, government and corporate securities company analysis and portfolio management.

FIN 04433: Financial Institutions and Markets 3 S.H.
Prerequisites: FIN 04300
This course provides an overview of financial markets and institutions in the U.S. economy. It intends to equip students with a balanced introduction to the operations, mechanics, and structure of the U.S. financial system, emphasizing its institutions, markets, regulators and financial instruments. Another focus of the course is to analyze the major risks faced by financial institutions and the strategies for controlling and managing these risks.

FIN 04435: International Financial Management 3 S.H.
Prerequisites: FIN 04300
This course studies financial management in the international environment. Topics include foreign exchange risk management, multinational working capital management, international portfolio investment, foreign direct investment, capital budgeting for the multinational corporation, political risk, international financing and international financial markets.

Africana Studies

AFST 11104: Introduction to Africana Studies 3 S.H.
This course will introduce students to the interdisciplinary, multicultural and international field of Africana Studies, from the perspective of the experiences and scholarly and creative contributions of Africans and African descendants to the making of the modern world. The primary focus in the course will be to explore how the experiences and contributions of African peoples have influenced historical and contemporary developments, addressed urgent societal issues, and helped to shape social consciousness, social activism and social change, within the African Diaspora and the global community.

AFST 11304: Africana Social Thought 3 S.H.
Prerequisites: AFST 11104
This course engages students in an introductory overview of major ideas, theories, ideological debates, and social/political movements that have emerged tin the African Diaspora to challenge national and global social, political, economic and other realities, and to produce a dynamic framework of historical and contemporary thought that have helped to shape social consciousness, social activism, and public policy.

AFST 11305: Research Methods in Africana Studies 3 S.H.
Prerequisites: AFST 11104 and COMP 01112
This course is designed to develop students skills in applying and critically reviewomg basic quantitative research methods. Topics will include analysis of descriptive, correlational and experimental studies, followed by an extensive presentation of the main qualitative research methods, including case studies, ethnographic studies, grounded theory research, life history studies, phenomenological studies, and participatory action research. Students will also learn data gathering methods such as observation, interviewing, and analysis of archival materials.

AFST 11310: Service Learning Seminar in Africana Studies 3 S.H.
Prerequisites: AFST 11104 and Permission of Instructor is also required
The proposed model for the Africana Studies Major at Rowan University requires that students participate in a three-credit service learning experience, accumulating 70-75 hours with an educational, social sevice, mental health, business, or cultural/civic group, institution or organization to explore community or institutional development initiatives which address issues that are local, regional, national and/or international in scope. The seminar will integrate classroom learning and community service through a collaborative partnership involving each student, the seminar leader, and a leader within the community organization. Students will spend approximately one day a week at their internship site, and will return to the classroom to share their experiences. Students interested in enrolling in the Service Learning Internship must interview with the course instructor one semester prior to the semester in which they will enroll in the course.

AFST 11450: Senior Seminar in Africana Studies 3 S.H.
Prerequisites: AFST 11104, AFST 11304, and AFST 11305 or an equivilant methods course
The senior seminar in Africana Studies is designed as teh culmination of students' experiences in the various aspects of the Africana Studies major. The course emphasizes and reinforces elements of the research and service components of the Africana Studies major, while exploring original themes or focusing on more extensive and intensive study of themes covered in survey courses. It will also provide for faculty and students an intellectual discussion community in which to posit, examine, and disseminate cutting-edge scholarship and creative work, including interdisciplinary approaches to topics in the study of peoples of African descent. Students will use critical thinking and analytical skills in understanding and interpreting relevant literature, to develop a proposal for research, and to produce a substantial written research project report, using either qualitative or quantitative research methods or an integration of both.

American Studies

AMST 13201: 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 13400: Independent Study in American Studies 3 to 9 S.H.
Students will engage in an independent study project under the supervision of a faculty member. Topics will vary.

AMST 13402: Senior Seminar in American Studies - WI 3 S.H.
Prerequisites: 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.

Art

ARHS 03103: 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 03104: 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 03130: 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 03205: 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 03220: 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 03231: Surveying Asian Art 3 S.H.
This course provides an introduction to the artistic traditions of China, Japan, India, Korea, and Southeast Asia with an emphasis on historical, religious and social context. Focus on the arts of Buddhism, Hinduism, and other religious and cultural influences on the visual arts.

ARHS 03252: 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 03310: History of American Art 3 S.H.
A minimum of at least 30 s.h. completed.
This course provides students with an overview of the development of painting, sculpture and architecture in America from colonial times to the 20th century.

ARHS 03340: Survey of Women Artists 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 03425: Special Problems in Art History 3 S.H.
Prerequisites: ARHS 03103 or ARHS 03104 or ARHS 03205
Special Problems in Art History is an intensive investigation of a specific movement, style, medium, or major artist. Content changes each time the course is offered. Check the Schedule of Classes to determine specific area of study.

ART 02100: Representational Drawing 3 S.H.
This course presents the basic representational skills and knowledge for effective drawing. It covers the elements and fundamentals of perspective, composition, anatomy, light and shade and rendering.

ART 02105: Color and Design-Two Dimensional 3 S.H.
An introductory lecture/studio course dealing with compositional strategies, to teach students to manipulate elements in dealing with solutions to the problems of aesthetics, function, and balance and the relationship between form and content. In the studio student's work on selected conceptual problems in both black and white and color in various materials.

ART 02110: Figure Drawing 3 S.H.
This course consists of experimenting, exploring and improvising with techniques suitable for drawing representation of such visual forms as figure and still-life. It also covers nonrepresentational approaches. For art majors only.

ART 02200: Expressive Drawing 3 S.H.
Prerequisites: ART 02100
This course will consist of experimentation, exploring, and improvisation with techniques suitable for representation of visual forms such as still-life, landscape, and figures as well as non-representational approaches.

ART 02207: Color and Design-Three Dimensional 3 S.H.
Drawing on the experiences gained in the 2D design and color problems, this course teaches students to establish visual excitement in a 3D format. Students deal with relationships of organic and natural structures and mechanical and geometric forms, as well as methods for relating them to one another.

ART 02211: Intermediate Drawing IV 3 S.H.
Prerequisites: ART 02200
These studios are a continuation of fundamental drawing. They will include figure/life drawing, composition, technique, and the analysis of human form, as well as other drawing problems.

ART 02220: Introduction to Painting I 3 S.H.
Prerequisites: ART 02222
This course introduces students to basic concepts, techniques, materials and procedures of painting.

ART 02222: Studio Core Portfolio Review 0 S.H.
After completing the Foundation Studio Core, each student will present a portfolio of 15 works executed in design and drawing. This portfolio will include at least 8 drawings and at least 5 designs including no less than two three-dimensional projects. Students will receive an evaluation of their portfolios, which is required before progressing on to the studio specialization. Students sign up for this review the semester they are enrolling in their final studio courses of the Foundation Core.

ART 02225: 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 02240: 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 02245: Intermediate Figure Sculpture 3 S.H.
Prerequisites: ART 02222
This studio emphasizes the analytical and expressive potential of the human figure in sculpture by working in a variety of techniques and methods, including modeling in clay from the live figure. Techniques of moldmaking and casting are an integral part of the course.

ART 02251: 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 02260: 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 02261: 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 02300: Workshop in Art 3 S.H.
This course explores various studio experiences and techniques. The area(s) to be covered will be identified prior to registration each semester. For non-art majors only.

ART 02301: Intermediate Sculpture 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 02302: Intermediate Sculpture IV 3 S.H.
Prerequisites: ART 02240, 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 02303: 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 02304: 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 02306: 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 02307: 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.

ART 02315: 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 02317: 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 02320: Intermediate Painting IV 3 S.H.
Prerequisites: ART 02220, 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 02321: Intermediate Printmaking IV 3 S.H.
Prerequisites: ART 02260, 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 02324: 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 02325: Intermediate Figure/Life Painting and Drawing 3 S.H.
Prerequisites: ART 02220 and ART 02222
Students paint from life and costumed figures to strengthen their understanding of figure articulation, action, proportion and anatomical construction.

ART 02327: Aquarelle (Intermediate Level) 3 S.H.
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 02360: 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 02370: Selected Topics in Glass-Working 3 S.H.
Prerequisites: ART 02222
Selected topics to be presented may include lamp-working, stained glass, painting and enameling, history of glass-working and, when facilities can be scheduled with Wheaton Village, glassblowing and/or glass casting.

ART 02400: Independent Study .5 to 9 S.H.
Intended primarily for students working at an advanced level in one of the regular studio areas, this course allows students to complete various projects. Students must show sufficient maturity and experience to assure successful completion of the proposed project.

ART 02401: Advanced Sculpture V 3 S.H.
These studios explore advanced problems in sculpture. Students work in consultation with the instructor.

ART 02402: Advanced Sculpture VI 3 S.H.
These studios explore advanced problems in sculpture. Students work in consultation with the instructor.

ART 02403: 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 02404: 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 02411: Advanced Sculpture VII 3 S.H.
These studios explore advanced problems in sculpture. Students work in consultation with the instructor.

ART 02412: Advanced Sculpture VIII 3 S.H.
Prerequisites: ART 02302, ART 02401, ART 02402 and ART 02411
These studios explore advanced problems in sculpture. Students work in consultation with the instructor.

ART 02414: 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 02416: 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 02420: 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 02425: Advanced Painting VIII 3 S.H.
Prerequisites: ART 02320, ART 02414, 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 02430: 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 02431: Advanced Printmaking VIII 3 S.H.
Prerequisites: ART 02321, ART 02324, 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 09101: 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 09110: Experiencing Art 3 S.H.
This course provides art experiences as processes which, in a workshop environment, are developed by students into expressional plastic forms. This course introduces work with the tools, materials, processes and purposes of art. Materials used may include clay, paint, wood, plastics, metals and fabric. For non-art majors only.

ART 09200: Theory and Analysis of Art Education 3 S.H.
This course provides students with an historical knowledge base of the theories, philosophies and persons that have impacted the teaching of art in public schools. Assignments will actively engage learners in developing their own teaching philosophies as they examine current theoretical and pedagogical research, and the national and state curriculum standards for teachers and students of the visual arts.

ART 09210: Introduction to Metals and Jewelry 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 09211: Intermediate Metals and Jewelry II 3 S.H.
Prerequisites: ART 02222 and ART 09210
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 09212: Jewelry and Metal Casting 3 S.H.
Prerequisites: ART 02222
This course deals with various metal casting processes, using a variety of metals. The course provides an in-depth learning experience through intensive independent work.

ART 09225: Introduction to Puppetry I 3 S.H.
This course provides an overview of the field of puppetry, including history, construction, playwriting and performance. It includes studio work.

ART 09226: Intermediate Puppetry II - Puppetry in Education 3 S.H.
This course is devoted to structuring puppet experiences in the classroom and teaching with puppets.

ART 09228: Introduction to Illustration 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 09229: 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 09240: 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 09241: 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 09242: 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.

ART 09243: 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 09308: Color Theory 3 S.H.
Through an investigation of classification systems and theories, color theory students will construct color relationships for various applications with paint and degital media.

ART 09310: Intermediate Puppetry III 3 S.H.
This course is devoted to structuring puppet experiences in the classroom and teaching with puppets.

ART 09311: Intermediate Metals and Jewelry III 3 S.H.
Prerequisites: ART 02222 and ART 09211
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 09312: Intermediate Metals and Jewelry IV 3 S.H.
Prerequisites: ART 02222 and 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 09313: Intermediate Puppetry IV 3 S.H.
This course is devoted to structuring puppet experiences in the classroom and teaching with puppets.

ART 09337: 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 09343: Introduction to Graphic Design I 3 S.H.
Prerequisites: ART 02222
This course provides in visual communication combining theory, practice and technology. Design elements and principles including visual communication, visual hierarchy, typography, and image treatment will be explored through graphic design history and weekly projects. Students will develop a visual vocabulary, problem solving skills and conceptual thinking abilities through creative exploration.

ART 09344: Intermediate Graphic Design II: Typography 3 S.H.
Prerequisites: DESN 09343 or ART 09343
The emphasis in this course will be on learning to ¿think¿ with type; learning to use visual and verbal language to develop and deliver ideas. Class will focus on the students¿ process and presentation as well as final product. Extensive sketching and refinement will be expected for each project. Special emphasis will be paid to improving craft and presentation skills.

ART 09349: Intermediate Graphic Design III: Visual Identity 3 S.H.
Prerequisites: DESN 09344 or ART 09344
An Intermediate studio design course teaches the student to focus on developing visual identity and symbol systems. Students will work on projects covering a broad range of visual identity projects including symbols, marks, and corporate/brand identity systems. The emphasis of the course is on creativity and portfolio-quality work, and an understanding of icons and visual identity.

ART 09350: Intermediate Graphic Design IV: Packaging 3 S.H.
Prerequisites: DESN 09349 or ART 09349
In this intermediate studio design course students will learn the art and craft of packaging design. Working from project briefs, students will design and produce projects throughout the semester covering a broad range of packaging techniques. Key course concepts will include seeing and designing in three demensions, mass vs prestige design, designing for target markets, playful design, product lines, and new product launches. Portfolio-quality projects will range from retail shopping bags to braded beverage bottles.

ART 09351: Computer Art Techniques I 3 S.H.
This course introduces students to the techniques made possible by the computer with design, drawing and painting programs. The course explores the computer's ability to execute designs as well as copying, rescaling, mirroring, rotating, color permutation, tapering, shadowing filling and animating.

ART 09352: 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 09353: 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 09358: 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 09359: 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 09363: Advanced Graphic Design V: Publication Design 3 S.H.

Prerequisites: ART 09363

An advanced studio course in editorial and information design, emphasis will be placed on creating sophisticated layouts through refined typographic skills and the dynamic use of imagery to generate big picture ideas and brand identities. Course material will include designing editorial material vs. advertising material, the role of graphic designer vs. art director, the use of photography and illustration, designing unique pieces and designing for monthly publications. Students will design and produce portfolio-quality including brochures, mailers, posters, annual reports, sales brochures, announcements, consumer magazines, and catalogue design.

ART 09364: Advanced Graphic Design VI: Visual Communication 3 S.H.

Prerequisites: ART 09350 and ART 09363

A studio and critical theory course for senior students with a focus on professional development through client-based projects. The nature of the projects will depend upon clients¿ needs and may include identity packages, posters, brochures, annual reports and publications, print or digital design. Students will work directly with clients on all projects. Publication and packaging design are pre-requisites for this class. Through lectures, readings, and case studies this course will also explore the practice of Design Management, including issues of pricing work, intellectual property, project management, and design responsibility and sustainability in a global consumer culture.

ART 09365: 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 09375: 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 09377: 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 09380: Advanced Puppetry V 3 S.H.
Prerequisites: DESN 09225 or ART 09225 and DESN 09226 or ART 09226 and DESN 09310 or ART 09310 and DESN 09313 or ART 09313
These courses study in-depth a specific phase of puppetry. They emphasize hand and rod puppets, shadow puppets and black theatre, marionettes and the history of puppetry.

ART 09381: Advanced Puppetry VI 3 S.H.
These studio courses offer in-depth involvement with sophisticated puppetry techniques. Students will develop individual expertise, style and approaches to the art of puppetry.

ART 09390: Work in Progress Review 0 S.H.
A required review of work-in-progress for all B.F.A. students.

ART 09401: Senior Show or Project 0 S.H.
Each B.A. student will prepare and mount selected works as a senior exhibition or execute an equivalent project. Required for graduation.

ART 09405: Advanced Puppetry VII 3 S.H.
These studio courses offer in-depth involvement with sophisticated puppetry techniques. Students will develop individual expertise, style and approaches to the art of puppetry.

ART 09406: Advanced Puppetry VIII 3 S.H.
These studio courses offer in-depth involvement with sophisticated puppetry techniques. Students will develop individual expertise, style and approaches to the art of puppetry.

ART 09411: Advanced Metals and Jewelry V 3 S.H.
Prerequisites: ART 09.411
Advanced level studios designed for the designer-craftsperson student electing to develop in-depth knowledge and skills in all aspects of jewelry and metals as a professional field. Students will identify research, and create special works in consultation with their professor.

ART 09412: Advanced Metals and Jewelry VI 3 S.H.
Prerequisites: ART 09411
Advanced level studios designed for the designer-craftsperson student electing to develop in-depth knowledge and skills in all aspects of jewelry and metals as a professional field. Students will identify research, and create special works in consultation with their professor.

ART 09419: 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 09420: 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 09439: 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 09440: 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 09450: 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 prost-production editing on Avid editing systems. Field production includes use of single and multiple camera units.

ART 09451: 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 09452: Computer Art Techniques II 3 S.H.
This course allows students to draw, paint, animate, layout and design using computers and software. Students may specialize in fine arts, illustration, drawing, crafts, interior designing, textiles, package design lettering/typography or desktop publishing. Students develop their own professional portfolios of computer art.

ART 09460: Advanced Metals and Jewelry VII 3 S.H.
Prerequisites: ART 09412
Advanced level studios designed for the designer-craftsperson student electing to develop in-depth knowledge and skills in all aspects of jewelry and metals as a professional field. Students will identify research, and create special works in consultation with their professor.

ART 09461: Advanced Metals and Jewelry VIII 3 S.H.
Prerequisites: 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 metals as a professional field. Students will identify research, and create special works in consultation with their professor.

ART 09463: Advanced Graphic Design VII: Internship 3 S.H.
Students are encouraged to work at internships in the design industry to further their professional skills and understanding of the extensive design field.

ART 09464: Advanced Graphic Design VIII: Portfolio 3 S.H.
Prerequisites: DESN 09350 or ART 09350 and DESN 09363 or ART 09363 and DESN 09364 or ART 09364
A course for soon-to-be graduating students focused on portfolio development, resume writing, interview skills, professional presentation, and job seeking strategies. Students will be given direction and guidance in developing specific portfolio pieces for a professional design portfolio. Students will be expressed to execute new work.

ART 09490: B.F.A. Senior Thesis Exhibition 0 S.H.
This experience allows students an opportunity to enhance their portfolio skills. This exit evaluation, in the form of a solo exhibition, will give students an occasion to make note of their work development and to determine their progress as emerging professional artists.

ART 11250: Introduction to Photography I 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 11275: Intermediate Photography II 3 S.H.
This studio emphasizes the development of a critical eye and the use of black and white photography as a form of self-expression and an artistic medium. Students are expected to have a working knowledge of the photographic process. Students advance their technical skills in photographic printmaking, and further understand photography as fine art. Students work on long term individual projects, which will develop technical, aesthetic and conceptual mastery of their medium. Major emphasis is on studio lighting, as well as using 35mm and medium format cameras. Students focus on raising the levels of artistic skill and knowledge towards professional standards. Students will provide their own cameras and supplies.

ART 11375: 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.

ART 11380: 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 11385: 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 11405: 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.

INAR 39333: ADVANCED PHOTOGRAPHY 3 S.H.

SMED 31350: 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.

SMED 31360: Secondary Art Methods: Teaching and Learning Art B 3 S.H.
Prerequisites: ELEM 02270 and ELEM 02282
This course prepares pre-service teachers for instructing high school students in the visual arts. Through laboratory and clinical field experiences learners will apply theories of artistic learning to authentic arts classroom situations while under faculty supervision. Assignments involve the learner in examining high school art curriculums, a variety of assessment strategies used by art teachers in the classroom, and approaches for critiquing student works and aesthetic enrichment. The learner will be required to prepare art lessons and units of study that demonstrate: a working knowledge of artistic concepts and skills, an understanding of the artistic development of the adolescent, and considerations for adaptive learning in the arts for special populations.

SMED 31450: Clinical Practice in Art Education 10 S.H.
Corequisites: SECD 03350 and SMED 31451
This senior level course provides the teacher education candidate with opportunities to demonstrate the professional knowledge, pedagogic skills and dispositions developed in preservice professional course work. The student teaching experience is a supervised, full-time activity conducted in public elementary, middle and secondary art classrooms. The experience requires demonstrated mastery of artistic content, lesson planning, instructional techniques in the arts, student assessment and classroom management. Admission to this course requires completion of professional education courses and near completion of academic major courses. A minimum grade point average of 3.0 in major and professional education courses is required.

SMED 31451: Clinical Practice Seminar in Art Education 1 S.H.
Corequisites: SECD 03350 and SMED 31450
This capstone seminar for art teacher candidates provides an opportunity to establish structural knowledge apriori that will enable the integration of applied art classroom experiences during the subsequent weeks of student teaching and; creates a forum for students to process new experiences in the elementary, middle and secondary schools with art professionals who share an understanding of the context in the art classroom. Interviewing skills and a professional portfolio wil be developed during this course.

Biological Science

BIOL 01100: Biology I 4 S.H.
This course studies the chemical properties of protoplasm; cell structure and cell division; metabolic processes in organisms, including photosynthesis and respiration; principles of genetics including Mendelian laws; evolution and ecological relationships of organisms.

BIOL 01101: 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 01104: Biology 1: Diversity, Evolution, and Adaptation 4 S.H.
This laboratory course is designed for freshman Biology majors and is the first of a four-course introductory sequence. This course introduces students to organismal diversity and its evolutionary origins, covers the fundamental concepts of evolutionary theory, and surveys many of the ways that organisms have become adapted to their environments. In addition, students in this course will learn some of the basic skills necessary for scientific inquiry, including the scientific method, critical thinking, experimental design, and the gathering, analysis, and presentation of quantitative data. Credit will not be given for both Biology I (BIOL 01104) and Biology I (BIOL 01100). Priority for enrollment will be given to students declared as Biology majors, Biology minors, Computer Science majors, Biochemistry majors, Environmental Studies majors, Environmental Studies minors, or Pre-Medical concentration.

BIOL 01105: 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.

BIOL 01106: Biology 2: Concepts in genetics 4 S.H.
Prerequisites: BIOL 01104
This course is designed for first year biology majors and builds on skills and knowledge gained by the students from Biology 1. The course focuses on the study of genetic factors in bacteria, viruses, higher plants and animals. The principles of mendelian, molecular and population genetics will be introduced. Discussion of genetic applications in agriculture, biotechnology, and medicine will be an integral part of the course. The laboratory projects will provide the students with the opportunity to gain hands-on experience with the most common classical and molecular genetics methods. Credit will not be given for both Biology 2 (BIOL01.104) and Biology II (BIOL01.101).

BIOL 01110: 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 01112: 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 01113: 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 01115: 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 01201: Pharmacognosy 3 S.H.
Prerequisites: BIOL 01204
This is a lecture/demonstration course which sudies the science that embraces the history, source, cultivation, collection, preparation, distribution, commercem identification, composition, purity and preservation of drugs of plant origin.

BIOL 01202: Biology 3t: Biological Skills and Methods 4 S.H.
Prerequisites: BIOL 01100 and BIOL 01101
This laboratory course is designed for students transferring into the Biology major after having completed Biology I and Biology II at another institution. This course will review key topics covered in Biology 1, 2, and 3 (BIOL01.103, BIOL01.104, and BIOL01.203) while introducing students to a variety of scientific skills covered in those courses. Examples of skills include critical thinking, experimental design, reading of primary literature, data collection, analysis, and interpretation, and oral and written scientific presentations. Credit will not be given for both Biology 3 (BIOL01.203) and 3t

(BIOL01.202).

BIOL 01203: Biology 3: Introduction to Cell Biology 4 S.H.
Prerequisites: BIOL 01106
This laboratory course introduces students to the fundamentals of cell biology, including the cellular basis of life, cell evolution, cellular organization, cell metabolism, cell diversity, cell-cell communication, intracellular signaling and the cellular basis of disease.

BIOL 01204: Biology 4: Global Ecology 4 S.H.
Prerequisites: BIOL 01104, BIOL 01106 and BIOL 01203 or BIOL 01100 and BIOL 01101 and BIOL 01202
This laboratory course serves as the capstone for the biology core curriculum. Students will learn integrative concepts linking topics from Biology 1, 2, and 3 together in terms of population, community, and ecosystem-level ecological processes. We will explore these concepts through case studies covering diverse topics from biodiversity patterns to anthropogenic effects on individuals to ecosystems. This course will reinforce the skills introduced in earlier core courses, and will build upon these skills with further expectations of writing, primary literature synthesis and review, and critical thinking.

BIOL 01210: 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 01300: Phycology 3 S.H.
Prerequisites: BIOL 01204
This laboratory course considers the algae. It studies the relationships of these organisms as they are ordered in taxonomic schemes. Proper identification of specimens will be emphasized. May not be offered annually.

BIOL 01310: Evolution 4 S.H.
Prerequisites: BIOL 01204
This laboratory course considers organic evolution, including its conceptual basis, its historical development, the processes that produce it, and the evolutionary history of life on earth. Laboratory exercises will include simulations of evolutionary processes, demonstrations illustrating patterns of evolution in the past, and opportunities to utilize research techniques of evolutionary biology.

BIOL 01320: Introduction to Virology 4 S.H.
Prerequisites: BIOL 01204
This laboratory course explores topics such as virus origin and evolution, their physical structure and chemical composition, taxonomy, and modes of transmission. The mechanisms involved in their control of the machinery of their host cells will be studied in detail. Particular focus will be placed on important virus-associated human and animal diseases, AIDS, and the role of viruses in cancer.

BIOL 01325: Introduction to Mycology 4 S.H.
Prerequisites: BIOL 01204
This lecture and laboratory course provides a comprehensive treatment of the morphology, taxonomy, physiology, and ecology of fungi, and their involvement in man's everyday life. This course may not be offered annually.

BIOL 01352: Ornithology 4 S.H.
Prerequisites: BIOL 01204
This course covers anatomy, physiology, ethology and ecological parameters of the avian community. Laboratory and field investigations form a significant part of the course. May not be offered annually.

BIOL 01356: Parasitology 4 S.H.
Prerequisites: BIOL 01204
This lab course examines the biology of organisms that normally grow only in or on the living body of another, and from which they obtain nourishment.

BIOL 01405: Conservation Biology 4 S.H.
Prerequisites: BIOL 01204
This laboratory course for upper-level students majoring in biology is designed to familiarize students with the current crisis in global biodiversity. The objectives of this course are to examine fundamental and applied aspects of genetics, population and community ecology, paleontology and systematics, agriculture and forestry, wildlife biology and zoo management, and sociology and economics. Laboratory and field exercises are designed (1) to introduce students to local, regional and global conservation issues and (2) to emphasize synthesis and creativity in addressing conservation problems.

BIOL 01428: Developmental Biology 4 S.H.
Prerequisites: BIOL 01101 and BIOL 1430 or BIOL 01101 and BIOL 14440 or BIOL 01204
This course studies the development of multicellular organisms from fertilization, through embryonic and post-embryonic stages. Topics include fertilization, cellular differentiation, regulation of gene expression, pattern formation, morphogenesis, and evolution of developmental mechanisms. Experimental approaches of developmental biology will be emphasized.

BIOL 01430: Cell Biology 4 S.H.
Prerequisites: BIOL 01204
This laboratory course addresses the fundamental properties of cells from an experimental perspective by exploring modern and classic experiment approaches to the study of cell biology. Structural, biochemical and molecular aspects of cell function will be considered.

BIOL 01435: Cell Culture Technology 4 S.H.
Prerequisites: BIOL 01204
This laboratory course introduces advanced biology students to the history, theory, and techniques of maintaining live cells in long-term culture. The combination of lectures and laboratory experiences have been designed to demonstrate cell biology in both theory and practice. The course is very much geared to a "hands-on" approach in the context of real laboratory operations in neighboring work areas.

BIOL 01440: Special Topics in Biological Sciences 2 S.H.
Prerequisites: BIOL 01204
This seminar course is a literature-driven exploration of a broad range of topics in individual areas of the biological sciences. The particular subjects discussed will examine both fundamental and cutting-edge biological processes and technologies. Students will be required to give oral presentations on the selected topics. They may be also asked to submit written reports. This course is expected to strengthen the skills of students in critical reading and evaluation of the primary scientific literature. This course is required for all Biology majors.

BIOL 01445: Special Topics in Biological Sciences - WI 3 S.H.
Prerequisites: BIOL 01204, COMP 01112 and senior standing
This 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 01450: Independent Study in Biological Sciences 3 S.H.
Students conduct independent work on a project concerned with biological science with the supervision of a selected faculty member. This course requires development and execution of the proposed work, including preparation of an acceptable report of work completed.

BIOL 01454: Herpetology 4 S.H.
Prerequisites: BIOL 01204
Students make an intensive study of the behavior, ecology, evolution and physiology of amphibians and reptiles. Laboratories stress identification, gross anatomy and techniques.

BIOL 01458: Mammalogy 4 S.H.
Prerequisites: BIOL 01204
This course provides a detailed study of the mammals of the world. Its topics include: the anatomy, behavior, ecology and systematics of the class. Laboratory work emphasizes the mammals of New Jersey as well as field work.

BIOL 01460: Animal Ethology 4 S.H.
Prerequisites: BIOL 01204
An in-depth study of animal behavior under natural conditions, this course deals with the major theories of innate behavior.

BIOL 01465: Animal Histology 4 S.H.
Prerequisites: BIOL 01204
This upper level lecture and laboratory course provides an in-depth study of animal tissue. It includes the examination and identification of specific cells, tissues and organs. The students will develop laboratory skills in cytological and histological techniques. The relationship of histology to cell biology, physiology and pathology will be emphasized.

BIOL 01470: Ichthyology 4 S.H.
Prerequisites: BIOL 01204
This course is a senior-level zoology course designed to introduce students to the fundamental aspects of the biology of the major groups of fishes. Topics to be discussed in class include taxonomy and systematics of the major groups of fishes, a survey of modern fishes, their basic structure and function, behavior, and ecology. Laboratory exercises are designed to introduce students to current methods, approaches, and topics; field exercises are designed to survey the diversity of fishes and their habitats in New Jersey and nearby states.

BIOL 01475: Biology Lab/Field Research 3 S.H.
This course introduces and/or develops research techniques used in biological research. Research is performed in collaboration with one or more faculty in an area of specialization of the faculty. Emphasis will be placed on developing research skills, developing technical writing skills, and the development of skills needed for scientific presentations. Up to three credits from this course may be counted towards the major; additional credits may count as free electives.

BIOL 02200: Introductory Botany 4 S.H.
Prerequisites: BIOL 01204
This laboratory course considers the biology of plants. It is a broad survey of plant nutrition, physiology, development, anatomy, morphology, reproduction, evolution and ecology. An emphasis is placed on the structure and function of plants and the relevance of plants to humanity and the global environment.

BIOL 02201: Plant Diversity 4 S.H.
Prerequisites: BIOL 01204
This laboratory course considers the patterns of plant diversity and the processes that generate and maintain plant diversity. Several types of diversity are assessed for each of the major groups of plants, including diversity in morphology, physiology, evolution, ecology and human economy. Students who complete this course will have a better understanding of the types and sources of plant diversity, and the role of human and nonhuman factors in affecting plant diversity. Instructor's permission to enroll is required for students who have not completed Introductory Botany (BIOL 02.200).

BIOL 02300: Introductory Botany 4 S.H.
Prerequisites: BIOL 01204
This laboratory course considers the biology of plants. It is a broad survey of plant nutrition, physiology, development, anatomy, morphology, reproduction, evolution and ecology. An emphasis is placed on the structure and function of plants and the relevance of plants to humanity and the global environment.

BIOL 02301: Plant Diversity 4 S.H.
Prequisites: BIOL 01204
This laboratory course considers the patterns of plant diversity and the processes that generate and maintain plant diversity. Several types of diversity are assessed for each of the major groups of plants, including diversity in morphology, physiology, evolution, ecology and human economy. Students who complete this course will have a better understanding of the types and sources of plant diversity, and the role of human and nonhuman factors in affecting plant diversity.

BIOL 02350: Flora of New Jersey 4 S.H.
Prerequisites: BIOL 01204
This laboratory course is an exploration of the local flora in terrestrial communities, from the shore to the Pine Barrens. The emphases of this course are plant communities and the identification of plants. It also provides an overview of plant conservation and the features of plants that determine their population dynamics. The focus of the laboratories is several all-day field trips. Offered during summer sessions.

BIOL 02405: Plant Physiology 3 S.H.
Prerequisites: BIOL 01204 and CHEM 07200
This course will cover the principles and factors concerned with development of plants, including nutrition, water relationships, photosynthesis, chemosynthesis, reproduction, and growth.

BIOL 02410: Stream Ecology 4 S.H.
Prerequisites: BIOL 01204
This course covers topics in the area of study concerned with the physical, chemical, biological and ecosystems processes in creeks, streams and rivers (so-called lotic environments or related running waters). The course has a strong laboratory component with hands-on research in an effort to understand local stream ecology.

BIOL 07300: Invertebrate Zoology 4 S.H.
Prerequisite: BIOL 01204
This laboratory course will focus on the diversity and adaptations of single-celled and multicellular invertebrates. We will explore the current understanding of the evolutionary relationships among taxa, using both traditional morphological and contemporary genetic approaches.

BIOL 07301: Comparative Vertebrate Anatomy 4 S.H.
Prerequisites: BIOL 01204
This laboratory course provides an intensive comparative study of the gross and microscopic anatomy of vertebrate animals, including dissection of representative chordates.

BIOL 10210: Human Anatomy and Physiology I 4 S.H.
This course offers a molecular, cellular and systematic approach to the structure and function of the component units and organizational systems of humans. Emphasis is placed on membrane physiology and the skeletal, molecular, digestive and circulatory systems.

BIOL 10212: Human Anatomy and Physiology II 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 10345: Human Physiology 4 S.H.
Prerequisites: BIOL 01204 and CHEM 07200
This course surveys the basic physiology of the human organism, emphasizing the nervous and circulatory systems.

BIOL 10350: Work Physiology 3 S.H.
Prerequisites: BIOL 01204
This course studies the effect of short term and long term work stress on the human organism. This course may not be offered annually.

BIOL 11330: Microbiology 4 S.H.
Prerequisites: BIOL 01204
This course deals with the morphology and physiology of unicellular organisms, with emphasis upon bacteria. It studies culture methods, growth parameters, isolation, identification and characterization, and metabolism of microorganisms in the laboratory.

BIOL 11338: Immunology 4 S.H.
Prerequisites: BIOL 01204
This course studies infection and resistance and the principles and types of immunity and hypersensitivity. Laboratory applications include: antigen-antibody formation, structure and reactivities.

BIOL 11405: Environmental Microbiology 4 S.H.
Prerequisites: BIOL 01204 and BIOL 11330
This course covers topics related to microorganisms in the environment. It deals with the actions of microbes in the terrestrial, aquatic, air and plant/animal environment and places focus on microbial control and microbial applications.

BIOL 14440: Introduction to Biochemistry - Lecture Only 3 S.H.
Prerequisites: BIOL 01204 and CHEM 07201
This course investigates chemical compounds and chemical reactions which are of paramount importance to the functioning of biological systems. It also examines the major metabolic pathways for energy production and biosynthesis.

BIOL 18360: Marine Biology 4 S.H.
Prerequisites: BIOL 01204
Field and laboratory oriented, this course studies the interrelationships of marine animals and plants and provides instruction and experience in collecting and identifying examples of local marine flora and fauna.

BIOL 18400: Limnology 4 S.H.
Prerequisites: BIOL 01204
This course intoduces basic and applied concepts in limnology, or the study of fresh waters. It analyzes the physical, chemical, biological and ecosystems processes in lakes (so called lentic environments). The course has a strong laboratory component with hands-on research in an effort to understand regional lake ecology.

BIOL 19300: Introduction to Oceanography 3 S.H.
This course introduces the varied techniques of the oceanographer; it emphasizes recent developments in the field of Marine Sciences as well as physical, chemical, geological and biological aspects of the world's oceans. Field work required; a trip on a research vessel recommended. Offered only in the summer at the New Jersey Marine Sciences Consortium facilities.

BIOL 19425: Coastal Marine Geology 4 S.H.
This course includes a field study of the geological processes of the beach, bay, lagoon, estuary and salt marsh; it also covers erosional and depositional features and sediment analysis. Field experience is supplemented by laboratory work and individual projects. Offered in the summer at New Jersey Marine Sciences Consortium facilities.

BIOL 20100: Introduction to Natural Resources 3 S.H.
This introductory course considers natural resources and their relationship to man and society. For science and non-science majors.

BIOL 20150: Human Ecology: An Evolutionary Approach 3 S.H.
This course will take an evolutionary approach to understand how the environment has shaped biological and cultural changes in humans, and how humans 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 20310: Ecology 4 S.H.
Prerequisites: BIOL 01204
This course emphasizes population, communities and ecosystems. It studies aspects of energy flow, species diversity and population dynamics in a variety of ecosystems. The course requires laboratory and field work.

BIOL 20321: Physiological Ecology 4 S.H.
Prerequisites: BIOL 01204
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 20330: Environmental Science 4 S.H.
Prerequisites: BIOL 01204
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 20401: Principles of Ecology 4 S.H.
Prerequisites: STAT 02260, CHEM 05102, MATH 03315 and BIOL 01100 or STAT 02260, CHEM 05102, 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 20425: Environmental Toxicology 4 S.H.
Prerequisites: BIOL 01024 and CHEM 07200
This course covers topics related to the fate and impact of pollutants in the environment. This course deals with the laws and regulations of pollutant discharge, the kinds of chemical pollutants, the transport and distribution of such chemicals into the environment, and their effect in populations and communities as well as individual organisms. The acute and chronic effect of these pollutants, the

principles of environmental monitoring and assessment, and special examples and case studies will be analyzed.

BIOL 20474: Tidal Marsh Ecology 4 S.H.
Prerequisites: BIOL 01204
This course studies salt marsh development and physiography, community structure, energetics and interrelationships.

BIOL 21401: Entomology 4 S.H.
Prerequisites: BIOL 01204
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.

BIOL 22335: Genetics 4 S.H.
Prerequisites: BIOL 01204
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 22410: Concepts in Human Genetics 4 S.H.
Prerequisites: BIOL 01204
The course will discuss the application of genetics principles to the human species. All major areas of genetics such as transmission genetics, cytogenetics, biochemical genetics, molecular genetics and population genetics will be covered. The emphasis will be placed on fundamental concepts and technological advances in the study of human genetics as they pertain to medical practice. The principles of human genetics applied to counseling, screening, ethics, law, and the evaluation of their social implications will also be addressed. The laboratory sessions will focus on the practical analysis of various case studies related to different human genetic disorders. Oral presentation of primary literature articles by the students is expected.

BIOL 22450: Molecular Genetics 4 S.H.
Prerequisites: BIOL 01204
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 27403: Comparative Embryology 4 S.H.
Prerequisites: BIOL 01204
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.

NURS 03303: Comprehensive Health Assessment 3 S.H.
Prerequisites: NURS 03301
This course focuses on total health assessment with differentiation between normal and abnormal findings. The total health assessment content focuses on individuals across the life span. Emphasis is placed on data collection and analysis through history and physical exam.

NURS 03304: Nursing Informatics 3 S.H.
This course reviews the information needs and information systems related to nursing practice. Students will experience the manner in which informatics supports all areas of practice, including education, clinical practice, administration and research.

NURS 03305: Pathophysiology 3 S.H.
Prerequisites: NURS 03303 and NURS 03307
Fundamental concepts of physiology, the changes that porduce signs, symptoms, and the body's remarkable ability to compensate for these changes are reviewed and extended in this course.

NURS 03306: Pharmacology 3 S.H.
This course reviews and extends the students' previous knowledge of pharmacological science. It explores mechanisms of action of drugs used to treat various health conditions at the cellular level. 3 credits Elective.

NURS 03307: Epidemiology in Nursing Practice 3 S.H.
In this course, the professional nursing student is introduced to a population-based approach to health care. Students will incorporate information on the etiology and predictors of events in order to design health promotion and desease prevention strategies.

NURS 03309: Topics in Health Care Ethics 3 S.H.
Students in this nursing course will examine moral dilemmas created or intensified by recent advances in medical technology and study ways of analyzing those dilemmas. Discussion topics include: euthanasia and the right to die, abortion, behavior modification, allocation of scarce medical resources, in vitro fertilization, genetic screening and engineering and human experimentation. These moral dilemmas will be related to nursing.

NURS 03401: Community Health Nursing 6 S.H.
Prerequisite: NURS 03303
This course will explore how community health nurses use concepts from nursing and public health to provide comprehensive, continuous, preventive healthcare thereby promoting health for communities, populations at risk, aggregates, families, and individuals. Students will use critical thinking skills to formulate healthcare strategies which consider the biopsychosocial, cultural, ethical, legal and economic issues impacting the community as a client. The clinical practicum focuses on clients with diverse needs in a variety of settings.

NURS 03402: Environmental and Occupational Health 4 S.H.
Prerequisites: NURS 03301, NURS 03303, NURS 03305, 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 helath 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 thses phenomena.

NURS 03403: 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 delivery systems. The multi-faceted aspects of the role of the nurse as leader and manager are explored in depth, with emphasis on the role of the nurse as change agent. Organizational behavior, decision-making, the change process and the management of health care organizations are components of this course. The concepts of professionalism, leadership-management, research and teaching-learning are integrated with the professional nurse¿s role as a manager. This course prepares students to function as change agents in the health care delivery system.

NURS 03404: Research Applications in Nursing Practice 3 S.H.

Prerequisite: STAT 02100 or the equivalent

Knowledge obtained from this course will prepare students to critically analyze nursing issues from an applied research perspective. Students are provided with the skills needed to manage and interpret nursing data.

NURS 03405: 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 policy making and financing within today's ever-changing health care environment are explored. Risk management and quality care are integrated into the course. This course gives the student a financial understanding of the health care delivery system. Students are exposed to the political and legislative process within health care agencies and health care policy development at the state and federal levels. Ethical and legal issues in nursing and health care are explored.

Chemical Engineering

CHE 06201: Principles of Chemical Processes I 2 S.H.

Prerequisites: MATH 01141, PHYS 02200 and CHEM 06105 or MATH 01131

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 06302: 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.

CHE 06309: 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 06310: Chemical Engineering Thermodynamics I 3 S.H.
Prerequisites: CHE 06302, MATH 01235 and MATH 01236
This course provides a foundation in engineering thermodynamic principles. The course includes an overview of basic thermodynamic principles, heat effects, the Second Law of Thermodynamics., and thermodynamic properties of fluids and flow processes. The course will also include solution thermodynamics theory and application, phase equilibria, chemical reaction equilibria, power and refrigeration cycles, liquefaction and thermodynamic analysis of processes. The course will focus on the synthesis and solution of complex problems in a team project-oriented environment.

CHE 06311: Heat Transfer Processes 2 S.H.
Prerequisites: MATH 01235, ENGR 01341, MATH 01235 and CHE 06302 or ME 10311 and MATH 01131
This course describes modes of heat transfer: conduction, convection (forced and natural) and radiation. It presents steady and unsteady state analysis of heat transfer, types of heat exchangers and heat exchanger design. Demonstrations and laboratories will be integrated throughout the course.

CHE 06312: Separation Processes I 2 S.H.
Prerequisites: ENGR 01341, CHE 06302 and MATH 01131 or MATH 01141
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. Deomonstrations, laboratories and computer simulations may be integrated trhoughout this course.

CHE 06314: 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 06315: Chemical Engineering Thermodynamics II 3 S.H.
Prerequisites: CHE 06310
This course is a direct continuation of Chemical Engineering Thermodynamics I. This course includes an in-depth view of mulitcomponent systems, phase equilibria such as liquid-liquid and solid-liquid equilibria, simultaneous chemical reactions equilibria, and electrolyte equilibria. The course will also cover chemical engineering thermodynamics applications in emerging technologies such as the biochemical and biomedical fields.

CHE 06316: Chemical Reaction Engineering 4 S.H.
Prerequisites: CHE 06309, CHE 06311, 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 06401: Chemical Process Component Design 4 S.H.
Prerequisites: CHE 06315 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.

CHE 06402: 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 06403: Unit Operations Experimental Design and Analysis 2 S.H.
Prerequisites: CHE 06315 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 engege 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 06404: Unit Operations Laboratory II 2 S.H.
Prerequisite: CHE 06.403
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 06405: Process Dynamics and Control 3 S.H.
Prerequisites: CHE 06401
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 06406: Chemical Plant Design 3 S.H.
Prerequisites: CHE 06401
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 06441: 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 06442: 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 06462: 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 06463: Green Engineering of Chemical Processes 3 S.H.
Prerequisites: CHE 06314 and CHE 06316
This course evaluates process design techniques to minimize waste and by-products in the processing and manufacturing industries. Topics include: mass and heat recycling processes; technologies for process stream renovation, material reuse and recycling methods. Case studies of industrial applications are utilized.

CHE 06464: Advanced Separation Technology 3 S.H.
This course describes advanced separation processes not previously covered in Transfer Processes II and Separation Processes courses. Topics include: crystallization and precipitation; adsorption, chromatography and ion exchange; reverse osmosis, ultrafiltration, gas permeation and prevaporation. Commercial system design parameters and laboratory demonstrations will be included. An overview of other novel separation processes will be done.

CHE 06465: Advanced Design of Reactors 3 S.H.
This course presents an overview of chemical reaction types and ideal reactors. Topics presented include: catalysis and catalytic reactors; analogies for real reactors; fluid flow and heat and mass transfer effects on chemical reactions and reactor design; numerical analyses and simulation of reacting systems; applications in the chemical industry.

CHE 06466: Polymer Processing 3 S.H.
Prerequisites: ENGR 01281 and CHE 06310
The course provides an introduction to the various aspects of polymer engineering starting with basic polymer properties, structure and function. The major topics covered are the formation of polymer systems and manufacturing techniques. Fabrication processes topics include coating, extrusion, and foams. The production of thin-films and membranes will focus on stretching, phase inversion, and hollow fiber spinning. Students will study application of polymeric materials engineering to various industries.

CHE 06468: Principles of Electrochemical Engineering 3 S.H.
Prerequisites: CHEM 06100 or CHEM 06105
This course will focus on the fundamental principles of process electrochemistry. Basic principles of thermodynamics, kinetics and mass transfer as applied to electrochemical systems will be presented. Modeling of electrochemical systems and application of electrochemical principles to corroding systems will be conducted by the students. Engineering case studies of commercial applications in energy conversion and storage and electrolytic processes will be presented.

CHE 06470: Principles of Air Pollution Control 3 S.H.
Prerequisites: CHEM 06100 or CHEM 06105
This course introduces students to air pollution control theory. Students design air pollution control processes and specify equipment related to the control of particulate, gaseous and toxic air emissions. The chemistry required for pollution control process design is presented. The environmental impacts due both to controlling and not controlling emissions are considered. Students design control equipment, specify and troubleshoot control systems and predict the impacts for each major type of control system.

CHE 06472: Principles of Biomedical Processes 3 S.H.
Prerequisites: CHEM 06100 or CHEM 06105
This course introduces students to chemical engineering fundamentals applied to biomedical systems. Students analyze and design biomedical processes. The basic biochemistry and physiology required for understanding of biomedical systems is presented. Basic principles of mass transfer, heat transfer, fluid flow, and chemical reaction are used to analyze or design drug delivery systems, pharmacokinetic models, the circulatory system, transport across cell membranes, and human and artificial organs. Laboratory experiments and demonstrations will be integrated throughout the course.

CHE 06474: 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 06476: Principles of Bioseparation Processes 3 S.H.
This course will focus on the fundamental principles of bioseparation processes. The characteristics of bioseparations will be presented as applied to downstream processing in the pharmaceutical/biotechnology and related industries. Theory and design of filtration, microfiltration, centrifugation, cell disruption, extraction, adsorption, chromatography, precipitation, ultrafiltration, crystallization, and drying will be presented as applied to biosystems. Commercial design considerations, such as sanitary design/sterilization, water quality, solvent recovery, waste disposal and biosafety will be reviewed.

CHE 06477: Fundamentals of Engineering Process Analysis and Experimental Design 3 S.H.
This course exposes students to advanced engineering applications of process analysis and experimental design. The course includes a multidisciplinary approach with theoretical background to support the course applications. Students will use advanced statistical and optimization techniques for

process analysis and experimental design, process monitoring and quality control presently used in industry. The analysis and experimental design techniques presented in this course serve to optimize complex industrially relevant processes and make engineering design and calculations more effective. Applications from a wide range of industries will be presented including pharmaceutical, food, bulk and specialty chemicals, and petroleum industry applications.

CHE 06479: 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 06480: Project Optimization in Engineering 3 S.H.

This course will overview strategies for planning and directing long-term engineering projects. Topics will include project organization, project scheduling, allocation of resources, project optimization and financial analyses.

CHE 06481: Advanced Process Analysis 3 S.H.

This course will examine advanced topics in process analysis including: process consistency, identification of optimal process based on economic analysis, process documentation including flowsheets and budgets, replacement analysis for processing equipment, and rationing limited resources between competing projects.

CHE 06482: Principles of Food Engineering 3 S.H.

Prerequisites: MATH 01141, CHEM 06100 and CHEM 06105 or MATH 01131

This course introduces students to chemical engineering fundamentals applied to food processing systems. Students analyze and design food engineering processes. The basic chemistry required for understanding of food systems is presented. Basic principles of mass transfer, heat transfer, fluid flow, chemical reaction, process control, and mixing are used to analyze or design food production systems. Computer simulations will be used for the design of food processing systems. Laboratory experiments and demonstrations will be integrated throughout the course.

CHE 06483: Principles of Engineering Exercise Physiology 4 S.H.

Prerequisites: MATH 01236 and CHEM 06100

This course introduces students to chemical engineering fundamentals applied to physiologic systems, primarily during exercise. The basic biochemistry and physiology required for understanding these systems is presented. Basic principles of mass transfer, heat transfer, fluid flow, thermodynamics, and chemical reaction are used to analyze the human metabolic system, respiratory system, cardiovascular system, and thermal system. The interrelationships of these systems will be investigated, and their dynamic response to exercise will be studied. Laboratory experiments will be conducted throughout the course. This course is jointly taught with the Department of Health and Exercise Science.

CHE 06484: Fundamentals of Controlled Release 3 S.H.

Controlled release systems are designed to provide delivery of an agent at a pre-determined rate for an extended period of item. 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 06485: Fundamentals of Engineering Quality Control 3 S.H.
Prerequisites: MATH 01235 and MATH 01236
This course will expose students to the fundamental principles of engineering quality control and process controller design. Students will learn basic control charting techniques and process capability assessment. The course will include process monitoring and control techniques routinely used in industry and expose students to the relevance of these techniques in the design and development of processes and process safety and risk assessment. The course will include numerous examples from a wide range of engineering applications and industries.

CHE 06486: Membrane Processes 3 S.H.
Prerequisites: CHEM 06105 and MATH 01131 or MATH 01141 or CHEM 06100 and MATH 01131
Principles of membrane processes: reverse osmosis, ultrafiltration, microfiltration, electrodialysis, prevaporation, gas permeation, and their application to traditional and emerging fields. Membrane materials and structure. Mass transfer and design aspects for both liquid and gas seperation systems.

CHE 06490: Special Topics in Chemical Engineering: Topic 3 S.H.
Prerequisites: MATH 01131 or MATH 01141 and CHEM 06100 or MATH 01131 or MATH 01141 and CHEM 06105
This course presents chemical engineering topics related to recent developments in industrial practice or research. May be repeated.

Chemistry and Biochemistry

CHEM 05100: 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 05102: Chemistry of Everyday Life (Lecture and Lab) 4 S.H.
A one-semester course for the non-science major presenting an overview of General, Organic and Biochemistry. Emphasis is upon the application of chemical principles to industrial processes, environmental concerns and biologically interesting reactions. This course cannot be applied for credit toward a science major nor used as prerequisite for CHEM06.101

CHEM 05301: Chemistry in the Environment 3 S.H.
Prerequisites: MATH 03305 or ENST 94101 or CHEM 06100
This course relates the fundamentals of chemistry learned in the prerequisite course to the natural processes found in nature. It also examines how chemistry is related to environmental concerns in our modern world. The course is not desinged for majors in science and engineering.

CHEM 05310: Independent Study-Chem 1 to 6 S.H.

CHEM 05350: Forensic Chemistry (Lecture and Lab) 4 S.H.
This course considers the application of physical and chemical methods to the identification and analysis of the physical evidence associated with a crime. The course emphasizes those areas of chemistry and to a lesser extent physics, biology and geology useful for determining the evidential value of crime scene and related evidence. The laboratory experience emphasizes the application of physical and chemical analytical procedures to the examination of materials that would likely be considered evidence in a crime.

CHEM 05430: Advanced Topics in Chemistry 3 S.H.
This course covers special topics in individual areas of chemistry. Specific prerequisites are determined by the nature of the course when it is announced.

CHEM 05435: Cooperative Experience in Chemistry 3 S.H.
The goal of this course is to provide the student with the opportunity to participate in a research/development experience in a non-academic setting. The course may be taken as an advanced elective by students with Junior or Senior status for a maximum of 3 s.h. credit. It may be elected to fulfill the research requirement of the BS in Chemistry major, It can be taken more than once.

CHEM 05440: Research I 3 S.H.
This course provides individual laboratory investigation of a topic outside the scope of existing courses; laboratory and conferences are required. The results of investigation will be presented in a written and oral report.

CHEM 05441: Research II 3 S.H.
Prerequisites: CHEM 05440
This course is a continuation of CHEM05.440.

CHEM 05450: Seminar I 1 S.H.
In this course students give oral reports on topics chosen from the current chemical literature. Students must attend local professional meetings.

CHEM 06100: Chemistry I (Lecture and Lab) 4 S.H.
This course presents the basic principles involved in the study of chemistry. It emphasizes modern theories and laws used in the understanding of the structures and reactions of the elements and compounds and also includes gas laws, stoichiometry, and solution theory.

CHEM 06101: Chemistry II (Lecture and Lab) 4 S.H.
Prerequisites: CHEM 06100 or CHEM 06105
This course is a continuation of CHEM06.100. It covers these topics: equilibria, including acids and bases, complexes, and sparingly soluble compounds, thermodynamics, kinetics, electrochemistry, and solution theory. Descriptive inorganic chemistry is also covered.

CHEM 06105: Advanced College Chemistry I (Lecture and Lab) 4 S.H.
Prerequisites: High school pre-calculus or calculus, one year minimum of high school chemistry and physics
This course is designed for the beginning engineering student and other well-prepared science majors. The course covers the material in both Chemistry I & II (CHEM 06.100 and 06.101), including theories and laws used in the understanding of the structures and reactions of the elements and compounds, atomic structure, stoichiometry, thermodynamics, gas laws, states of matter, solution

theory, chemical kinetics, chemical equilibrium, acid base chemistry, precipitation reaction, redox reactions and electrochemistry. It is not recommended for those who do not have a declared science or engineering major.

CHEM 06106: Advanced College Chemistry II (Lecture and Lab) 4 S.H.
Prerequisites: CHEM 06105 or CHEM 06101 or appropriate APChem test score (4,5)
This course covers a review of CHEM 06.105, and topics such as quantum chemistry, molecular structure and bonding, crystal structures, absorption scectroscopy, coordination compounds, organic functional groups and reactions. Included also is in depth coverage of topics such as electrochemistry, equilibrium, kinetics, descriptive chemistry and selected industrial applications.

CHEM 06300: Advanced Inorganic Chemistry 4 S.H.
Prerequisites: PHYS 08400 or CHEM 08400
This course studies concepts and models of inorganic chemistry. It explains molecular geometries and other physical and chemical properties on the basis of the several chemical bonding theories and with reference to the periodic table. Students study both main group and transition element chemistries. The laboratory component emphasizes the synthesis and characterization of inorganic compounds.

CHEM 07200: Organic Chemistry I (Lecture and Lab) 4 S.H.
Prerequisites: CHEM 06101 or CHEM 06106
This course studies the chemistry of carbon compounds and their properties, structures and reactions. It emphasizes the study of the principle classes of aliphatic and aromatic compounds, which in conjunction with selected experiments, gives an understanding of the mechanisms of organic reactions. Required for science majors.

CHEM 07201: Organic Chemistry II (Lecture and Lab) 4 S.H.
Prerequisites: CHEM 07200
This course is a continuation of CHEM07.200. Required for science majors.

CHEM 07202: Industrial Organic Chemistry 3 S.H.
Prerequisites: CHEM 07200
Industrial Organic Chemistry will cover common topics found typically in Organic Chemistry II (CHEM 07.201) but will focus on the utility of this chemistry in an industrial setting. Highlights include: polymer synthesis, mineral sources of chemicals, renewable sources of chemicals, green chemistry, aromatic materials, coal, organic color chemistry, detergents, food, pharmaceutical chemistry, and others.

CHEM 07348: Biochemistry (Lecture and Lab) 4 S.H.
Prerequisites: CHEM 07201 or CHEM 07202
This course deals with chemical compounds and reactions important to the functioning of biological systems and includes a discussion of the metabolic pathways for energy production and biosynthesis.

CHEM 07357: Chemical Biology 3 S.H.
Prerequisites: CHEM 07201 or CHEM 07202
The goal of this course is to describe how chemistry is applied to biochemical and biological systems to answer specific questions. It examines the use of small, synthetic molecules that are used as probes of biochemical function as well as how to design experiments using these molecules. The course also encompasses the use of purely synthetic compounds as functional or structural mimics of biological molecules. The methods and techniques used to measure designed interactions will also be discussed.

CHEM 07405: Introduction to Polymer Chemistry 3 S.H.
Prerequisites: CHEM 07201 or CHEM 07202
This course presents an introduction to the topic of polymer chemistry. The subject matter, by its nature, crosses all the lines of specialization within chemistry. The structure, properties and synthesis of polymeric materials are covered in accordance with the recommendations of the joint polymer education committee of the American Chemical Society.

CHEM 07408: Advanced Biochemistry 4 S.H.
Prerequisites: BIOL 14348 or CHEM 07348
This course provides an in-depth study of the principles involved in biological processes. It emphasizes the significance of biochemical reactions and regulations as well as mechanisms. A thorough elucidation of the structure, function and mechanism will be presented. The overall strategy of living systems will be illustrated. The laboratory experiments will provide exposure to representative procedures and some important modern techniques.

CHEM 07410: Medicinal Chemistry 3 S.H.
Prerequisites: CHEM 07201
A study of the biochemical principles and metabolic pathways with particular emphasis on pharmaceutical applications and biotechnology. This course will focus on the molecular mechanisms of drug action and chemical basis of drug therapy. Current methods used to study medicinal chemistry including recombinant DNA, combinatorial chemistry and bioinformatics will be reviewed. A 3-D molecular modeling of drug targets and drug design will be integrated throughout the course. Clinical trials of drug case study are included.

CHEM 07431: Advanced Topics in Biochemistry 3 S.H.
This course covers special topics in individual areas of biochemistry. Specific prerequisites are determineed by the nature of the course when it is announced.

CHEM 07464: Advanced Organic Chemistry I (Lecture) - WI 3 S.H.
Prerequisites: ENGL 01112, 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 07470: Organic Spectroscopic Analysis (Lecture and Lab) 3 S.H.
Prerequisites: CHEM 07201 or CHEM 07202
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 07475: 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 07478: 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 08305: Biophysical Chemistry 4 S.H.
Prerequisites: BIOL 01101, MATH 01131, PHYS 02201, CHEM 07201 and CHEM 09250
This course covers the topics of physical chemistry and their applications in biochemistry. Topics include thermodynamics, kinetics and spectroscopy.

CHEM 08400: 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 08401: Physical Chemistry II (Lecture) 3 S.H.
Prerequisites: PHYS 08400 or CHEM 08400
This is a continuation of CHEM08.400

CHEM 08402: 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 08403: Physical Chemistry Laboratory II 2 S.H.
Prerequisites: CHEM 08401
This course is a continuation of CHEM08.402

CHEM 09250: Quantitative Analysis (Lecture and Lab) 4 S.H.
Prerequisites: CHEM 06101 or CHEM 06106
This course provides lecture and laboratory experience in classical methods of gravimetric and volumetric analyses as well as electrical and spectroscopic analyses.

CHEM 09410: Instrumental Methods (Lecture and Lab) 4 S.H.
Prerequisites: CHEM 08401 and CHEM 09250
This course covers the use of instrumental methods in the solution of chemical problems. It stresses both the theoretical and practical aspects of obtaining and interpreting data. Among the instruments considered are visible, UV, IR, NMR, AA, ICP, Raman and Mass Spectrometers as well as electrical and chromatographic techniques.

PHYS 08305: Biophysical Chemistry 4 S.H.
Prerequisites: BIOL 01101, MATH 01131, PHYS 02201, CHEM 07201 and CHEM 09250
This course covers the topics of physical chemistry and their applications in biochemistry. Topics include thermodynamics, kinetics and spectroscopy. This course also provides laboratory experience in physical methods that apply to biological systems.

Civil Engineering

CEE 08102: Engineering Graphics 2 S.H.
The course deals with the creation and interpretation of engineering drawings, maps, and plans using engineering software programs.

CEE 08103: Field Surveying 2 S.H.
The course deals with the measurement of existing and man-made land profiles. The tasks performed include measurements of drainage areas, distances, angles, and elevations; closing traverses; topographic surveys; and highway alignments.

CEE 08203: Surveying and Engineering Graphics 4 S.H.
The course deals with the measurement of existing and man-made land profiles (surveying), and the creation and interpretation of engineering drawings, maps and plans (engineering graphics). The tasks performed include the measurements of drainage areas, distances, angles, and elevations; closing traverses; topographic surveys; and highway alignments. Additional tasks include creation and interpretation of engineering plans, drawings, and maps using appropriate engineering software programs.

CEE 08301: Civil Engineering Materials 2 to 3 S.H.
Prerequisites: ENGR 01281, ENGR 01271 and 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 08305: Civil Engineering Systems 3 S.H.
Prerequisites: MATH 01131
The course deals with the theories and principles of civil engineering systems as applied to real-world analysis and design problems. The course covers four important areas of civil engineering systems: linear programming, project scheduling, probability and statistics, and engineering economics. The course includes appropriate computer applications.

CEE 08311: Environmental Engineering I 3 S.H.
Prerequisites: MATH 01236, CHEM 06105 with C- or better grade and co-requisite ENGR 01341
This course deals with topics in principles of environmental engineering, including ecosystems, water and wastewater treatment and design, and sludge/residuals management.

CEE 08312: Environmental Engineering II 3 S.H.
Prerequisites: CEE 08311 with C- or better grade.
This course deals with topics in solid and hazardous waste and air pollution engineering, including regulations, fundamentals, evaluation, management, prevention, treatment and disposal.

CEE 08342: Water Resources Engineering 3 S.H.
Prerequisites: MATH 01235 and ENGR 01341 both with C- or better grade.
This course deals with the analysis and design of basic water flow structures using the principles of hydraulics and hydrology. The topics covered in hydrology include the analysis of rainfall, runoff, groundwater flow, and stream flow. The topics covered in hydraulics include the analysis and design of hydraulic structures such as weirs, open channels, culverts, and storm sewers. The course includes

appropriate laboratory experiments and computer applications.

CEE 08351: Geotechnical Engineering 3 S.H.
Prerequisites: ENGR 01272 with C- or better grade, ENGR01341 and CEE 08301.
The course deals with the basic principles of geo-technical engineering including soil properties and soil mechanics. The study of soil properties includes soil gradation, void ratio, porosity, water content, degree of saturation, specific gravity, soil consistency, soil classification. The study of soil mechanics includes permeability, capillarity, seepage and stresses in soils. The course includes appropriate laboratory experiments.

CEE 08361: Transportation Engineering 3 S.H.
Prerequisites: CEE 08103
The course deals with the analysis, design, construction, operation, maintenance, rehabilitation, and efficiency of transportation systems and mass transit systems. The course includes a study of the impact on transportation systems caused by sociological, geographical, economic and environmental factors. The course also includes appropriate field measurements and computer applications.

CEE 08382: Structural Engineering 3 S.H.
Prerequisites: ENGR 01271 and ENGR 01272 both with C- orbetter grade.
This course deals with the analysis of simply-supported and continuous structures using classic and matrix analysis methods including integration, moment-area, conjugate beam, virtual work, force, and stiffness methods. Trusses, beams and frames are considered in the course.

CEE 08383: Analysis and Design of Steel Frames 3 S.H.
Prerequisites: CEE 08382
This course deals with the analysis and design of structural frames. Analysis using the stiffness method is emphasized. The design of frame members includes the design of steel beams and beam-columns, connections for steel frames, bracing and composite steel/concrete members. Steel joists and decking are also introduced. The course includes appropriate computer applications.

CEE 08404: Engineering Estimating for Seniors 3 S.H.
Prerequisites: ECON 04102
The course deals with the development of engineering estimates for civil engineering projects and project components including labor, materials, and equipment. Total project costs including direct and indirect costs, field and home-office costs, and contingency are covered. Also covered are the various types of civil engineering estimates including piles and 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 08412: Environmental Treatment Process Principles 3 S.H.
Topics in Fundamentals of Physiochochemical Processes in Environmental Engineering such as Absorption, Coagulation/Flocculation, Filtration, Sedimentation, Disinfection, Ion Exchange, Chemical Oxidation, Corrosion and Membranes.

CEE 08413: Introduction to Environmental Management 3 S.H.
This course deals with integrated environmental management issues and methodologies with a global perspective. Topics include environmental decision-making from a socio-economic and environmental standpoint, environmental data collection, analysis, and management, techniques for environmental assessment and feasibility case studies. The course is intended to give students an understanding of current environmental issues and tools for analysis of data for environmental management. The issues

are examined from the worldwide perspectives of science, engineering, business, and society.

CEE 08422: Site Remediation Engineering Principles 3 S.H.
This course deals with topics with site remediation engineering. Topics include site characterization, site safety, modeling site conditions, conducting feasibility studies, and designing remediation systems, such as pump and treat, stabalization, containment, treatment walls, natural attenuation, enhanced bioremediation, phytoremediation, oxidation, soil flushing, and soil vapor extraction.

CEE 08431: 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 08432: Pollutant Fate and Transport Principles 3 S.H.
This course deals with topics in characteristics and properties of organic pollutants, aquatic chemistry, transport mechanisms for pollutants (Absorption, Retardation, Attenuation, Volatilization, Biodegradation), groundwater (Properties, Flow Equations, Transport in Porous Media) and mathematical modeling.

CEE 08433: Principles of Integrated Solid Waste Management 3 S.H.
The course deals with the theories and principles of integrated solid waste management as applied to real-world analysis and design problems. The course covers the design of facilities and programs, such as landfills, composting facilities, transfer stations, collection programs, and drop-off centers, and planning of integrated systems for municipalities and counties. Computer applications are included.

CEE 08443: Advanced Water Resources Engineering for Seniors 3 S.H.
Prerequisites: CEE 08342
The fundamental theme of the course is the study of advanced topics in water resources engineering including the analysis and design of advanced hydraulic structures, hydraulic similitude and modeling, wave action, and advanced hydrology. The course includes appropriate laboratory experiments and computer applications.

CEE 08444: Principles of Hydraulic Design 3 S.H.
Prerequisites: CEE 08342
The fundamental theme of the course is the design and analysis of structures for controlling and conveying water in both the built and natural environment. Topics covered vary from year to year based upon instructor and student interests. Past topics have included open channel flow design, dams and spillways sanitary and storm sewers, culverts, pumping stations, turbomachinery, and hydraulic similitude and modeling.

CEE 08445: Principles of Environmental Fluid Mechanics 3 S.H.
Prerequisites: CEE 08342
The fundamental theme of the course is the engineering study of fluid flow in the environment. Advanced topics in water resources engineering are explored, with content varying based upon instructor and student interests. Past topics have included open channel flow, hydrology, fish passage at hydraulic structures, sediment transport, mixing in natural water bodies, and water quality modeling. The course includes appropriate laboratory and/or field experiments and computer applications.

CEE 08446: River Engineering Principles 3 S.H.
Prerequisite: CEE 08342
This course presents the theory and analytical techniques for the design and analysis of engineering projects that control or convey water in open channel systems. Topics include sediment transport, design of hydraulic structures, river restoration, and computer modeling.

CEE 08447: Watershed Engineering Principles 3 S.H.
Prerequisite: CEE 08342
This course presents the theory and analytical techniques for the design and analysis of stormwater management projects. Topics include environmental law, stormwater mitigation structures, rainfall-runoff analysis, limnology, and computer modeling.

CEE 08452: Foundation Engineering for Seniors 3 S.H.
Prerequisites: CEE 08351 with C- or better grade.
The fundamental theme of the course is the analysis and design of structural building and bridge foundations based on advanced principles of soil mechanics. These advanced principles of soil mechanics include compressibility, shear strength, and bearing capacity. The types of foundations analyzed and designed include spread footings and pile foundations. The course includes appropriate laboratory experiments and computer applications.

CEE 08453: Earth Retaining Systems for Seniors 3 S.H.
Prerequisites: CEE 08351 with C- or better grade.
The fundamental theme of the course is earth retaining systems including advanced principles of soil mechanics and analysis and design of earth retaining systems. The advanced principles of soil mechanics covered include lateral soil pressure and slope stability. The analysis and design of earth retaining systems includes slopes, embankments, retaining walls, and other systems. The course includes appropriate laboratory experiments and computer applications.

CEE 08463: Tranportation 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 08464: 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 08465: Pavement Analysis and Evaluation 3 S.H.
Prerequisites: CEE 08361
The fundamental theme of this course is the engineering study of the mechanical behavior of flexible and rigid pavements. These include understanding of the pavement response and field performance data, and design of flexible and rigid pavements. The course will include appropriate computer applications.

CEE 08473: Advanced Structural Analysis for Seniors 3 S.H.
Prerequisites: CEE 08382
The course deals with the matrix method of structural analysis. The topics covered include structural members, member joints, member end conditions, local and global structural matrices, condensation of global structural matrices, static structural analysis, and dynamic structural analysis. The course will include appropriate computer applications.

CEE 08474: Structural Mechanics 3 S.H.
Prerequisites: CEE 08383 or ME 10241 and MATH 01236
This course presents the foundations of structural mechanics. Topics include: stress and strain tensors; equilibrium; compatibility and consecutive relationships; stain energy density; energy methods for solid bodies, frames and trusses; and techniques for approximate solutions of problems.

CEE 08475: Fatigue and Fracture 3 S.H.
Prerequisites: CEE 08382 or ME 10241 and MATH 01236
This course presents the theory and analytical techniques to design structural components for cyclic loading. Topics include linear elastic fracture mechanics; S-N fatigue; fatigue crack growth; and algorithms for simulating three-dimensional crack propagation.

CEE 08481: Reinforced Concrete Design 3 S.H.
Prerequisites: CEE 08382
The course deals with the topic of reinforced concrete analysis and design. The analysis and design of reinforced concrete structural members includes types of concrete and steel, fundamentals of reinforced concrete behavior, analysis and design of rectangular and T-beams and slabs including flexural and shear behavior, development of reinforcement, deflections and crack control. Analysis and design of short reinforced concrete columns is also included. The course includes appropriate computer applications.

CEE 08484: Prestressed Concrete for Seniors 3 S.H.
Prerequisites: CEE 08481
The fundamental theme of this course is the analysis and design of prestressed concrete members for highway bridges, parking structures, office buildings, and industrial buildings. Topics covered include prestressed construction applications and materials, flexural analysis of pretensioned and post-tensioning beams, bending and shear design, loss of prestress, deflection, and composite beams. The course includes appropriate computer applications.

CEE 08485: Advanced Reinforced Concrete for Seniors 3 S.H.
Prerequisites: CEE 08481
The fundamental theme of the course is the design and analysis of advanced reinforced concrete structures and structural components including two-way slabs, footings, retaining walls, shear walls, and slender columns.

CEE 08486: Bridge Engineering for Seniors 3 S.H.
Prerequisites: CEE 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 08487: 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 08490: Civil Engineering Practice 3 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 08491: 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 08492: Civil Engineering Design Project II 2 S.H.
Prerequisites: CEE 08491
This is the second course in a sequence of two courses that will provide a meaningful design experience for teams of undergraduate civil engineering students under the direction of two or more faculty advisers. The sequence will include a thorough literature search and review, the development of a clear and concise problem statement, consultations with other faculty and industry experts, and the derivation of publishable results. The project will culminate in a final written report and oral presentation.

ENGR 01273: Strength of Materials 3 S.H.
Prerequisite: ENGR 01271
The course presents the theory and analytical techniques used in the design and analysis of engineered structural components. The course addresses the principles of stress and strain, mechanical properties of materials, and beam and bar analysis. The study of structural components includes axial forces, torsion, bending, shear, combined loading, buckling, and design. Concepts such as principal stresses, Hooke's Law for plane stress, and failure criteria are introduced.

Communication Studies

CMS 04200: Introduction To Communication Studies 3 S.H.
Introduction to Communication Studies introduces students to the field of Communication Studies by examining the various disciplines within the field. Such disciplines include interpersonal communication, communication ethics, health communication, family communication, organizational communication, intercultural communication, rhetorical studies, media studies, and others. The course also looks at the similarities and differences among the disciplines.

CMS 04205: Public Speaking 3 S.H.
Prerequisites: COMP 01112 or ENGR 01201
This course trains students in the fundamentals of public speaking, including study and practice of speech preparation and speech delivery. The goal is to enable the student to participate effectively in oral communication, as a student, professionally and as a citizen.

CMS 04210: Mass Media and Their Influences 3 S.H.
Prerequisites: ENGL 05105 or COMP 01112 or ENGR 01201 or permission of instructor
This course studies the impact on our daily lives of television, radio, films, magazines and newspapers. Students examine how the media influence politics, purchases, 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 04211: Mass Media and Their Influences - WI 3 S.H.
Prerequisites: COMP 01112 or ENGR 01201 or permission of instructor
This is a writing intensive course that studies the impact on our daily lives of television, radio, films, magazines, and newspapers. Students examine how the media influence politics, purchases, 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 04215: Fiction and Film 3 S.H.
Prereequisites: 30 credits required
This course provides comparative study of film and literature. Students learn the critical vocabulary of literature and film and enhance their understanding of both art forms. The course covers American and foreign works.

CMS 04220: 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 04225: Semantics 3 S.H.
Prerequisites: 30 credits required
This course makes students aware of the relationship between language and human behavior and of the use and abuse of verbal and non-verbal language. It emphasizes meaning, the classification and abstraction processes and the application of semantic principles to the language of literature, politics, advertising and prejudice.

CMS 04226: Semantics - WI 3 S.H.
Prerequisites: COMP 01112 or ENGR 01201 + 30 credits required
This is a writing intensive course that makes students aware of the relationship between language and human behavior and of the use and abuse of verbal and non-verbal language. It emphasizes meaning, the classification and abstraction processes and the application of semantic principles to the language of literature, politics, advertising and prejudice.

CMS 04240: Small Group Communication 3 S.H.
This course focuses on the principles and theories of communication as they relate to the small group process. It deals with the barriers to effective group discussion and leadership with corresponding remedial measures, as well as an application of small group research as it pertains to hypothetical and actual small group situations.

CMS 04241: Small Group Communication - WI 3 S.H.
Prerequisites: COMP 01112 or ENGR 01201
This is a writing intensive course that focuses on the principles and theories of communication as they relate to the small group process. It deals with the barriers to effective small group discussion and leadership with corresponding remedial measures as well as an application of small group research as it pertains to hypothetical and actual small group situations.

CMS 04250: Communication Theory 3 S.H.
Prerequisites: COMP 01112 or ENGR 01201 or permission of instructor
This sophomore-level course acquaints students with current theories as they apply to a variety of communication environments. Drawing upon a wealth of timely research, students study theories relating to interpersonal, small group, organizational, public and mass communication. The course presents theories through readings as well as extensive class discussion.

CMS 04260: Organizational Communication Theory and Research 3 S.H.
Prerequisites: Comp 01112 or ENGR 01201
Organizational Communication theory and research introduces students to the basics of organizational communication. The class will focus on how scholars and researchers study and understand the communication patterns and relationships that go on in organizations. Students will be asked to consider a variety of perspectives and theories of organizational communication while comparing them to each other and to their own experiences as organizational actors.

CMS 04270: Persuasion and Social Influence 3 S.H.
This course surveys theories and theorists dealing with the area of persuasion, beginning with the Classical Age and extending through present day empirical research. It emphasizes applying the theories to practical situations and goals.

CMS 04290: Rhetorical Theory 3 S.H.
Prerequisites: COMP 01112 or ENGR 01201
Rhetorical Theory introduces students to the concept of rhetoric and how it has been theorized from antiquity to the present. The course provides students with a systematic history of rhetorical theory and spotlights significant theorists such as Plato, Aristotle, Cicero, Blair and Burke. Students will explore how both ancient and contemporary theories of rhetoric apply to contemporary society.

CMS 04300: Ethical Issues in Human Communication 3 S.H.
Prerequisites: 58 credits required
Ethical Issues in Human Communication will address numerous ethical conundrums in our communicative activities. Specific ethical systems provide the groundwork for application to interpersonal, organizational, intercultural, political and rhetorical communication contexts. Case studies and class discussions will be used to encourage students to develop their own ethical frameworks for communication contexts.

CMS 04305: Advanced Public Speaking 3 S.H.

Prerequisites: CMS 06202 or CMS 04205 or permission of instructor

Students analyze the special problems of advanced speech composition and delivery through discussion and platform appearance. In addition to strengthening students' command of the fundamentals of public speaking, this course gives attention to rhetorical style and specialized types of speaking situations. This course may not be offered annually.

CMS 04310: Images of Gender in Popular Culture 3 S.H.

Prerequisites: COMP 01112 or ENGR 01201

This course examines the concept of gender as it is rhetorically constructed in contemporary popular culture. Students will analyze how various cultural texts (such as advertisements, popular songs, television shows, or video games) communicate what it means to be masculine and feminine in U.S. culture. The course will examine how these images have changed historically and how depictions of race, class, and sexual identity also contribute to our understandings of gender in popular culture.

CMS 04320: Communicating Gender 3 S.H.

Prerequisites: COMP 01112 or ENGR 01201

Communicating Gender will consider the theory, research, and experience of the intersection between gender and communication. Focus will be given to the ways in which gender, as a concept and set of expectations, is created through communication. Students will also consider their own individual experiences as gendered communicators while studying the varying perspectives of communication studies scholars with regard to this phenomenon.

CMS 04325: Linguistics 3 S.H.

Students study the nature of human language by examining four major components: phonology, semantics, syntax, 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.

CMS 04330: International Media Communication 3 S.H.

This course examines systems of communication from a global perspective, analyzing the historical, cultural, and philosophical influences that have shaped those systems. The course enables students to analyze the systemic effects of globalization, new technologies, regulation, efforts of various groups to control development of communication structures, inequities in communication infrastructure, so-called cultural imperialism, and the linkage between international media and diplomacy, economics, and politics.

CMS 04335: Introduction to Survey Research 3 S.H.

Prerequisites: 60 credits required

This course provides students with an understanding of research in general and survey research in particular. Theory is applied through emphasis on survey design, sampling, interviewing, tabulating and analysis of data. Students learn the "whys" and "hows" of public opinion polling by doing an actual survey.

CMS 04340: Family Communication 3 S.H.

Prerequisites: COMP 01112 or ENGR 01210

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 prospectives and theories of family communication while comparing them to each other and to their own experiences as family members.

CMS 04345: Argumentation and Debate 3 S.H.
Prerequisites: CMS 06202 or CMS 04205 or permission of instructor
This course focuses on the principles and techniques of argumentative speaking and formal debating. Students study types and tests of evidence and reasoning, and develop skills in logical persuasion, cross examination, intensive research, case preparation, and critical listening. This course may not be offered annually.

CMS 04350: Communication Studies Research Methods 3 S.H.
Prerequisites: CMS 01220 or CMS 04200 and CMS 01300 or CMS 04250
This course introduces the student to quantitative and qualitative research methods used in communication studies. Students will learn about research procedures, identification and definition of variables, sampling methods, and basic statistical methods such as discourse analysis, correlational analysis, parametric and non-parametric tests, and descriptive techniques. Students will become familiar with current communication studies research and will design and complete a research project.

CMS 04355: Communication Studies Internship I 3 S.H.
Prerequisites: 75 credits required and Communication Studies Major, or permission of instructor
Under professional supervision in the field, students practice theories and skills learned in the classroom. No part is a prerequisite for another; order is not a factor in selecting this course.

CMS 04356: Communication Studies Internship II 3 S.H.
Prerequisites: 75 credits required and Communication Studies Major, or permission of instructor
Under professional supervision in the field, students practice theories and skills learned in the classroom. No part is a prerequisite for another; order is not a factor in selecting this course.

CMS 04357: Communication Studies Internship III 6 S.H.
Prerequisites: 75 credits required and Communication Studies Major, or permission of instructor
Under professional supervision in the field, students practice theories and skills learned in the classroom. No part is a prerequisite for another; order is not a factor in selecting this course.

CMS 04360: Intercultural Communication 3 S.H.
Prerequisites: COMP 01112 or ENGR 01201
Intercultural Communication will consider the theory, research, and experience of intercultural communication. The nature of culture and its relationship to communication will be discussed. Students will be asked to consider their own experiences as intercultural communicators while studying the varying perspectives of communication studies scholars with regards to this phenomenon.

CMS 04365: Research Practice in Communication Studies 1 to 3 S.H.
Prerequisites: Completion of 75 credits required, approval of Communication Studies Department advisor.
Research Practicum in Communication Studies allows students to apply the theories and methodology learned in Communication Studies courses to a research partnership with a member of the department faculty. Students earn 1 credit for every 40 hours of work, with most practica implemented for 3 credit hours. Students keep a detailed log of working hours, prepare a portfolio representative of their practicum experience, write an analytical critique of the practicum, and are evaluated by their faculty partner as well as the practicum supervisor. In order to receive approval for this course, students must have a minimum 2.5 grade point average.

CMS 04370: Political Communication 3 S.H.
Prerequisites: COMP 01112 or ENGR 01201 and POSC 07100 or POSC 07110 or POSC 07200
Political Communication investigates the many and varied understandings of how "the political" functions symbolically in contemporary society. Most broadly the course further develops students' appreciation for the inherently political relationship between language and meaning. More specifically, it focuses on the intersections between public, political discourse, representations and manifestations of the tensions between liberalism and democracy, the performance of citizenship, and civic responsibility.

CMS 04375: Special Topics in Communication 3 S.H.
This course provides students with an opportunity to thoroughly investigate specific areas critical to the field of communication. Course topics change as new trends develop and as student interest necessitates scheduling. Topics are selected on the basis of timeliness and the availability of expert staff. General topics are announced as the course is scheduled. This course is not offered annually.

CMS 04380: Health Communication 3 S.H.
Prerequsites: COMP 01112 or ENGR 01201
Health communication will address the topic of health as it is enacted and defined in communication. Specific topics to be discussed are doctor-patient interaction, social and cultural issues of health, mass media representations of health and healthy behaviors, along with communication within health organizations.

CMS 04385: Constructing Health 3 S.H.
Prerequisites: CMS 04250 and CMS 04380
Constructing Health will address the various communicative means by which the concept and structure of "health" is socially defined. Students taking this course will study the constructs of health, medicine, the body, and normalcy as enacted in rhetorical, mediated, organizational and interpersonal communication examplars. The relationship between power and these constructions is also interrogated.

CMS 04390: Rhetorical Criticism 3 S.H.
Prerequisites: CMS 06202
This course surveys ancient to modern theories of speech criticism 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.

CMS 04405: Independent Study - Communication Studies 1 to 3 S.H.
Prerequisite: department permission
This course provides students with an opportunity to work independently on specialized communication topics under the guidance of a faculty member. Generally, this course may not be substituted for any course offered by a department in the College of Communication. In addition to departmental permission, approval by the dean is also required.

CMS 04450: Seminar in Communication Studies - WI 3 S.H.
Prerequisites: CMS 06330 or CMS 04350 and senior standing in the Communication Studies major or permission of instructor
This writing intensive course provides a seminar experience in areas of communication that are not part of the regular course offerings. Examples of potential topics include Friendship, Rhetoric of Music, Romantic Relationships, and Presidential Campaigns.

Computer Science

CS 01080: Computer Literacy 3 S.H.

This Course teaches students how to use microcomputers effectively. Students learn about computer hardware and how it functions with an operating system and application software. Computer file management, data storage, multimedia, computer architecture, local area networks, the Internet, data security, and obtaining information from a library database are included. There is extensive hands-on use of windows, word processing, spreadsheets, and the Internet. This is a Basic Skills course; credit is not applied toward graduation.

CS 01102: Introduction to Programming 3 S.H.

This course acquaints students with the logical structure of a computer, the algorithmic formulation of problems, and a modern high-level programming language. Extensive programming experience is included in the course. Proficiency equivalent to Basic Algebra II (MATH01.195) is expected for this course.

CS 01104: Introduction to Scientific Programming 3 S.H.

This course emphasizes algorithmic solutions of problems. The syntax of the programming language is also studied, as well as the writing of structured code. Proficiency equivalent to Basic Algebra II.

CS 01105: Web Literacy 3 S.H.

This is an introductory course on the world wide web, exposing how it works, and showing students how to use it appropriately. This course teaches students to create and modify basic web pages with markup languages and style directives, and how to embed non-text information such as video, images, and sound. The principles of publishing websites on the Internet and the process by which a page is delivered to end users will also be covered.

CS 01200: Computing Environments 3 S.H.

Prerequisites: CS 01080 or 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 01205: Computer Laboratory Techniques 3 S.H.

Prerequisites: CS 04113 or CS 04103

A practical introduction to the hardware, software and networks used by the Computer Science Department. A foundation in programming using the language or languages required for intermediate and advanced computer science courses will be included.

CS 01210: Introduction to Computer Networks and Data Communications 3 S.H.

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 01395: Topics in Computer Science 1 to 4 S.H.
This course enables the faculty to offer courses in advanced topics which are not offered on a regular basis. Prerequisites will vary according to the specific topic being studied.

CS 01400: Independent Study 1 to 4 S.H.

CS 04103: Computer Science and Programming 4 S.H.
This course emphasizes programming methodology, algorithms and simple data structures. A programming language rich enough to allow easy implementation of data structures is studied. Prior programming experience in any programming language is expected for this course.

CS 04110: Introduction to Programming Using Robots 3 S.H.
Prerequisites: CS 01080, or a Minimum score of 70 on theComputer Competency Exam.
This course teaches fundamental programming skills centered in the context of robot programming. Students will program small robots to perform a variety of tasks. In addition to learning a sophisticated programming language, students will gain skills in design techniques and experience working in teams to build complex systems.

CS 04112: Java for Object Oriented Programmers 2 S.H.
Prerequisites: CS 04103
This course is designed for students who have substantial programming experience in an object-oriented language, such as C++, but who need to learn Java as prerequisite knowledge for other courses in the curriculum. Students will study the syntax and semantics of Java, specifically, classes and objects, abstraction, encapsulation, data types, calling methods and passing parameters, decisions, loops, arrays and collections, documentation, testing and debugging, exceptions, design issues, inheritance, and polymorphic variables and methods.

CS 04113: Introduction to Object Oriented Programming 4 S.H.
Prerequisites: MATH 01122 or MATH 01123 or MATH 01130
Introduces the fundamental concepts of programming from an object-oriented perspective. Topics are drawn from classes and objects, abstraction, encapsulation, data types, calling methods and passing parameters decisions, loops, arrays and collections, documentation, testing and debugging, exceptions, design issues, inheritance and polymorphic variables and methods, The course emphasizes modern software engineering and design.

CS 04114: Object Oriented Programming and Data Abstraction 4 S.H.
Prerequisites: CS 04113 or (CS 04103 and CS 04112)
Objects and data abstraction continues from Introduction to Object-Oriented Programming to the methodology of programming from an object-oriented perspective. Through the study of object design, this course also introduces the basics of human-computer interfaces, graphics, with an emphasis on software engineering. A second operating system/programming platform is introduced.

CS 04115: 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 04140: Enterprise Computing I 4 S.H.

Prerequisites: CS 01080, or minimum score of 70 on the Computer Competency Exam

This course will acquaint students with data representation, data organization and data storage utilizing basic data structures. Students will perform basic file manipulation by reading data from files, writing data to files and data file formatting. Students will also understand basic logic, basic object oriented design and programming and the concepts of software engineering. Proficiency equivalent to Basic Algebra II (MATH01.195) is expected for this course.

CS 04141: Enterprise Computing II 3 S.H.

Prerequisites: CS 04140

This course is designed to extend the material presented in Enterprise Computing I by applying object oriented design and software engineering principles to develop a small scale enterprise system. This course will acquaint students with advanced features and data structures. Students will also understand basic graphical programming, event driven programs, exception handling and web programming.

CS 04222: Data Structures and Algorithms 4 S.H.

Prerequisites: CS 04.114 (C- or better) and MATH 03.160

This course features programs of realistic complexity. The programs utilize data structures (string, lists, graphs, stacks, trees) and algorithms (searching, sorting, etc.) for manipulating these data structures. The course emphasizes interactive design and includes the use of microcomputer systems and direct access data files

CS 04225: 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.

CS 04233: Structured Design and Programming Using COBOL 3 S.H.

Prerequisites: CS 01102 or CS 04113 or CS 04103

In this course students learn to write structured programs in COBOL. It includes a description of the language and a comparison with other languages. It emphasizes structured modular programming and documentation such as hierarchy charts (HIPO) and flow charts. Prior programming experience in any programming language is expected for this course.

CS 04234: Advanced Structured Design and Programming Using COBOL 3 S.H.

Prerequisites: CS 04233

This course prepares students for professional proficiency in the COBOL programming language, and includes structured and modular programming, top-down design, hierarchy charts and flow diagrams, table handling, sorting, searching, report preparation, character manipulation, sequential and ISAM files, programming standards and the transaction-master update problem.

CS 04305: Web Programming 3 S.H.

Prerequisites: CS 01205 and CS 04222

This course introduces the student to some of the underlying software components of the World Wide Web as it currently exists. Topics include markup languages, scripting languages, programming languages such as Java, and other software components of the Web.

CS 04315: Programming Languages 3 S.H.

Prerequisites: (CS 04222 or CS 04225) and (CS 06205 or/and CS 06.205)

A study of the fundamental principles underlying the design of programming languages. Students will study two or more languages from contrasting programming paradigms such as Functional, Object-Oriented, Logical, or Concurrent.

CS 04325: Programming in Ada 3 S.H.

Prerequisites: CS 04222

Students will gain an understanding of the major concepts of the programming language Ada. They will learn how the constructs of the Ada language can be used to produce software which is portable, readily maintained and modified, and efficiently designed. Students will do several programming projects in Ada, and will be exposed to problems in the design of real-time systems and concurrent programming.

CS 04327: Power Java 3 S.H.

Prerequisites: CS 04222

This advanced programming course explores the power of the Java programming language. It looks at the advanced features provided in Java: reflection and proxies, interfaces and inner classes, graphics programming, the event listener model, event handling, Swing user interface components, graphical user interface design, object serialization, multithreading, network programming, remote objects and remote method invocation, collection classes, database connectivity, and JavaBeans.

CS 04380: Object Oriented Design 3 S.H.

Prerequisites: CS 07340

This course will introduce important concepts, such as inheritance and polymorphism, which are crucial tools needed for crafting object-oriented solutions to real-world problems. Design patterns that commonly occur in design situations will be covered. A formal notation for describing and evaluating object-oriented designs such as the Unified Modeling Language (UML) will be taught. Students will apply the concepts to design and implement object-oriented solutions to one or more reasonably sized real-world problems.

CS 04390: Operating Systems 3 S.H.

Prerequisites: CS 04222 and CS 06205

The course concentrates on the design and functions of the operating systems of multi-user computers. Its topics include time sharing methods of memory allocation and protection, files, CPU scheduling, input-output management, interrupt handling, deadlocking and recovery and design principles. The course discusses one or more operating systems for small computers, such as UNIX.

CS 04391: Concurrent Programming 3 S.H.

Prerequisites: CS 04390

Introduces the motivation for and fundamental concepts of concurrent programming. Topics include processes, threads, context switching, atomic instructions/actions, shared data, race conditions, critical sections, mutual exclusion, synchronization, locks, barriers, semaphores, monitors, shared-memory multiprocessors, and an overview of distributed programming (distributed-memory multicomputers, interprocess communication, message passing, remote procedure call, rendezvous). The course includes developing concurrent programming skills by using a language that supports the multithreaded paradigm.

CS 04392: System Programming and Operating System Internals 3 S.H.
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 04394: 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 04400: Computer Science - Senior Project 3 S.H.
Prerequisites: CS 04315 and CS 07340
This is an advanced programming course in which students work on large-scale individual or team programming projects and make a formal presentation on their work. The course discusses program development, methodologies and strategies.

CS 04401: 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 04430: 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 06205: Computer Organization 3 S.H.
Prerequisites: CS 04113 and MATH 03160 or CS 04103 and MA03160
This course provides an introduction to computer organization. Students are exposed to the register level architecture of a modern computer and its assembly language. The topics include machine level data representation, von Neumann architecture and instruction execution cycle, memory hierarchy, I/O and interrupts, instruction sets and types, addressing modes, instruction formats and translation. This course is not open to students who have taken CS04.204 Assembly Language Programming.

CS 06310: Principles of Digital Computers 3 S.H.
Corequisites: CS 06311 Prerequisites: CS 06205
This course provides an introduction to the fundamentals of computer hardware systems. The topics include digital logic, combinational circuits, sequential circuits, memory system structure, bus and interconnection structure, computer arithmetic and the ALU unit, I/O system structure, hardwired control unit, microprogrammed control unit, and alternative computer architectures. This course is not open to students who have taken CS06.370 Digital Design and Lab.

CS 06311: Digital Computer Laboratory 1 S.H.

Corequisites: CS 06310 Prerequisites: CS 06205

This lab course provides the student with hands-on experience in the design and implementation of digital components. State-of-the-art systems are used to design, test, and implement digital circuits: Combinational circuits, sequential circuits, registers, counters, datapath, arithmetic/logic units, control units, and CPU design. This course is taken concurrently with Principles of Digital Computers.

CS 06410: 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.

CS 06412: 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 06415: Wireless Networks, Protocols and Applications 3 S.H.

Prerequisites: CS 06410

This course prepares students to understand wireless networks systems, and the underlying communications technologies that make them possible. The course covers descriptive material on wireless communications technologies, and important deployed and proposed wireless networks and systems. Wireless system performance and Quality of Service capabilities are addressed. Students will prepare and deliver technical presentations on state-of-the-art topics in wireless networks and systems.

CS 06416: TCP/IP and Internet Protocols and Technologies 3 S.H.

Prerequisites: CS 06410

This is an advanced computer networking course that will expand students knowledge received in the Data Communications and Networking course. This course will examine operation of the TCP/IP protocol as well as design and architecture of the Internet. This course will cover such topics as: Medium access protocols, address resolution protocols, Internet Protocol (IP), Quality of Service, Transport Protocol, and congestion control mechanisms. This course will also include selected topics on network security and network management. Students will prepare and deliver technical presentations on state-of-the-art research topics in the Internet.

CS 06420: Embedded Systems Programming 3 S.H.

Prerequisites: CS 04390, CS 06310,CS 06311

Embedded software is used in almost every electronic device. This course deals with software issues that arise in embedded systems programming. Important concepts covered in this course will include device programming interfaces, device drivers, multi-tasking with real-time constraints, task synchronization, device testing and debugging, and embedded software development tools such as

emulators and in-circuit debuggers. These concepts will be applied to design and implement embedded software for one or more modest-sized embedded systems.

CS 07210: Foundations of Computer Science 3 S.H.
Prerequisites: C- or better in MATH 03160 and any one of the following: CS 01102, CS 04103, CS 01104 or CS 04113
This course provides an introduction to the theoretical foundations of computer science, including finite automata, context-free grammars, Turing machines, and formal logic.

CS 07310: Robotics 3 S.H.
Prerequisites: (CS 04113 and CS 04222 and MATH 01210) or (CS 04103 and CS 04225 and ENGR 01202 and MATH 01236)
This course provides an introduction to the fundamentals of robotics. Students will study robot manipulators and mobile robots, robot sensors, and robot cognition. Students will also gain experience programming in small groups, and programming in a domain where noisy and imprecise data is commonplace.

CS 07320: Software Engineering Laboratory 1 S.H.
Prerequisites: concurrent enrollment in CS 07321
This lab is designed for students who register for CS 07.321 Software Engineering I and wish to learn how to develop and structure their deliverables, as well as how to use software development tools, under faculty guidance and supervision. Real-world projects will often be provided.

CS 07321: Software Engineering I 3 S.H.
Prerequisites: (CS04.222 or CS 04.225) and (COMP 01.112 or ENGR 01.201) and (CMS 06.202 or ENGR 01.202)
An introduction to the discipline of Software Engineering. Students will explore the major phases of the Software Lifecycle, including analysis, specification, design, implementation, and testing. Techniques for creating documentation and using software development tools will be presented. Students will gain experience in these areas by working in teams to develop a software system. Proficiency in programming is expected of the students entering this course.

CS 07322: 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 phrases and student teams will create appropriate deliverables for each phase. Advanced modern software engineering topics such as critical systems, real-time systems, formal specification and validation, and project management will be covered.

CS 07340: Design and Analysis of Algorithms 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 07350: 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.

CS 07360: Introduction to Computer Graphics 3 S.H.

Prerequisites: (MATH 01210 or MATH 01235) and CS 07340

This junior/senior level course covers such topics as fundamentals of graphics devices; use of graphics language/packages; windowing and clipping; geometrical transformation in 2- and 3-D; raster display algorithms; hidden line and surface elimination; animation.

CS 07370: Introduction to Information Visualization 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 07380: 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 07422: Theory of Computing 3 S.H.

Prerequisites: CS 04222 and MATH 01131 and CS 07210

This is an advanced course in the theoretical foundations of computer science, building on the introduction provided in the Foundations of Computer Science course. It studies models of computers, such as finite automata and Turing machines, formal languages, and computability, as well as the fundamentals of complexity theory and NP-completeness.

CS 07450: 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 07460: Computer Vision 3 S.H.
This course examines the fundamental issues in computer vision and major approaches that address them. The topics include image formation, image filtering and transforms, image features, mathematical morphology, segmentation, camera calibration, stereopsis, dynamic vision, object recognition and computer architectures for vision.

CS 07470: Theory and Applications of Pattern Recognition 3 S.H.
This class will introduce a broad spectrum of pattern recognition algorithms along with various statistical data analysis and optimization procedures that are commonly used in such algorithms, with particular emphasis to engineering applications. Although mathematically intensive, pattern recognition is nevertheless a very application driven field. This class will therefore cover both theoretical and practical aspects of pattern recognition, Bayes decision theory for optimum classifiers, density estimation techniques, discriminant analysis, basic optimization techniques, introduction to basic neural network structures, unsupervised clustering techniques and more state of the art algorithm independent techniques.

CS 99300: Computer Field Experience 3 to 9 S.H.
Prerequisites: permission of instructor (note: only 3credits for CFE can be applied towards the restricted electives)
Students are assigned projects in a professional environment.

INTR 01265: Computers and Society 3 S.H.
Prerequisites: CMS 06202
This interdisciplinary course focuses upon the effects of computer systems on individuals and institutions. How computer systems are developed and operated will be related to an analysis of current trends in American society. A study of present and probably future applications of computers in such areas as management, economic planning, data collection, social engineering, education and the military will be followed by an exploration of the relationship of computer systems to problem solving orientations, bureaucratization, centralization of power, alienation, privacy, autonomy and people's self concept. This course is open to students at any level who satisfy the prerequisite and have course work in computer science or sociology or permission of instructor.

INTR 01266: Computer and Society - WI 3 S.H.
Prerequisites: CMS 06202
This interdisciplinary course focuses upon the effects of computer systems on individuals and institutions. How computer systems are developed and operated will be related to an analysis of current trends in American society. A study of present and probably future applications of computers in such areas as management, economic planning, data 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.

Economics

ECON 04100: American Economic Systems 3 S.H.
Focuses on the fundamental ideology, mechanics, development, and contemporary state of American economic system with reference to the global economy. Course is recommended for all students who want only a one semester course in economics.

ECON 04101: An Introduction to Economics-A Macroeconomic Perspective 3 S.H.
This course analyzes the overall level of economic activity in the United States and examines its major determinants, public stabilization policies, economic growth and international trade.

ECON 04102: An Introduction to Economics-A Microeconomic Perspective 3 S.H.
This course analyzes resource allocation among alternative uses. It studies consumer demand, product and factor price determination, general equilibrium and optimal income distribution.

ECON 04200: History of Economic Ideas 3 S.H.
This course investigates the development of economic thought. It analyzes the significant contribution of philosophers and economists from the works of Plato to those of Keynes.

ECON 04205: American Economic History 3 S.H.
This course surveys the process of U.S. economic development to the present day. It analyzes the factors behind the growth of the U.S. economy and the prospects for the future. This course may not be offered annually.

ECON 04210: Environmental Economics 3 S.H.
Prerequisites: ECON 04102
This course analyzes the economic causes and consequences of environmental deterioration and examines the relevant public policies. This course may not be offered annually.

ECON 04215: Current Economic Problems and Policies 3 S.H.
Prerequisites: ECON 04101 and ECON 04102
This course explores current significant problems confronting the United States' economy. This course may not be offered annually.

ECON 04225: Women in the Economy 3 S.H.
This course analyzes the economic roles of women in society and studies recent movements, policies and their implementation.This course may not be offered annually.

ECON 04269: Selected Topics in Economics 3 to 6 S.H.
Prerequisites: ECON 04101 or ECON 04102
This course focuses on a detailed study of a selected topic in economics. Students should consult the instructor regarding the course topic, methodology, and objectives. Any particular selected topic(s) may be offered once within a period of three years.

ECON 04282: Economic Statistics 3 S.H.
Prerequisites: ECON 04101, ECON 04102 and STAT 02100 or STAT 02260
This course studies statistical decision-making, linear regression, correlation and the construction and use of index numbers and time series through the explicit use of economic examples, illustrations and applications.

ECON 04292: Statistics for Economists 3 S.H.
Prerequisites: ECON 04101 and ECON 04102
This course is an introduction to the use of statistical concepts and their applications in economics. The course covers areas such as probability, hypothesis testing, regression analysis, correlation, and time series. Students cannot receive credit for both this class and Economic Statistics (ECON 04.282).

ECON 04301: Intermediate Macroeconomics 3 S.H.
Prerequisites: ECON 04101
This course analyzes in depth the factors determining the level of national income, employment, price levels and interest rates.

ECON 04302: Intermediate Microeconomics 3 S.H.
Prerequisites: ECON 04102
This course analyzes factor price determination, general equilibrium, capital theory and optimal income distribution.

ECON 04303: Principles of Economics: A Survey 3 S.H.
This course analyzes the market system and alternative mechanisms for determining prices and allocating resources. Pure competition, monopolistic competition, oligopoly and monopoly are examined. Additionally, the determinants of aggregate employment and national income, money, banking, monetary policy, international trade and finance are analyzed. This course is not available to economics majors.

ECON 04305: Money and Banking 3 S.H.
Prerequisites: ECON 04101
This course studies the operation of the money and banking system in the U.S. It stresses Federal Reserve control of money supply and credit conditions to combat inflation and unemployment. It considers monetary arrangements and problems among nations. This course may not be offered annually.

ECON 04307: Economic Development M/G 3 S.H.
Prerequisites: ECON 04101 and ECON 04102
This course studies the process of economic growth, the sources of increasing economic productivity, the resources for investment and the proper allocation of resources. This course may not be offered annually.

ECON 04310: Global Economics - M/G 3 S.H.
Prerequisites: ECON 04101 and ECON 04102
This course studies the economic aspects of globalization taking place amongst countries through linkages of international trade and commerce, foreign direct investment, short term capital flows, institutional lending, immigration, emigration, knowledge, and technology. Emphasis will be placed on the economic processes and ramifications of globalization. This course may not be offered annually.

ECON 04315: 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 04320: 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 04345: 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 04351: 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.

ECON 04360: 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 04395: 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 04410: 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 04492: Seminar in Economics WI **3 S.H.**
Prerequisites: COMP 01112, ECON 04301, ECON 04302, and either ECON 04282 or ECON 04292 or permission of instructor
This course develops the interrelationships of various theoretical and applied areas within the study of economics through the techniques of research design.

ECON 04495: Independent Study-Economics **1 to 3 S.H.**

Educational Leadership

EDSU 28100: 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.

EDSU 28205: 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 28305: 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.

Electrical Engineering

ECE 09201: 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 09202: Network II 2 S.H.

Prerequisites: ECE 09201 Minimum Grade of C

Extends network analysis principles including ac sources, transformers, and polyphase networks. The Laplace transform is developed as a method for obtaining the transient and steady-state response of a network. The frequency response of a transfer function is analyzed using Bode plots. The Fourier transform technique is used to determine the response of networks to periodic inputs. Computer-aided analysis and simulation tools are presented as methods to augment network analysis and design.

ECE 09241: Digital I 3 S.H.

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 09242: Digital II: Microprocessors 3 S.H.

Prerequisites: ECE 09443 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 09301: 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 09302: Engineering Electromagnetics II 2 S.H.
Prerequisites: ECE 09202 Minimum Grade of C and MATH 01236 and ECE 09301 Minimum Grade of C
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.

ECE 09311: 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 09312: 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 09321: 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 09322: Systems and Controls II 3 S.H.
Prerequisites: ECE 09321
This course is a continuation of Systems and Controls I with the focus on multi-input, multi-output systems. The fundamental concepts of linearity and time-invariance are introduced. The state-space description and the concept of a matrix transfer function are studied in depth, especially with respect to stability. The concepts of controllability, observability, and realizations are covered. Numerical techniques are continuously emphasized. Optimal control and nonlinear systems are also discussed. Software simulation, primarily with MATLAB and laboratory experiments, will complement and supplement the theory.

ECE 09331: Electrical Communication Systems 4 S.H.
Prerequisites: ECE 09202 Minimum Grade of C and MATH 01236and ECE 09241 and ECE 09311
This is a junior level undergraduate course that covers the fundamentals of analog and digital communication systems. Analog and digital modulation techniques are covered along with optimal receivers, concept of a matched filter, error rate and intersymbol interference. Appropriate mathematical background in Fourier transforms, probability and random variables are taught. The student is exposed to software and hardware designs.

ECE 09351: Digital Signal Processing 3 S.H.
Prerequisites: ECE 09321 Minimum Grade of C
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 09360: Electrical Engineering Clinic Consultant I 1 S.H.
Prerequisites: ENGR 01.202, MATH 01.236
This course provides the student with disciplinary background and preparation for consulting work in support of multidisciplinary clinic projects. Work and topics will be directed by the clinic discipline manager.

ECE 09362: Electrical Engineering Clinic Consultant II 1 S.H.
Prerequisites: ECE 09.360
This course provides the student advanced disciplinary background and preparation for consulting work in support of multidisciplinary clinic projects. Work and topics will be directed by the clinic discipline manager.

ECE 09400: Electrical Engineering Clinic Consultant 1 S.H.
Prerequisites: ENGR 01202
This course provides an opportunity for consulting work in support of a multidisciplinary clinic project. Work will be managed by the discipline manager.

ECE 09401: High Speed Interconnects 3 S.H.
High speed interconnects are pervasive in electronic systems. From the smallest integrated circuits to the largest worldwide networks, the ability to interconnect components, subsystems and systems is of critical importance. This course will provide a fundamental understanding of the various techniques used to achieve high-speed interconnects. Topics to be covered include: transmission lines, metal waveguides, dielectric waveguides, antennas, and electromagnetic compatibility.

ECE 09402: Topics in Electrical & Computer Engineering 1 to 3 S.H.
This course covers special topics in individual areas of Electrical and Computer Engineering. Specific prerequisites are determined by the nature of the course when it is announced.

ECE 09403: Sustainable Design in Engineering 3 S.H.

This is a senior level undergraduate elective course that covers the fundamentals of sustainable design in engineering with an emphasis on electricity and energy. Topics include energy fundamentals (forms, fuels, conversion technologies), energy use and its impacts on a globalizing economy, life cycle assessment tools and environmental management techniques, ISO14001 implementation in industry (US vs. European experience), application of sustainable engineering practice via an eco-design software tool. The student is exposed to sustainable designs in product manufacturing and energy/electricity production.

ECE 09404: Principles of Biomedical Systems and Devices 3 S.H.

As a survey of biomedical engineering, this class will introduce various systems of the human physiology from an engineering perspective. In particular, students will be introduced to signals of biological origin obtained from these systems; biosensors, transducers and bioelectrodes used to acquire such signals, along with medical quality amplifiers for measuring biopotentials. Electrical safety of medical devices; measurements of the blood pressure, blood flow, and respiratory system will also be discussed. Along with a carefully designed set of experiments, this course will provide the fundamental principles of biomedical engineering from an electrical and mechanical engineering perspective.

ECE 09405: Product Engineering 3 S.H.

This course treats product engineering from a variety of perspectives including engineering and non-engineering viewpoints to explore important elements for modern design. Techniques and tools of rapid prototyping, including virtual reality, are treated. Important course concepts are reinforced through product design experiences.

ECE 09406: Forensic Engineering and Product Liability 3 S.H.

This course examines engineering failure from both the forensics and liability perspectives. Forensic engineering seeks to discover the reason for product or system failure. Product liability seeks to assign and quantify blame for that failure. Methods of forensic engineering are presented. The implications of product liability on the design process are considered from several perspectives. The course is complemented with practical applications.

ECE 09407: Interaction Design 3 S.H.

Prerequisites: ENGR 01302

This course examines interaction design from several perspectives. The role of ergonomics is treated along with techniques of input and output interfacing. Methods and tools for virtual implementation are presented. The course is complemented with practical applications.

ECE 09408: Power System Engineering 3 S.H.

Prerequisites: ECE 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 09411: Modern Solid State Devices 3 S.H.

This is an introductory course in the fundamentals of solid state electronic devices. The course will cover the physical structure of silicon and compound semiconductor materials and the conduction processes in these materials. The p-n junction and its applications will be studied along with the principles of transistor devices. The course will address analog and switching applications and introduce basic laser operations.

ECE 09412: 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.

ECE 09413: Principles of Nondestructive Evaluation 3 S.H.

Prerequisites: ENGR 01401 or ENGR 01402

Principles of nondestructive evaluation provides an introduction to contemporary and emergent methods for the non-invasive inspection of infrastructure composed of modern engineering materials. The course covers system design and the processing and analysis of nondestructive evaluation signals. Case studies on engineering design for testing are provided.

ECE 09431: 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 09432: 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 09443: Computer Architecture I: Introduction 2 S.H.

Prerequisites: ECE 09241 Minimum Grade of C

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 09444: 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 09451: 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 09452: 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 09453: 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 09454: 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.

ECE 09455: 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 09456: 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 09460: Electrical Engineering Clinic Consultant III 1 S.H.
Prerequisites: ECE 09.362
This course provides an opportunity for instruction in principles of engineering consulting and consulting work in support of a multidisciplinary clinic project. Work will be managed by the clinic discipline manager.

ECE 09462: Electrical Engineering Clinic Consultant IV 1 S.H.
Prerequisites: Electrical Engineering Clinic Consultant I(ECE 09.360)
This course provides an opportunity for instruction in principles of engineering consulting and consulting work in support of a multidisciplinary clinic project. Work will be managed by the clinic discipline manager.

ECE 09471: 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 09481: Backplane Design 3 S.H.
This course provides an overview of backplane design for a variety of digital systems. It surveys current technologies with treatment of emerging and updated standards. Methods of analysis, synthesis, and verification of backplane systems are presented. The course is complemented with project work for typical applications.

ECE 09483: 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 09484: Mixed Signal Technology 3 S.H.
This course will extend the student's background in circuit design to include the devices and technologies used in mixed analog-digital VLSI chips for high volume applications such as hard-disk drives, cordless telephones and TVs. The course will begin with device models, fabrication technology and layout as applied to mixed analog-digital circuits. Device modeling requirements for analog work will be covered as well as models used in most modern circuit simulators. Fabrication technologies will be examined that have been developed specifically for mixed signal VLSI chips. The techniques for layout of mixed signal circuits that emphasize a high degree of analog device matching and minimum digital-to-analog interference will be covered.

ECE 09498: Seminar: Engineering Frontiers 1 S.H.
Prerequisites: ENGR 01201 and ENGR 01402 or (ENGR 01201 or COMP 01112) and ENGR 01402
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.

Engineering

ENGR 01101: Freshman Engineering Clinic I 2 S.H.

This course presents an introduction to the practice of engineering through application problems drawn from engineering disciplines chosen to amplify work drawn from supporting courses. It includes topics such as: technical communication formats; analytical tools; computer-based tools: introduction to design; engineering ethics; teamwork.

ENGR 01102: Freshman Engineering Clinic II 2 S.H.

Prerequisites: ENGR 01101, MATH 01130, PHYS 02200 and 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 01201: Sophomore Engineering Clinic I 4 S.H.

Prerquisites: ENGR 01102 and COMP 01111 and (PHYS 02200 of HONR 05185) and (MATH 01131 or MATH 01140) and (CS 01104 or CS 04103) Corequisites: (CHEM 06100 or CHEM 06105)

This course, a continuation of the Engineering Clinic series, provides expanded treatment of the practice of engineering through applications drawn from various engineering disciplines and industry. Project work includes a variety of technical communication topics, analytic and computer-based tools, including the design process, engineering ethics, safety and teamwork. The composition component presents critical thinking, reading, writing, research and argumentation.

ENGR 01202: Sophomore Engineering Clinic II 4 S.H.

Prerequisites: ENGR 01201 and (CHEM 06100 or CHEM 06105)

This course is a continuation of the Engineering Clinic sequence that provides design and design support experiences. The clinic also integrates information from supporting courses. The goal of the public speaking component is to enable students to participate effectively in oral communication, especially as related to technical presentations.

ENGR 01271: Statics 2 S.H.

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 01272: Solid Mechanics 2 S.H.

Prerequisites: ENGR 01271

The course deals with the study of solid mechanics including stress and strain, mechanical properties of materials, and beam and bar analysis. The study of beam and bars includes axial forces, torsion, bending, shear, combined loading, buckling, and design.

ENGR 01281: Material Science 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 01282: 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 01291: 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 01301: Junior Engineering Clinic I 2 S.H.
Prerequisites: ENGR 01202 and MATH 01236 and (CHEM06302 or ECE 09311 or ENGR 012720
This is one course in a sequence of courses that will provide a meaningful research and design experience for a team of undergraduate students under the direction of an engineering faculty advisor. The research topic will be chosen by mutual agreement of the undergraduate students and their advisor. The sequence will include a thorough literature search and review, the development of a clear and concise problem statement, consultations with other faculty and professional experts, and the derivation of publishable results. The research will culminate in a final written report and oral presentation.

ENGR 01302: Junior Engineering Clinic II 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 01341: 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 01342: Engineering Fluid Mechanics 3 S.H.
Prerequisite: ME 10451 and MATH 01236
This course is designed for multidisciplinary engineering students required to have an introductory knowledge of fluid flow. This course includes all of the topics of Fluid Mechanics I (ENGR 01.341) and is equivalent to ENGR 01.341. Topics covered in the area of general fluid flow include hydrostatics, Mass and Energy Balances, incompressible inviscid and viscous flows, momentum balances and dimensionless groups. Topics covered in the area of pipe flow include incompressible and compressible

flows, fluid machinery including pumps and turbines, viscous flows, boundary layers, turbulence, and pressure losses. The course includes appropriate laboratory experiments and computer applications.

ENGR 01391: 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 01401: Senior Engineering Clinic I 2 S.H.
Prerequisites: ENGR 01302
This course provides a culminating experience to the Engineering Clinic sequence. The goal of this sequence of courses is to give teams of undergraduate engineering students a meaningful, leading-edge, team-based, multidisciplinary project experience. The sequence will include a thorough literature search and review, the development of a clear and concise problem statement, consultations with other faculty and professional experts, and delivery of a final written report and oral presentation.

ENGR 01402: Senior Engineering Clinic II - WI 2 S.H.
Prerequisites: ENGR 01401
This course provides a culminating experience to the Engineering Clinic sequence. The goal of this sequence of courses is to give teams of undergraduate engineering students a meaningful, leading-edge, team-based, multidisciplinary engineering project experience. The sequence will include a thorough literature search and review, the development of a clear and concise problem statement, consultations with other faculty and professional experts, and delivery of a final written report and oral presentation.

ENGR 01410: Introduction to Finite Element Analysis 3 S.H.
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 01411: 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 01453: Introduction to Analytical 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.

ME 01453: 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 02101: Literary Studies for English Majors 3 S.H.
This course serves as an introduction to upper-level courses in the English Department and is required for freshman English majors. Using readings from all three genres, students will develop the skills and practice necessary for an analytical reading of literature and for writing critical essays about literature, using both primary and secondary sources.

ENGL 02105: 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 02107: 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 02110: Readings in British Literature 3 S.H.
Designed to give the student some idea of the scope and depth of English literature, this course deals with a limited number of writers from the earliest periods of English literature through the twentieth century. Such writers as Chaucer, Shakespeare, Milton, Swift, Wordsworth, Austen, Bronte, Dickens, Lawrence, Shaw, and Woolf are read and discussed.

ENGL 02112: Readings in Asian Literature 3 S.H.
This course provides students with some knowledge of and sensitivity to the literary traditions of India, China, and Japan. The course includes selected ancient, modern, and contemporary works from each of these three Asian cultures. Similarities and differences among these cultures, as well as between Asian and Western cultures, will be explored. Such works as the Ramayana, Shakuntala, and the Analects of Confucius, poetry of Li Po, short stories by Lu Hsun, Japanese haiku, Noh plays and short stories by modern Japanese writers will included. This course may not be offered annually.

ENGL 02113: Readings in U.S. Literature 3 S.H.
This broad review of American literature concentrates on some of the most important writings of the nineteenth and twentieth centuries, emphasizing the diversity of the American experience and including a focus on the issues of race, class, and gender. This introductory course includes works by authors such as Emerson, Thoreau, Douglass, Poe, Hawthorne, Melville, Whitman, Dickinson, Chopin, Wharton, Fitzgerald, Hemingway, Hurston, Hughes, Ellison, Wright, Morrison, and more recent writers.

ENGL 02116: Readings in Non-Western Literature 3 S.H.
Designed to give the student some knowledge of and sensitivity toward literature from around the world (exclusive of Europe and the United States), the course covers a limited number of ancient and modern works from Asia, the Near East, Africa, and Latin America. It emphasizes those perceptions, beliefs, and values that are different from ours.

ENGL 02123: Experiencing Literature 3 S.H.
This course increases students' understanding and enjoyment of literature. By studying the major forms of literature--drama, novel, poetry, and short story--students will understand some of the distinguishing characteristics of each form, the special demands each form imposes upon the thoughtful reader, and some of the most useful ways to respond to these demands.

ENGL 02130: 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 02151: Readings in Shakespeare 3 S.H.
A general-education course, this class studies six to eight representative plays by Shakespeare, including examples of all four genres - comedy, tragedy, history, and romance. The course will consider closely character, theme, language, and theatrical values. This course may not be offered annually.

ENGL 02200: Women in Literature 3 S.H.
This course examines the aesthetic, historical, and social implications of a wide range of diverse texts written by women from medieval times to the present, examining the accomplishments of such significant women writers as Pizan, Murasaki, Wollstonecraft, Eliot, Jacobs, Wharton, Chopin, Woolf, Stein, Plath, Rich, Morrison, Lessing, and other more recent writers.

ENGL 02205: Adolescent Literature 3 S.H.
This course, a 200-level elective, examines contemporary understandings of adolescence as a developmental state betwixt and between childhood and adulthood through literature that is about adolescents and their concerns. The class will explore texts adults believe suitable for adolescents that may or may not have been written with them in mind but that are regularly taught or given to young adults, as well as literature written especially for them (Y.A. Literature). Central to this course is the idea that adolescence is a culturally constructed category of identity that varies across regions, time, race, glass, gender and sexuality.

ENGL 02211: 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 ones 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 02215: 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.

ENGL 02216: 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 02217: U.S. Literature of Latino/a and Hispanic Peoples 3 S.H.
This course surveys the development of contemporary U.S. literature written in English by Latino/a and Hispanic writers. Reading selections include poems, personal essays, short fiction, novels, and drama. This course may not be offered annually.

ENGL 02228: The Modern Short Story 3 S.H.
This course traces the development of the modern short story as a distinct form of literature. Students read and analyze stories by writers of various nationalities, and explore a wide range of themes and fictional techniques.

ENGL 02231: World Mythology 3 S.H.
World Mythology provides an introduction to variety of mythologies, which may include to Mesopotamian, Egyptian, Indian, Norse, Irish, Native Americans, and Greek and Roman mythologies. This course will discuss and analyze the narratives, characters and themes in those mythologies, as well as there similarities to and influences on British and American literatures.

ENGL 02301: Literary Study Off-Campus 3 S.H.
This course permits students to study literature at important literary sites in the United States and abroad under the supervision of a faculty leader. Study includes preparatory reading, attendance at theatrical productions, tours of literary locales, theatres, writers' homes, and visits to the area's other important historical and cultural sites. Travel and program costs are borne by the students.

ENGL 02309: British Literature to Romanticism 3 S.H.
Prerequisites: COMP 01112
This course surveys the key developments and trends in British literature and language from the eighth century to the eighteenth by examining representative canonical and noncanonical literary works. The course begins with Beowulf and ends after Dr. Johnson, tracing the wealth and variety of a thousand years of poetry, drama, and prose, beginning with the earliest writings in Old English, through the

Middle Ages, the Renaissance, the Restoration, and on to the close of the Neoclassical period in the 18th century. It considers traditional "periods" and new theories and classifications of English literature. Students will learn about historical and theoretical contexts underlying the assigned readings and, in addition to proving their competence on required papers and tests, will complete a signature assignment that will demonstrate a synthesis of critical thinking, reading, and writing.

ENGL 02311: British Literature Since Romanticism 3 S.H.

Prerequisites: COMP 01112

This course, intended for English majors and minors, surveys the key developments and trends in British literature and language from the late eighteenth century to the present by examining representative canonical and emerging literary works. It closely studies the relationship between literature and the specific social, political, and economic concerns it reflects. Beginning with Wordsworth, this course surveys the major writers - and also some minor ones - of the Romantic, Victorian, and Modern periods, including poets, novelists, dramatists, and prose essayists. It includes Irish and some contemporary postcolonial writers. Students will learn about historical and theoretical contexts underlying the assigned readings and, in addition to proving their competence on required papers and tests, will complete a signature assignment that will demonstrate a synthesis of critical thinking, reading, and writing.

ENGL 02313: US Literature to Realism 3 S.H.

Prerequisites: COMP 01112

This survey, intended for English majors and minors, highlights literature in the colonial, revolutionary, and early national periods and the first half of the nineteenth century. Designed for English majors and minors, it emphasizes such writers as Edwards, Wheatley, Bradstreet, Franklin, Emerson, Thoreau, Jacobs, Poe, Douglass, Melville, Hawthorne, Dickinson, and Whitman. Students will study the relationship between literature and the specific social, political, and economic concerns it reflects. Students will learn about historical and theoretical contexts underlying the assigned readings and, in addition to proving their competence on required papers and tests, will complete a signature assignment that will demonstrate a synthesis of critical thinking, reading, and writing.

ENGL 02315: US Literature Since Realism 3 S.H.

Prerequisites: COMP 01112

This survey, intended for English majors and minors, highlights subjects such as the rise of realism and naturalism, the modernist revolution, and post-modernism. This course also investigates and defines the major themes and the developing forms of American fiction, drama, and poetry in a survey of such authors as Twain, Howells, James, Chopin, Wharton, Hurston, Crane, Dreiser, Frost, O'Neill, Hemingway, Faulkner, Eliot, Stevens, Williams, Stein, Lowell, Barthelme, Morrison, Alexie, Cisneros, and Erdrich. Students will learn about historical and theoretical contexts underlying the assigned readings and, in addition to proving their competence on required papers and tests, will complete a signature assignment that will demonstrate a synthesis of critical thinking, reading, and writing.

ENGL 02316: African American Literature Since Harlem Renaissance 3 S.H.

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 02322: 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 02327: 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 02330: 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 02338: Special 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.

ENGL 02340: Literary Theory 3 S.H.
Prerequisites: COMP 01112
Literary Theory provides an introduction to a variety of theories about both the roles of literature and how it should be read. The course may cover Ancient Greek, neo-Platonist, Renaissance, Romantic, Victorian, New Critical, Psychoanalytical, Marxist, Feminist, Deconstructive and other postmodern theories. Students will both analyze these theories and use them for interpreting a variety of literary texts.

ENGL 02345: Shakespeare I 3 S.H.
Prerequisites: COMP 01112
This course, intended for English majors and minors, focuses on the first part of Shakespeare's career. It considers traditional and emerging critical approaches to the plays as "drama" and as "theatre." It covers such early and middle plays as Richard III, The Merchant of Venice, Henry IV, As You Like It, and one major later tragedy, with an emphasis on historical and theoretical contexts underlying character, theme, style, language development, and various aspects of performance. It also examines the social, cultural, and political contexts of Shakespeare's plays for early modern and twenty-first century audiences. In addition to proving their competence on required papers and tests, students will complete a signature assignment that will demonstrate a synthesis of critical thinking, reading, and writing.

ENGL 02350: 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 02392: Independent Study (English) **3 to 6 S.H.**
The course gives students an opportunity to study independently in order to strengthen their background in a particular area of literary studies.

ENGL 02393: English Seminar I - Writing Intensive **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 02394: English Seminar II - Writing Intensive **3 S.H.**
Prerequisites: ENGL 02101 and ENGL 02393
This capstone course is required of all English majors in their senior year. Each seminar enables a small group of students to investigate intensively an area of literature under a professor competent in the field. While subjects vary annually, all seminars emphasize individual guidance, class discussion, oral and written reports, and require a long research paper.

ENGL 02410: Internship in English **3 S.H.**
This course provides the opportunity for students majoring in English to apply the skills they have developed in the course of their studies in a supervised work situation. Students will create a portfolio, keep journals, and meet with the faculty internship coordinator regularly. This course may be utilized within the 24-hour free elective distribution only.

ENGL 02417: Special Topics in Literature **3 S.H.**
Prerequisites: ENGL 02101 and COMP 01112
This course focuses on significant literary works, themes, periods, writers, or genres not normally taught or covered in the traditional upper-level electives. Repeatable when topics vary. This course may not be offered annually.

ENGL 02421: The English Novel **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 02423: 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 02424: 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 02425: 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 02430: Anglo-Saxon and Medieval Literature 3 S.H.
Prerequisites: ENGL 02101
This course studies the foundations of English language and literature from its beginnings through the fifteenth century, proceeding from the relatively limited selection of Anglo-Saxon poetry and prose to the profusion of literary genres extant in the Middle Ages. Although almost all texts will be read in translation, some attention will be devoted to understanding the major characteristics of the Anglo-Saxon language and Middle English. Selections from continental writers of the period may also be included. This course may not be offered annually.

ENGL 02440: Chaucer 3 S.H.
This course serves as an introduction to the poetry of Chaucer, to the language which he used, and to the times in which he lived. Typically, readings are taken from The Canterbury Tales and Troilus and Criseyde. This course may not be offered annually.

ENGL 02441: English Renaissance Literature 3 S.H.
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 02460: 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 02471: 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 02472: 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 02473: 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 02482: 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, Zamiatin, Sartre, Camus, Kafka, Beckett, Ionesco, and Weiss. This course may not be offered annually.

ENGL 05301: American English Grammar 3 S.H.
This course emphasizes traditional grammar and seeks to give the student a practical understanding of the structure of contemporary American English grammar. Procedures include lecture, class discussion, and the working out of grammatical problems, including sentence diagramming.

Environmental Studies

ENST 94101: Environmental Studies: Physical Perspectives 3 S.H.
This is a multidisciplinary course that examines the basic principles of biology, chemistry, geology and physics as they relate to environmental studies. Many environmental problems will be discussed. The reasons for these problems, as well as possible solutions will be explored during the course. Environmental concerns in New Jersey will provide the backbone for specific examples. Students will consider the implications and challenges of environmental problems, as well as think in a multidisciplinary way about resolving some of these pressing our endangered earth today.

ENST 94102: Environmental Studies: Social Perspectives 3 S.H.
This introductory course examines the relationship between the physical environment, social policy and human populations from a social science perspective. A human ecology approach will be used to study this relationship and analyze a variety of environmental issues. The first part of the course introduces the anthropology and the philosophy of the human ecological perspective. During the second part of the course, the physical social, psychological and political aspects of environmental issues will be examines.

ENST 94121: Field Methods and Research Design in Environmental Studies 4 S.H.
Prerequisite: ENST 94.121

ENST 94301: Environmental Ethics 3 S.H.
This is a multidisciplinary course that addresses ethical issues and concerns regarding the environment; the relationships between individual, society and the natural environment; the importance of common attitudes and prevailing world-views for understanding and responding to environmental challenges; and the need to for changes in those attitudes and world-views. Students will be encouraged to think about the profound ethical, political, economic, religious, scientific, and technological implications of these environmental challenges.

ENST 94400: Environmental Impact Assessment 3 S.H.
Prerequisites: ENST 94121
This is a three-credit, senior-level course designed to introduce students to a systematic process for predicting and evaluating the significant environmental consequences of a proposed action or undertaking. The range of environmental impact assessments and techniques including infrastructure projects, such as power plants, highways, pipelines, dams, mines, airports, incinerators and landfills will be explored. Assessment processes have also been used to consider the implications of new technologies, plans, and policies that may result in significant social, economic and biophysical effects. Finally, the course focuses on how assessment processes and techniques are designed or should be designed to be effective, efficient and fair.

ENST 94401: Seminar in Environmental Studies I 3 S.H.
Students participate in planning a research project, collecting data, and preparing a report suitable for publication. Research topics are selected according to student interests.

ENST 94402: Seminar in Environmental Studies II 3 S.H.
Students participate in planning a research project, collecting data, and preparing a report suitable for publication. Research topics are selected according to student interests.

ENST 94403: Independant Study - Environmental Studies 1 to 6 S.H.

Foreign Languages/Literature

AFRI 16440: Special Topics in Foreign Languages and Literatures 3 S.H.
Prerequisities: appropriate language proficiency as determined by the professor
This course brings new perspectives and themes to the established Foreign Languages and Literatures curriculum. Eash semester the instruction of this course rotates among faculty members who select topics according to their current scholarly interests. In this way, the course expands options for upper-level electives.

ARAB 12101: Elementary Arabic I 3 S.H.
This is a comprehensive foundation course for beginning students of Modern Standard Arabic. It offers an essential grounding for developing successful communication strategies by practicing listening comprehension and speaking skills with the sounds and characteristics of Arabic. It will also provide students with opportunities to read and write simple Arabic prose to meet their commuinication needs. It introduces students to the culture and history of the Arabic speaking world.

ARAB 12102: Elementary Arabic II 3 S.H.
Prerequisites: ARAB 12101
(Continuation of Elementary Arabic I) This course provides an expanded overview of the syntax, structures and vocabulary of Modern Standard Arabic, including extended practice in the four skill areas of listening comprehension, speaking, reading and writing. It introduces students to the culture and history of the Arabic- speaking world.

ARAB 12440: Special Topics in Foreign Languages and Literatures 3 S.H.
Prerequisities: appropriate language proficiency as determined by the professor
This course brings new perspectives and themes to the established Foreign Languages and Literatures curriculum. Eash semester the instruction of this course rotates among faculty memebers who select topics according to their current scholarly interests. In this way, the course expands options for upper-level electives.

CHIN 07101: Elementary Chinese I 3 S.H.
This is a beginning course in Chinese (Mandarin) for students who have not previously studied the language. It covers the mechanics of the Chinese language, including intensive practice in listening comprehension and speaking. It will also introduce students to basic Chinese reading and writing skills.

CHIN 07102: Elementary Chinese II 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.

CHIN 07201: 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 07211: Intermediate Chinese II 3 S.H.
Prerequisites: CHIN 07101 and CHIN 07102 and CHIN 07201
Intermediate Chinese II continues to provide students the opportunity to develop further their competence in listening comprehension and in spoken Chinese, their ability to engage in more substantial conversations in additional learning, work and social settings. It will advance and enrich their knowledge of Chinese culture enabling them to understand how to function in a culturally appropriate manner and to develop and appreciate more subtlety in language use. The course continues to help students improve their ability to read and write simple Chinese prose for their communication needs.

CHIN 07400: Independent Study - Chinese III 3 S.H.

CHIN 07440: Special Topics in Foreign Languages and Literatures 3 S.H.
Prerequisities: appropriate language proficiency as determined by the professor
This course brings new perspectives and themes to the established Foreign Languages and Literatures curriculum. Eash semester the instruction of this course rotates among faculty members who select topics according to their current scholarly interests. In this way, the course expands options for upper-level electives.

FREN 02101: 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 02102: Elementary French II 3 S.H.
(Continuation of French I) This course focuses on the students' continued development of communicative competence in French with emphasis on the four skill areas of speaking, reading, writing and listening comprehension.

FREN 02201: Intermediate French I **3 S.H.**
Prerequisites: FREN 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 02205: Oral French **3 S.H.**
Prerequisites: FREN 02211
An intermediate-level conversation course which develops a broad range of active vocabulary as well as verbal patterns leading to greater facility in manipulating the spoken language.

FREN 02211: Intermediate French II **3 S.H.**
Prerequisites: FREN 02201
This course is open to students who have had some limited contact with the French language. It offers expanded practice in listening comprehension, speaking, reading and writing.

FREN 02212: French Reading and Composition **3 S.H.**
Prerequisites: FREN 02211
This course offers a broad grammar review based on readings, practical use of the language, written compositions and dictations.

FREN 02300: French Phonetics **3 S.H.**
Prerequisites: FREN 02211
This course provides a scientific study of French based upon the international phonetic system. It emphasizes diction and phonetic transcription and the correction of individual problems in pronunciation.

FREN 02311: 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.

FREN 02315: Introduction to French Literature **3 S.H.**
Prerequisites: FREN 02212
This course presents selected representative works of French literature within their social and cultural setting from the Middle Ages to the 19th century in original French texts. The course enhances listening comprehension, speaking, reading and writing proficiency through literature.

FREN 02320: French Civilization and Culture **3 S.H.**
Prerequisites: FREN 02212
This course provides students with a more profound insight into the varied aspects of contemporary France, its civilization and culture.

FREN 02324: Appreciation of French Literature **3 S.H.**
Prerequisites: FREN 02212
This course introduces students to the reading of French literary texts. Students acquire a vocabulary of basic critical terms necessary for the discussion and analysis of narrative works, poetry and theatrical texts. Through close reading of at least one text per genre, students develop critical approaches with emphasis on the *Explication de Texte* method.

FREN 02325: Readings in Contemporary French Literature 3 S.H.
Prerequisites: FREN 02212
This course deals with the main currents shaping contemporary French literature. It selects readings which best bring into focus the characteristics of the time. It emphasizes reading as communication, with analysis and practice of the techniques of effective reading in French.

FREN 02400: History of the French Language 3 S.H.
Prerequisites: FREN 02212
This course gives students an overview of the historical evolution of French from its Latin roots to present-day varieties spoken in France and the Francophone cultures. It provides an introduction to the science of linguistics.

FREN 02410: Advanced French Composition 3 S.H.
Prerequisites: FREN 02212
This course provides a systematic study of the problems of translation and of the practical application of written patterns, thus encouraging greater command of writing skills. It gives considerable attention to stylistics.

FREN 02421: The French Short Story 3 S.H.
Prerequisites: FREN 02212
This course analyzes the French short story in its various aspects. It studies in detail selected works of major authors in the genre.

FREN 02435: Individual Study (French) 3 to 6 S.H.
Prerequisites: FREN 02212
Students may contract with an instructor to be examined on assigned readings in various areas of French literature. Non-minors may do the readings in translation; French minors must do the readings in French. No more than 3 semester hours may be taken in any one semester.

FREN 02440: Special Topics in Foreign Languages and Literatures 3 S.H.
Prerequisities: appropriate language proficiency as determined by the professor
This course brings new perspectives and themes to the established Foreign Languages and Literatures curriculum. Eash semester the instruction of this course rotates among faculty members who select topics according to their current scholarly interests. In this way, the course expands options for upper-level electives.

GERM 03101: Elementary German I 3 S.H.
This beginning course is open to students who have not previously studied German. This course covers mechanics of the language, including intensive practice in listening comprehension, speaking, reading and writing.

GERM 03102: Elementary German II 3 S.H.
(Continuation of Elementary German I) This course focuses on the studentd' continued development of communicative competance in German with emphasis on the four skill areas of speaking, reading, writing and listening comprehension.

GERM 03201: Intermediate German I **3 S.H.**
Prerequisites: GERM 03102
This course is open to students who have had some limited contact with the German language. It offers expanded practice in listening comprehension, speaking, reading and writing.

GERM 03211: Intermediate German II **3 S.H.**
Prerequisites: GERM 03201
This course is open to students who have had some limited contact with the German language. It offers expanded practice in listening comprehension, speaking, reading and writing.

GERM 03212: German Reading and Composition **3 S.H.**
Prerequisites: GERM 03211
This course offers a broad grammar review based on readings, practical use of the language, written compositions and dictations.

GERM 03320: 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.

GERM 03440: Special Topics in Foreign Languages and Literatures **3 S.H.**
Prerequisities: appropriate language proficiency as determined by the professor
This course brings new perspectives and themes to the established Foreign Languages and Literatures curriculum. Eash semester the instruction of this course rotates among faculty members who select topics according to their current scholarly interests. In this way, the course expands options for upper-level electives.

ITAL 04101: Elementary Italian I **3 S.H.**
This introductory course is open to students who have not previously studied Italian. This course studies Italian language structures and patterns and offers practice in articulating these patterns. It also gives some attention to other language skills, such as listening comprehension, speaking, reading and writing.

ITAL 04102: Elementary Italian II **3 S.H.**
(Continiation of Elementary Italian I) This course focuses on the students' continued development of communicative competence in Italian with emphasis on the four skill areas of speaking, reading, writing and listening comprehension.

ITAL 04201: Intermediate Italian I **3 S.H.**
Prerequisities: ITAL 04102
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 04211: 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.

ITAL 04440: Special Topics in Foreign Languages and Literatures 3 S.H.
Prerequisities: appropriate language proficiency as determined by the professor
This course brings new perspectives and themes to the established Foreign Languages and Literatures curriculum. Eash semester the instruction of this course rotates among faculty members who select topics according to their current scholarly interests. In this way, the course expands options for upper-level electives.

JAPA 08101: Elementary Japanese I 3 S.H.
This is a comprehensive foundation course for beginning students of modern Japanese. It offers an essential grounding for developing successful communication strategies by practicing listening comprehension and speaking skills, emphasizing the sounds and speech patterns of Japanese. It will also provide students with opportunities to read and write simple Japanese prose to meet their communication needs. It introduces students to the culture and history of the Japanese-speaking world.

JAPA 08102: Elementary Japanese II 3 S.H.
This course provides an expanded overview of the syntax, structures and vocabulary of modern Japanese, including extended practices in the four skill areas of listening comprehension, speaking, reading and writing. It introduces students to and amplifies their knowledge of the culture and history of Japan.

LAT 09101: 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 09102: Elementary Latin II 3 S.H.
This is a beginning course in Latin continuing from Elementary Latin I. It emphasizes Latin grammar and vocabulary. Students will also read representative Latin prose selections, including the writings of Caesar.

LAT 09440: Special Topics in Foreign Languages and Literatures 3 S.H.
Prerequisities: appropriate language proficiency as determined by the professor
This course brings new perspectives and themes to the established Foreign Languages and Literatures curriculum. Each semester the instruction of this course rotates among faculty members who select topics according to their current scholarly interests. In this way, the course expands options for upper-level electives.

RUSS 06101: Elementary Russian I 3 S.H.
This beginning course is open to students who have not previously studied Russian. It covers mechanics of the language, practice in articulating Russian speech patterns and reading and writing in Russian.

RUSS 06102: Elementary Russian II 3 S.H.
(Continuation of Elementary Russian I) This course focuses on the emphasis on the students' continued development of communicative competence in Russian with emphasis on the four skill areas of speaking, reading, writing and listening comprehension.

RUSS 06201: Intermediate Russian I 3 S.H.
Prerequisites: RUSS 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 06211: Intermediate Russian II 3 S.H.
Prerequisites: RUSS 06.201
This course is open to students who have had some limited contact with the Russian language. It surveys grammar and offers expanded practice, particularly in speaking and reading.

RUSS 06345: Russian Literature in Translation I 3 S.H.
This course studies the major works of Russian prose, poetry and drama of the 18th and 19th Centuries in the context of political, cultural and intellectual history.

RUSS 06347: Women in Russian Literature (in translation) 3 S.H.
This course presents the image and role of Russian women from the 18th to the 20th centuries as reflected in Russian literature. The language of instruction is English.

RUSS 06440: Special Topics in Foreign Languages and Literatures 3 S.H.
Prerequisities: appropriate language proficiency as determined by the professor
This course brings new perspectives and themes to the established Foreign Languages and Literatures curriculum. Each semester the instruction of this course rotates among faculty members who select topics according to their current scholarly interests. In this way, the course expands options for upper-level electives.

SPAN 05101: Spanish I 3 S.H.
(No prerequisite) This course introduces the Spanish language and focuses on the students' development of communicative competence in Spanish with emphasis on the four skill areas of listening, comprehension, speaking, reading and writing.

SPAN 05102: Spanish II 3 S.H.
Prerequisites: SPAN 05101
(Continuation of Spanish I) This course focuses on the students' continued development of communicative competence in Spanish with emphasis on the four skill areas of speaking, reading, writing and listening comprehension.

SPAN 05201: 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 05211: 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 05212: Spanish Reading and Composition 3 S.H.
Prerequisites: SPAN 05211
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 05250: 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 05300: Spanish Phonetics 3 S.H.
Prerequisites: SPAN 05212
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.

SPAN 05301: 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 05302: Introduction to Hispanic Linguistics 3 S.H.
Prerequisites: SPAN 05301
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 05305: 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 05312: Spanish for Business 3 S.H.
Prerequisites: SPAN 05212
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 05313: Spanish for Medical Personnel 3 S.H.
Prerequisites: SPAN 05212
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 05320: Spanish Civilization and Culture 3 S.H.
Prerequisites: SPAN 05301
This course provides an overview of the religious, political, artistic and social history of Spain.

SPAN 05321: Survey of Spanish Literature I 3 S.H.
Prerequisites: SPAN 05301
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 05322: Survey of Spanish Literature II 3 S.H.
Prerequisites: SPAN 05301
This course is a continuation of SPAN 05.321 covering works from the mid-eighteenth century to the present.

SPAN 05323: Survey of Spanish American Literature I 3 S.H.
Prerequisites: SPAN 05301
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 05324: Spanish American Civilization and Culture 3 S.H.
Prerequisites: SPAN 05301
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 05325: Readings in Contemporary Spanish Literature 3 S.H.
Prerequisites: SPAN 05301
This course examines Peninsular works of various genres from contemporary Spanish writers.

SPAN 05326: Spanish Novel 3 S.H.
Prerequisites: SPAN 05301
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.

SPAN 05327: Spanish American Poetry 3 S.H.
Prerequisites: SPAN 05301
Students are introduced to the various movements and philosophies of Spanish American poetry which begin to take shape in Spanish American Modernism and continue through the twentieth and twenty-first centuries. Students will examine its genesis and evolution as it adapts and reacts to socio-cultural, geographic and political issues.

SPAN 05328: Spanish-American Theater 3 S.H.
Prerequisites: SPAN 05301
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 05329: Survey of Spanish American Literature II 3 S.H.
Prerequisites: SPAN 05301
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 05340: Introduction to Spanish Translation 3 S.H.
Prerequisites: SPAN 05212
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 05381: Contemporary Spanish Theater 3 S.H.
Prerequisites: SPAN 05301
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 05383: Spanish-American Short Story 3 S.H.
Prerequisites: SPAN 05301
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 05400: History of the Spanish Language 3 S.H.
Prerequisites: SPAN 05301
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 05409: Advanced Spanish Grammar (WI) 3 S.H.
Prerequisites: SPAN 05301 and COMP 01112 or SPAN 05301 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 05410: Advanced Spanish Grammar and Composition 3 S.H.
Prerequisites: SPAN 05301
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 05411: Advanced Spanish Conversation 3 S.H.
Prerequisites: SPAN 05301
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 05426: Spanish-American Novel 3 S.H.
Prerequisites: SPAN 05301
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 05435: Spanish Individual Study 3 to 9 S.H.
Prerequisites: SPAN 05301
This course gives students an opportunity to study independently in order to strengthen their background in a particular area of Hispanic studies.

SPAN 05440: Special Topics in Foreign Languages and Literatures 3 S.H.
Prerequisites: SPAN 05301
This course brings new perspectives and themes to the established foreign languages and literatures curriculum. Each semester the instruction of the course rotates among faculty members with select topics according to their current scholarly interests. In this way, the course expands options for upper-level electives.

SPAN 05481: The Generation of 1898 3 S.H.
Prerequisites: SPAN 05301
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 05482: Contemporary Spanish Novel 3 S.H.
Prerequisites: SPAN 05301
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, Transicion and present-day Spain among others will be studied. Areas of emphasis include voice, narratology, discourse and gender.

SPAN 05499: Study Abroad 1 to 6 S.H.
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.

SWHL 17101: Elementary Swahili I **3 S.H.**
This beginning course is open to students who have not previously studied Swahili. It covers the mechanics of the language, including intensive practice in listening, comprehension, speaking, reading and writing. Students will also be introduced to East African life and culture.

SWHL 17102: Elementary Swahili II **3 S.H.**
This beginning course is open to students who have some limited study of Swahili. It offers expanded coverage of the mechanics of the language, including intensive practice in listening, comprehension, speaking, reading and writing. Students will develop additional knowledge of East African life and culture.

ZULU 16101: Elementary 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.

ZULU 16102: Elementary Zulu II **3 S.H.**
Prerequisites: ZULU 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.

Foundations of Education

EDUC 01104: Teaching: An Introduction to the Profession **3 S.H.**
This case-based introductory course is designed for students considering a career in teaching. It guides students through the profession, its foundations, realities, challenges, and rewards. Students will evaluate classroom practices using case studies, video methodology, and online resources. They will participate in ten (10) hours of field-based observations.

FNDS 21150: History of American Education **3 S.H.**
This course provides an in-depth study of American education from 1600 to the present, covering preschool through post-secondary education. It focuses on the social forces, sources of conflict, major educational figures and patterns of schooling during each period. In addition, the course will highlight the ways in which diversity has been accommodated, marginalized, or rejected in American education. Students will be able to identify and discuss ways in which diversity has been accomodated, marginalized, or rejected in American education.

FNDS 21230: Characteristics of Knowledge Acquisition **3 S.H.**
This course will focus on how human beings think, process information and acquire skills. Discussion of learning philosophies and applications in a variety of settings will be addressed. Methods of inquiry, reflection, motivation, creativity and critical thinking will be explored.

SMED 33420: Educational Technology **1 S.H.**
This laboratory course focuses on the use of educational technology in support of student learning, and integration of technology into the 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.

Geography-Anthropology

ANTH 02202: Introduction to Cultural Anthropology 3 S.H.

This course presents cultural anthropology as a coherent system of data and theory designed to explain the variety of human group behavior, giving special emphasis to the structure and function of non-western cultures.

ANTH 02203: Introduction to Archeology 3 S.H.

This course covers the rudiments of archeological field techniques, methods of analysis and dating methods.

ANTH 02210: Natives of South America 3 S.H.

The pre-history and cultures of native South Americans are examined in this course via the archeological record and ethnographic accounts. The concepts of culture, cultural evolution, and adaptation are emphasized while undertaking a comprehensive survey of the diverse native South American societies and their environments.This course is offered annually.

ANTH 02215: Medical Anthropology 3 S.H.

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 may not be offered annually.

ANTH 02221: Human Variation 3 S.H.

In this course, the genetic, immunological, anatomical and physiological variation among modern populations of humans across the globe is examined. The course will enable students to explain human biological adaptation to the bicultural environments in which they live, as well as to understand environmental influences on the human life cycle such as on fertility, growth, and longevity. No prerequisites

ANTH 02250: Introduction to Anthropological Linguistics 3 S.H.

Students in this interdisciplinary course will engage in the scientific study of language with particular reference to the relationships among the languages, thoughts, and cultures of speech communities living all over the world, including within the United States, France, India, Canada, Spain, Japan and Peru, among others. Additional course topics include the process of human language acquisition, structures of human language, bilingualism and the ways in which race, class, gender, and other social characteristics may be displayed through the use of language. This course is offered every other year, beginning in 2009.

ANTH 02270: New World Archaeology 3 S.H.

Prerequisites: ANTH 02203

This course covers the prehistoric and early historic cultural adaptations of the native peoples of the Americas. Emphases will be placed upon: current research trends and findings particularly in the last three decades; prehistoric cultural ecology; culture change and culture process; and current new and traditional controversies, from the earliest Native American hunter-gatherers to settled societies, animal and plant domestication, to the impact of colonization, and the impact of archaeological conservation. Students will research articles on discoveries and debates, prepare a research report, and apply learned archaeological methods in a simulated excavation. This course may not be offered annually.

ANTH 02301: Human Evolution 3 S.H.

Prerequisites: One of the following; ANTH 02201, ANTH 02221, BIOL 02100, BIOL01.104, BIOL 01110, BIOL 01113, BIOL 01310

Students of Human Evolution will study anthropological genetics and, evolutionary theory, basics of primate and human skeletal anatomy, dating and excavation techniques and the fossil evidence of hominid evolution from 7 million years ago to the present. Recent discoveries and controversies will be discussed and evaluated. The course will be offered annually.

ANTH 02310: Indians of North America 3 S.H.

This is an ethnographic and archaeological survey of the native peoples of North America, emphasizing cultural diversity and adaptation. The course will cover the time span from the settling of North America to the present. It analyzes the present-day problems of reservation life, the contributions of Native Americans, and the Native American¿s place in society. Students will analyze issues affecting Native North Americans.

ANTH 02311: People and Cultures of Africa 3 S.H.

ANTH 02312: 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-populational 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 may not be offered annually.

ANTH 02315: Forensic Anthropology 4 S.H.

Prerequisites: ANTH 02201 or BIOL 10210

Forensic Anthropology employs the methods of physical anthropology and archeology to identify human skeletal remains. Proper excavation technique for recovery of remains in order to fulfill the requirements of the legal system will be taught. Students will learn to determine age, sex, height, life history, cause of and time since death and population affinity from the human skeleton. There is a weekly Friday morning laboratory session in addition to classes. A weekend day-long excavation is required. Grading is based on homework, a case report, performance on exams and a final paper. This course may not be offered annually.

ANTH 02321: Cultural Ecology 3 S.H.

Prerequisites: ANTH 02202

This course examines the relation of human groups to their environments as mediated by culture. It emphasizes the interaction of significant variables in the natural habitat, technology, and social institutions. This course may not be offered annually.

ANTH 02322: Sex and Sex Roles in a Cross Cultural Perspective 3 S.H.

Prerequisites: ANTH 02202

This course examines the impact of sexuality on the structure of human cultures, and on how sexuality and gendered behavior are expressed and employed in different cultural contexts. This course may not be offered annually.

ANTH 02323: Anthropology of Magic and Religion in Primitive, Tribal, and Peasant Cultures 3 S.H.

This course examines the diversity of magical and religious beliefs in human cultures and explores how religious systems are interconnected with environment, economics, politics, and family structures. Course material emphasizes use of a comparative approach to explore the relationship between culture, magico-religious practices, and spirituality. The course will be offered annually.

ANTH 02326: The Maya 3 S.H.

Prerequisites: ANTH 02202 or ANTH 02310

This course traces the development of Maya culture from its earliest archaeological evidence to the eve of Old World contact, focusing on its adaptation to a variety of ecological settings, its interaction with other mesoamerican cultures, the development and transformation of city states, Mayan cosmology and world view, and the development of an indigenous system of writing. This course may not be offered annually.

ANTH 02350: Comparative Cultures 3 S.H.

Students conduct a survey and comparative study of a variety of cultures around the world, analyzing both cultural forms and the methods used by anthropologists to study them. This coursemay not be offered annually.

ANTH 02371: 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 02420: Culture and Personality 3 S.H.

This course explores how the culture into which an individual is born influences the development of that person's personality and sense of self. Course material is grounded in a cross-cultural comparative approach to understanding perception, emotion, and behavior. Child-rearing practices, psychological functions of art and religion, and various culture's responses to deviant behaviors will also be explored. This course may not be offered annually.

ANTH 02491: Independent Study in Anthropology 3 S.H.

Students have an opportunity to pursue individual specialized topics under the guidance of a staff member. This course may not be used as a substitute for a course offered by the department. This course may not be offered annually.

ANTH 02492: Undergraduate Research Seminar in Anthropology: Special Topics 3 S.H.

Students participate in planning a research project, collecting data and preparing a report suitable for publication. Subjects of research (e.g., applied anthropology, Egyptology, theory, current issues and controversies, visual anthroplogy) are selected according to student interest. This course may not be offered annually.

GEOG 06100: 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 06102: Cultural Geography 3 S.H.
This course focuses upon the varied and changing cultural environments of the world. Through a synthesis of data from many disciplines (i.e., anthropology, ecology, earth sciences, history, etc.), major cultural differences and areal patterns are identified and analyzed.

GEOG 06103: 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 06110: 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 06111: World Regional Geography 3 S.H.
A survey of the entire world that uses the regional approach to geographical analysis, this course provides students with a basic fund of geographic knowledge and concepts applicable to the contemporary world. It stresses resource distribution, environmental characteristics, population problems, food and water supplies, cultural variations and developmental strategies.

GEOG 06193: Introduction to the Mapping and Geographic Information Science 3 S.H.
This course provides the student with the conceptual tools required for intelligent and critical use interpretation and analysis of maps. In addition, the course furnishes the student with an introduction to and overview of the mapping sciences. Students learn the concepts, methods, and techniques common to the several branches of the mapping sciences and are introduced to cartography, satellite remote sensing, computer-assisted cartography, and geographical information systems. Because of its increasing importance, special emphasis is placed on geographical information systems.

GEOG 06201: 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 06301: 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 06302: 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 06303: 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 06304: 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 06305: 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 06308: 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 06310: 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 06313: 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 06315: 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 06316: Geography Research Clinic/Studio 1 to 6 S.H.
This course presents a project-based experience for students working with a faculty mentor. Modeled on the engineering clinic and a traditional planning studio, students apply knowledge gain through their previous coursework to solve a particular research, policy or planning problem. Projects will be solicited from local agencies and businesses and students will work as individuals or within teams to provide viable solutions.

GEOG 06320: 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 create cartographic compositions using the latest in geographical information system and cartographic software using the facilities of the department's computer teaching laboratory.

GEOG 06322: Remote Sensing II 3 S.H.

GEOG 06323: 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 06325: 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 by using case studies.

GEOG 06326: The Geoscience of Natural Disasters 3 S.H.
There are thousands of examples in which the forces of nature have suddenly claimed human lives and destroyed manmade constructions on a large scale. This course will introduce the nature, causes, risks, effects, and prediction of natural disasters including earthquakes, volcanic eruptions, landslides, subsidence, global climate change, severe weather, coastal erosion, floods, mass extinctions, and meteorite impacts. It will cover geologic principles and case histories of natural disasters and human responses (societal impact, mitigation strategies, and public policy).

GEOG 06327: New Jersey Applied Planning Practice 3 S.H.
This course will cover planning in New Jersey, its legal basis and how it is practiced. It will cover the specifics of the local planning boards, zoning board of appeals, master planning, planning procedures and processes. Topics such as affordable housing, regional planning coordination, smart growth, and physical design will be addressed.

GEOG 06328: Environmental/Sustainable Planning 3 S.H.
Environmental/Sustainable Planning addresses the advances and trends that are ocurring related to environmental and sustainability issues within the field of planning from a local to global perspective. The course will explore some of the national trends of environmental and sustainable planning focusing on programs such as the U.S. Green Building Council's LEED (Leadership in Energy and Environmental Design) programs for fostering green building and smart growth development. The course will also cover some specific New Jersey environmental planning issues such as the Pinelands, open space preservation and smart growth initiatives.

GEOG 06342: 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 06343: 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 06344: 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 06345: 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 06346: 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.

GEOG 06347: 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 06350: 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 06355: 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 06360: Geographic Information Systems I 3 S.H.
Prerequisites: GEOG 06193
Geographic Information Systems I (GIS I) begins with a brief history of GIS. Students are then introduced to the hardware and software components of GIS through lecture, demonstration, and hands-on laboratory exercises. Students learn GIS analysis techniques through lecture and computer laboratory sessions. Student evaluation is based on performance on examinations and computer laboratory assignments.

GEOG 06370: Water Resources Planning 3 S.H.
Water management planning and the public decision making process in metropolitan areas. Analysis of systems, resources and issues affecting water supply and treatment.

GEOG 06415: 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 leactures, demonstrations, and computer laboratory sessions. Student evaluation is based on performance on examinations and projects.

GEOG 06450: Geology of the National Parks 3 S.H.
This travelling geology course introduces students to the geology, and along the way geography, of the western United States using national parks and national monuments as field laboratories. Students will learn the basics of western geology while visiting some of the most spectacular natural regions in the world including Death Valley, the Grand Canyon, Yellowstone, Grand Teton, Crater Lake and Yosemite National Parks.

GEOG 06491: Independent Study in Geography 1 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 06493: 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 and Spring Semesters.

Health and Exercise Science

HLTH 37170: Stress Management 3 S.H.

This course focuses on the nature of stress and the impact it has on a person's health. The student will study the relationship of the physiological, psychological and social factors which contribute to one's general stress balance and develop life skills to combat the negative impact of stress.

HLTH 37180: Psychological Aspects of Health 3 S.H.

The course deals mostly with assisting students in meeting mental health problems in today's society. It emphasizes modification in behavior, effects of chemicals on behavior, the psychology of sex, the psychology of accident prevention and the psychological problems of aging. This course may not be offered annually.

HLTH 37192: Contemporary Health I 3 S.H.

This is the first in a series of two general knowledge based survey courses which provide students with knowledge of current health issues which occur in the human life cycle. Topics which will be addressed are family life and human sexuality, personal growth and development, mental and emotional health, aging and death and dying.

HLTH 37193: Contemporary Health II 3 S.H.

This is the second in a series of two general knowledge based survey courses which provide students with knowledge of current health issues which occur in the human lifecycle. Topics which will be addressed are alcohol, tobacco and other drugs, personal health, chronic and infectious diseases, environmental health and consumerism.

HLTH 37209: Health Education for Elementary School Teachers 1 S.H.

Elementary education majors will be prepared to conduct thorough and effective health education in grades K-6. This course focuses on the nature and philosophy of health education and comprehensive school health programs as well as the teacher's role in curriculum, instruction and evaluation as they impact student health-related behavior.

HLTH 37310: Foundations of Health Promotion and Fitness Management 3 S.H.

This course examines the history, purpose and current practice of health promotion and fitness in organizational settings. Concepts of the field as they relate to corporations, hospitals, non-profit community health agencies and commercial providers are discussed. Students meet with professionals in the field and learn how health promotion and fitness are addressed in different organizations. Resources for professionals in the field are reviewed. Characteristics and skills of successful professionals in this field are addressed.

HLTH 37325: Teaching Concepts of Health Education I 3 S.H.

Pre-requisite: PHED 35286

This is the first in a series of two combined pedagogy and helath education content courses which provide students with knowledge along with general scope and understanding of current health issues which occur in the human lifecycle. This course also develops an understanding of the competencies

essential for planning school health education programs. Students are given learning opportunities to develop sensitivity for the importance of integrating health education in various settings and to address the New Jersey Core Curriculum Content Standards for Comprehensive Health and Physical Education (Standards 2.1 through 2.4) Actual lesson planning and teaching experiences are required. Topics which will be addressed are Alcohol, Tobacco and Other Drugs, Personal Growth and Development, Mental and Emotional Health, Aging and Death and Dying.

HLTH 37326: Teaching Concepts of Health Education II 3 S.H.
Pre-requisite: PHED 35286
This is the second in a series of two combined pedagogy and health education content courses which provide students with knowledge along with general scope and understanding of current health issues which occur in the human lifecycle. This course also develops an understanding of the competencies essential for planning school health education programs. Students are given learning opportunities to develop sensitivity for the importance of integrating health education in various settings and to address the New Jersey Core Curriculum Content Standards for Comprehensive Health and Physical Education (Standards 2.1 through 2.4). Actual lesson planning and teaching experiences are required. Topics which will be addressed are Family Life and Human Sexuality, Personal Health, Chronic and Infectious Diseases, Environmental Health and Consumerism.

HLTH 37327: Consumer Health Decisions 3 S.H.
This course examines the rights and responsibilities of a consumer faced with increasing amounts of information related to his or her overall well-being. It examines the major problem of health fraud and the components of scientific research. The role of advertising is explored, as well as sound principles for purchasing nutrition, fitness and other health-related products and services. Students learn important concepts related to health insurance and hospitals, traditional and alternative medical care and how to better manage the decisions they make.

HLTH 37329: Laboratory in Personal Training Techniques 1 S.H.
Prerequisites: PHED 35401
This course prepares the student, with an excercise 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 excercise 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 37340: 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 37350: 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 37390: Health Problems of the Young Child 3 S.H.
Designed primarily for the early childhood and kindergarten-primary education majors, this course covers observation, detection, prevention and alleviation of physical, emotional and social health problems and disorders of the 3-8 year old child. This course may not be offered annually.

HLTH 37430: Practicum in Health Promotion and Fitness Management 3 S.H.
Prerequisites: HLTH 37340
This is an application-oriented course in which students design and implement a health promotion/ fitness program for the Rowan community. While the major emphasis is on the implementation of the program, students continue to meet weekly to discuss and evaluate their progress. Specific topics related to the field, such as legal liability and resume preparation are also addressed. In addition, students complete a formal evaluation of their professional qualities and skills for the health promotion and fitness field.

HLTH 37453: School Health Program Planning 2 S.H.
Prerequisites: PHED 35286 and HLTH 37192 or PHED 35392 or HLTH 37193
This course develops an understanding of the competencies essential in planning of health programs in schools. Students are given opportunities for integrating and correlating health in K-12 school settings. Field experiences, planning and teaching experiences are a part of this course.

HLTH 37483: Senior 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 37485: Evaluation Procedures in Health 3 S.H.
This course applies knowledge and skill in developing measuring techniques for program effectiveness, through types of research procedures related to health. It includes competence in evaluating and interpreting health-related statistical data and material from various national and international health organizations. This course may not be offered annually.

HLTH 37486: Problems and Issues in Health 3 S.H.
This course assists students in understanding current problems and issues in health solutions by examining past and possible future solutions. It stresses the latest health issues, such as AIDS, the cocaine problem, and teenage pregnancy. This course may not be offered annually.

INAR 05302: Contemporary American Family 3 S.H.
This course examines the dynamic interiors of family life, focusing on the interpersonal relationships of family members and current issues related to family life. Students choose course projects related to their professional or personal goals.

INAR 06200: Basic Nutrition 3 S.H.
Students study human nutrition through the basic knowledge of nutrients and the physiological processes involved in the utilization of food. They also develop an understanding of the ways in which age, health, social, and economic factors and other variables affect nutritional needs and food practices. A computerized dietary analysis may be one of the course requirements.

INAR 06390: Nutrition Education 3 S.H.
This course provides an overview of nutrition education and explores the various settings in which nutrition education is carried out. It introduces students to learning theory and reviews techniques and resources for teaching nutrition. Students learn to assess the needs of different learner groups and develop, select, and evaluate appropriate nutrition education materials. This course may not be offered annually.

INAR 06415: Nutrition for Fitness 3 S.H.
Prerequisites: INAR 06200
This advanced nutrition course explores the relationship between nutrition, physical fitness, performance and disease prevention. Specific topics include nutrition fraud, supplementation, ergogenic aids, diet planning for athletes and the relationship between nutrition and chronic diseases such as cancer and heart disease. In addition, students continue to develop their skills as nutrition counselors and educators.

INAR 06420: Contemporary Issues in Nutrition 3 S.H.
Prerequisites: INAR 06200
This upper-level nutrition course provides students with a forum to critically consider controversial issues in nutrition research, education and policy. The influence of governmental agencies, the food industry, the media, and consumer advocacy groups on the dietary guidelines provided for Americans is examined. Students are challenged to apply their nutrition knowledge and education skills as they provide a nutrition consultation for a client. This course is relevant for students desiring to enter the fields of public or community health upon graduation.

PHED 35103: Health and Wellness 3 S.H.
This course stresses the concepts of lifetime health and physical fitness. It examines the positive effects of exercise upon the heart and blood vessels, obesity and proper diet, body mechanics, and how the body handles stress. The course also examines the negative effects of disease, including socially transmitted diseases, substance abuse including narcotics, alcohol and tobacco, and other contemporary health-related problems. Students learn to analyze their strengths and limitations while planning a personal wellness profile which best fits their needs and interest.

PHED 35105: Introduction to Athletic Training 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 35109: Adventure and Experiential Learning 2 S.H.
This course in adventure and experiential learning activities is designed to provide the prospective students with the skills and knowledge necessary to conduct adventure and experiential learning activities in a variety of settings. A function of this course is to introduce strategies appropriate for facilitating experiential and adventure experiences for varied settings and groups. We believe that these types of activities are becoming increasingly relevant in today's society, especially in occupational

wellness. Thus, the skill and knowledge proficiency is a necessary component of leadership in a variety of settings.

PHED 35116: Safety, First Aid, and Basic Und 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 35218: 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 35219: Pathology and Evaluation of Orthopedic Injuries I 3 S.H.
Prerequisites: PHED 35218 Corequisites: PHED 35238
This course provides an examinationg of the etiology, epidemiology, pathology, and assessment of injuries and illnesses to the lower extremity. Structural, functional, and surface anatomy will be reviewed. In addition to didactic classroom time, students are also instructed, given time to practice and evaluated on pertinent athletic training psychomotor competencies and clinical proficiencies within a practical laboratory experience. There is an observational field experience associated with this class.

PHED 35220: Pathology and Evaluation of Orthopedic Injuries II 3 S.H.
Prerequisites: PHED 35219 Corequisitie: PHED 35239
This course provides an examination of the etiology, epidemiology, pathology and assessment of injuries and illnesses to the upper extremity, head, axial skeleton, chest, and thorax. Structural, functional and surface anatomy will be reviewed. In addition to didactic classroom time, students are also instructed, given time to practice and evaluated on pertinent athletic training psychomotor competencies and clinical proficiencies within a practical laboratory experience. There is an observational field experience associated with this class.

PHED 35228: Rhythmic Activities and Forms 3 S.H.
Prerequisities: PHED 35286
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 35235: 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 35238: Pathology and Evaluation of Orthopedic Injuries I (Lab) 2 S.H.
Prerequisites: PHED 35218 Corequisites: PHED 35219
This laboratory course is designed to teach the psychomotor and clinical proficiency skills necessary to perform a competent evaluation of the lower extremity and low back region. It must be taken and successfully completed in conjunction with Pathology and Evaluation of Orthopedic Injuries I before a student may continue matriculating through the Athletic Training Education Program.

PHED 35239: Pathology and Evaluation of Orthopedic Injuries II (Lab) 2 S.H.
Prerequisites: PHED 35219 and PHED 35338 Corequisites: PHED 352201
This laboratory course is desgined to teach the psychomotor and clinical proficiency skills necessary to perform a competent evaluation of the upper extremity, head, cervical and thoracic regions. It must be taken and successfully completed in conjunction with Pathology and Evaluation of Orthopedic Injuries II before a student may continue matriculating through the Athletic Training Education Program.

PHED 35241: 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 35242: 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 35270: Foundations of Fitness and Motor Development 3 S.H.
Corequisite: PHED 35286
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 35271: Movement and Meaning in Sports 3 S.H.
This course helps students understand themselves and how they relate physically to their environment. Through movement students discover, understand, control and adjust to their environment and gain an understanding of space, time and force. The course discusses exercise and sport forms. This course may not be offered annually.

PHED 35272: Technology and Assessment of Health and Exercise Science 3 S.H.
Prerequisities: CS 01050 or CS 01100 or Computer Competency Exam (70) and HES Department Acceptance
This course will prepare students in the Department of Health and Exercise Science to use computers and technology for organizing information, amplifying presentation, developing written documents, assessing client/students, gathering information, and completing research. Students will evaluate software, use peripheral devices, explore internet applications, and use non-computer media applications as they apply to their discipline. An introduction to simple statistical designs will also be a component of this course.

PHED 35286: Teaching in Learning Communities II: Foundations of Teaching Health and Physical Education 3 S.H.

Corequisite: SECD 03120 Prerequisites: EDUC 01104, Completion of Praxis I and Program acceptance

Students in this course are introduced to the profession of teaching health and physical education for pupil outcomes which address the New Jersey Core Curriculum Content Standards for Comprehensive Health and Physical Education, with specific emphasis on teaching skills, student behaviors, and the classroom environment. These three elements are discussed, analyzed and practiced through the principles of learning communities. Students explore the roles and responsibilities of teachers through the study of professional literature; class discussions and activities; simulation exercises; and direct interactions with students, teachers and administrators during on-campus and off-campus experiences. School observations are a required component of this course.

PHED 35310: Teaching Concepts of Individual & Dual Sports 3 S.H.

Prerequisites: PHED 35286

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 35320: Teaching Concepts of Team Sports 3 S.H.

Prerequisites: PHED 35285

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 35334: Advanced Emergency Care 3 S.H.

This is a sophomore level course designed primarily for athletic training majors and other allied health professionals. Students are trained in CPR for the professional rescuer as well as other advanced emergency skills. An additional observation experience in a local emergency room is required. There also is an optional lifeguarding component available in this class.

PHED 35336: Teaching Concepts of Elementary Physical Education 3 S.H.

Prerequisites: PHED 35286 and HES Department Acceptance

This course is an introductory survey course designed to help prepare health and exercise science teacher certification majors to teach relevant curriculum at the elementary school level. Students will be exposed to a number of important activities that comprise the focus of elementary school physical education. Methods, techniques and classroom management as they apply to teaching pertinent curriculum will be highlighted.

PHED 35338: Clinical Techniques in Athletic Training I 3 S.H.

Co-requisite: PHED 35358 Prerequisites: PHED 35220

This course, designed for first semester juniors, will review and evaluate psychomotor competencies and clinical proficiencies previously discussed in pre-professional course work. Students meet once per week in the Athletic Training Laboratory to practice and be evaluated on their psychomotor and clinical proficiency skills. Opportunities are also provided to discuss topics pertinent to the student's clinical residency assignment.

PHED 35339: Clinical Techniques in Athletic Training II 3 S.H.
Co-requisite: PHED 35359 Prerequisites: PHED 35338
This course, designed for second semester juniors, will review and evaluate psychomotor competencies and clinical proficiencies previously discussed in Therapeutic Modalities and topics relevant to previous course work. Students meet once per week in the Athletic Training Laboratory to practice and be evaluated on their psychomotor and clinical proficiency skills. Opportunities are also provided to discuss topics pertinent to the student's clinical residency assignment.

PHED 35340: Clinical Techniques in Athletic Training III 3 S.H.
Co-requisite PHED 35360 Prerequisites: PHED 35339
This course, designed for first semester seniors, will review and evaluate psychomotor competencies and clinical proficiencies previously discussed in Therapeutic Excercises and topics relevant to previous course work. Students meet once per week in the Athletic Training Laboratory to practice and be evaluated on their psychomotor and clinical proficiency skills. Opportunities are also provided to discuss topics pertinent to the student's clinical residency assignment.

PHED 35341: Clinical Experience in Athletic Training IV 3 S.H.
Corequisite: PHED 35361 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 35343: 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 35344: 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 35345: 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.

PHED 35347: Applied Biomechanics 3 S.H.
Prerequisites: PHED 35219 and PHED 35220
This course is designed to acquaint students with the fundamental principles involved with biomechanics and human movements. This course will discuss the kinetic and kinematics concepts and how they are applied to balance, posture, locomotion and functional activity.

PHED 35358: Residency in Athletic Training 1 S.H.
Prerequisites: PHED 35220 and acceptance in the Professional Phase of the athletic Training Education program; Corequisites: PHED 35338
This clinical education course, designed for first semester juniors, will review and evaluate, within a clinical assignment, those clinical proficiencies discussed in previous and concurrent course work using a learning-over-time model. The clinical assignment enables students to develop and assimilate patient care skills under the direct supervision of a certified athletic trainer and/or approved clinical instructor within the athletic training room, exposure to intercollegiate athletics and/or at approved affiliated sites. During this course, the student will be formally evaluated by an Approved Clinical Instructor only. This course must be takend and successfully completed in conjunction with PHED 35.338 Clinical Techniques in Athletic Training I before a student may continue to matriculate through the Athletic Training Education Program.

PHED 35359: Residency in Athletic Training II 1 S.H.
Prerequisites: PHED 35338 and PHED 35358 Corequisites: PHED 35339
This clinical education course, designed for second semester juniors, will review and evaluate, within a clinical setting, those clinical proficiencies discussed in previous and concurrent course work using a learning-over-time model. The clinical assignment enables students to develop and assimilate patient care skills under the direct supervision of a certified athletic trainer and/or approved clinical instructor within the athletic training room, exposure to intercollegiate athletics and/or at approved affiliated sites. During this course, the student will be formally evaluated by an Approved Clinical Instructor only. This course must be taken and successfully completed in conjuction with PHED 35.339 Clinical Techniques in Athletic Training II before a student may continue matriculating through the Athletic Training Education Program.

PHED 35360: Residency in Athletic Training III 1 S.H.
Prerequsites: PHED 35339 and PHED 35359; Corequisites: PHED 35340
This clinical education course, designed for first semester seniors, will review and evaluate, within a clinical setting, those clinical proficiencies discussed in previous and concurrent course work using a learning-over-time model. The clinical assignment enables students to develop and assimilate patient care skills under the direct supervision of a certified athletic trainer and/or approved clinical instructor within the athletic training room, exposure to intercollegiate athletics and/or at approved affiliated sites. During this course, the student will be formally evaluated by an Approved Clinical Instructor only. This course must be taken and successfully completed in conjuction with PHED 35.340 Clinical Techniques in Athletic Training III before a student may continue matriculating through the Athletic Training Education Program.

PHED 35361: Residency in Athletic Training IV 1 S.H.
Prerequisites: PHED 35340 and PHED 35360; Corequisites: PHED35341
This clinical education course, designed for second semester seniors, will review and evaluate, within a clinical setting, those clinical proficiencies discussed in previous and concurrent course work using a learning-over-time model. The clinical assignment enables students to develop and assimilate patient care skills under the direct supervision of a certified athletic trainer and/or approved clinical instructor

within the athletic training room, exposure to intercollegiate athletics and/or at approved affiliated sites. During this course, the student will be formally evaluated by an Approved Clinical Instructor only. This course must be taken and successfully completed in conjuction with PHED 35.341 Clinical Techniques in Athletic Training III before a student may continue matriculating through the Athletic Training Education Program.

PHED 35368: 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 35373: 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 35374: 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 35377: 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-l42. 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 35378: 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 35392: 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 35401: 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.

PHED 35405: 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 raining programs medical director associated with this course.

PHED 35412: 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 35430: 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 35450: K-12 Health and Physical Education Curriculum and 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 35452: Adapted Physical Education 3 S.H.
Prerequisites: PHED 35286, PHED 35320, PHED 35310, PHED 35270, PHED 35336, SPED 08130
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 35456: 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 35460: Clinical Practice in Health and Physical Education, Elementary 5 S.H.
Prerequisites: PHED 35392, Praxis II
This course allows teacher candidates to work under the guidance and direction of an experienced elementary health and physical education teacher. Teacher candidates gain experience and develop insight and skill in the teaching of secondary school health and physical education. An application for clinical practice must be submitted and approved through the Office of Field Experiences.

PHED 35461: Clinical Practice in Health and Physical Education, Secondary 5 S.H.
Prerequisites: 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 35465: 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.

PHED 35473: 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 35475: Therapeutic Modalities for Athletic Training 3 S.H.
Prerequisites: PHED 35220 and PHED 35239
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 35476: Therapeutic Exercises in Athletic Training - Laboratory Experiences 2 S.H.

Corequisites: PHED 35478; Prerequisites: PHED 35475

This laboratory course is designed to teach the psychomotor and lcinical proficiency skills necessary to develop psychomotor skills relevant to the use of Therapeutic Excercies. This laboratory course must be taken and successfully copleted in conjunction with Terapeutic Excercies in Athletic Training before a student may continue matriculating through the athletic Training Education Program.

PHED 35477: Psychosocial Aspects of Physical Activity 3 S.H.

Prerequisites: PSY01.107 PHED 35479

This course, designed for seniors in Athletic Training, addresses several CAATE proficiencies related to the psychosocial aspect of physical activity and injury. Topics include but are not limited to theories related to the psychological and emotional aspects of trauma and forced inactivity, the use of motivational activities towards rehabilitation, basic principles of mental preparation, relaxation, and visualization, as well as theories and techniques of interpersonal and cross-cultural communication among athletic trainers, their patients, and others involved in the health care of the patient.

PHED 35478: Therapeutic Exercises in Athletic Training 3 S.H.

Corequisites: PHED 35476; Prerequisites: PHED 35475and PHED 35447

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 35479: 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 35480: Trends in School and Community Recreation 3 S.H.

This course, an elective course for all students, assists students to develop and enhance "a worthy use of leisure" by participation in school and community recreation as well as leisure service programs and activities.

History

HIST 05100: Western Civilization to 1660 3 S.H.

This course covers the evolution of Western Culture from the Stone Age to the end of the Thirty Years War, emphasizing the medieval and early modern periods. Students study the ancient period to learn of its contribution to western culture. The course introduces students to the principles and methodology of history.

HIST 05101: Western Civilization Since 1660 3 S.H.
Prerequisites: Admitted to the Bantivoglio Honors ConcentratPrerequisites:
This course examines expansion of European culture to other world areas and the consequent changes for European life. It emphasizes the impact of the Industrial Revolution on all aspects of Western culture and introduces students to the principles and methodology of history.

HIST 05120: World History Since 1500 3 S.H.
This course studies the key changes in the patterns of interaction among the major cultures of the earth from the beginnings of European Expansion in the 1500's. The course covers the roots of European Expansion, the response of the Confucian, modern, and non-Eurasian cultures, and the emergence of a non-Western Third World Block since 1914.

HIST 05150: United States to 1865 3 S.H.
This course examines the historical roots of the American democratic traditions, with the emphasis on understanding the political, social and cultural forces developed in the new physical setting of North American and finally welded into a unified nation.

HIST 05151: United States Since 1865 3 S.H.
This course analyzes the principal political, social and cultural factors conditioning the life of the nation since the Civil War. It emphasizes the issues facing modern America by the impact of industrialization and the problems of world leadership.

HIST 05301: The American Revolution and Early Republic, 1775-1820 3 S.H.
Prerequisites: (HIST 05306 or AMST 13201) and HIST 05150
This course examines 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 05304: Islamic Civilization 3 S.H.
Prerequisites: HIST 05306
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 05306: Historical Methods-WI 3 S.H.
Prerequisites: COMP 01112
This course offers intensive training in the techniques of historical research and analysis of historical writing. Required of History majors as prerequisite for other upper-level courses.

HIST 05307: Ancient Mediterranean World 3 S.H.
Prerequisites: HIST 05306 and HIST 05100
This course begins with the earliest Near Eastern civilization and ends with the collapse of Rome. It deals with the wide diversities within this span through selected topics, using readings from primary sources and secondary interpretations. This course may not be offered annually.

HIST 05308: Modern Middle East 3 S.H.
Prerequisites: HIST 05306
This course provides an introduction to the history of the Middle East from 1800 to the present, a period of intense change in the region. It examines the transition from empires to nation states and the rise and fall of European imperialism in the area. This course is typically offered in the spring semester. This course may not be offered annually.

HIST 05310: Medieval Europe 3 S.H.
Prerequisites: HIST 05100 and HiST 05306
This course examines the development of Europe from the particularism of the feudal age to the formation of national states. It covers political evolution, integrating it with the social, economic and cultural trends giving particular stress to the reading of primary sources in translation. This course may not be offered annually.

HIST 05311: Renaissance and Reformation 3 S.H.
Prerequisites: HIST 05100 and HIST 05306
This course examines the Renaissance in Italy and northern Europe, the Protestant and Catholic Reformations and their impact upon the politics and culture of the period, the growth of a capitalistic society, overseas expansion and the beginnings of modern science. It uses reading of primary sources. This course may not be offered annually.

HIST 05312: Age of Enlightenment 1648-1789 3 S.H.
Prerequisites: (HIST 05101 or HIST 05120) and HIST 05306
This course studies Europe from the end of the Thirty Years War to the French Revolution including the significant intellectual development known as the Enlightenment, the development of the national monarchies, colonization and the colonial wars. This course may not be offered annually.

HIST 05313: Age of Revolution 1760-1815 3 S.H.
Prerequisites: (HIST 05101 or HIST 05120) and HIST 05306
This course emphasizes the dramatic changes that occurred in European society during this period. It examines the political, social, economic and intellectual factors that stimulated change, using readings in primary sources and secondary interpretations. This course may not be offered annually.

HIST 05314: Europe 1871-1914 3 S.H.
Prerequisites: (HIST 05101 or HIST 05120) and HIST 05306
This course examines the period in terms of its dual character as the climax of Enlightenment and as the source of later disillusionment. The course emphasizes Europe and not any particular country, giving particular attention to the historiographical problem of the causes of World War I. This course may not be offered annually.

HIST 05315: Twentieth Century Europe I 3 S.H.
Prerequisites: (HIST 05101 or HIST 05120) and HIST 05306
This course analyzes the major factors that have produced the unrest and disturbances of the present century. It stresses the important economic, social and intellectual trends and major political events. This course may not be offered annually.

HIST 05316: Twentieth Century Europe II 3 S.H.
Prerequisites: (HIST 05101 or HIST 05120) and HIST 05306
A continuation of in-depth analysis of the modern European historical experience, including the impact of world wars and social change. This course may not be offered annually.

HIST 05319: Ancient Greece 3 S.H.
Prerequisites: HIST 05100 and HIST 05306
This course will cover the history of ancient Greece from its prehistoric beginnings, through the flourishing and collapse of Helladic culture at the end of the Bronze Age, to the formation of the "Classical World" following the Dark Ages. Particular attention will be given to the role and importance of Homer in shaping Greek history and ideals; the rise of the city-state during the Archaic Period; the peculiarities of Sparta and Athens, and their rivalry and clash from the Persian to the Peloponnesian Wars. Emphasis shall be placed upon contemporary perceptions of, and reactions to these events as found in primary sources (in translation), and their utility for recovering and reconstructing Hellenic history.

HIST 05321: U.S. History 1820-1861 3 S.H.
Prerequisites: HIST 05150 and (HIST 05306 or AMST 13201)
This course analyzes American society and culture from 1820 to 1861 against the background of industrialization, urban development, westward movement, political campaigns, religious revivals, and evolving gender roles, race relations, and social classes. The course will also focus on the growth of the American Empire, the impact of Jacksonian democracy, and the emergence of sectional politics. This course may not be offered annually.

HIST 05322: Civil War and Reconstruction 3 S.H.
Prerequisites: HIST 05150 and (HIST 05306 or AMST 13201)
This course provides a detailed political, economic and cultural analysis of the causes of the Civil War. It makes a searching study of the years of reconstruction and their significance for our own times, giving particular emphasis to interpreting the era and its overall significance. This course may not be offered annually.

HIST 05324: Twentieth Century U.S. 3 S.H.
Prerequisites: HIST 05151 and (HIST 05306 or AMST13201)
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 05327: Victorian England 3 S.H.
Prerequisites: HIST 05306 and (HIST 05101 or HIST 05120)
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 05328: Colonial North America 1500-1775 3 S.H.
Prerequisites: HIST 05150 and (HIST 05306 or AMST 13201)
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 05329: The Gilded Age and Progressive Era, 1877-1914 3 S.H.
Prerequisites: (HIST 05306 or AMST 13201) and HIST 05151
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.

HIST 05334: US Urban History 3 S.H.
Prerequisites: HIST 05306 or AMST 13201
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 05338: America From War to War, 1914-1945 3 S.H.
Prerequisites: HIST 05306 or AMST 13201
This course will focus on federal government's role in the economy and in social life and the restructuring of the American racial, gender, and ethnic systems. A central focus of the course is the development of a mass production economy and the attendant rise of consumerism and media influence that characterized the era between the wars. This course may not be offered annualy.

HIST 05343: Russia to 1914 3 S.H.
Prerequisites: HIST 05306
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 05344: Russia Since 1914 3 S.H.
Prerequisites: HIST 05306
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 05347: Traditional Latin America 3 S.H.
Prerequisites: HIST 05306
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 05350: Modern Latin America 3 S.H.
Prerequisites: HIST 05306
This course examines the history of Latin America from 1825 to the present, including early revolutionary movements, cultural, economic, political and social development with special emphasis on the Organization of American States and United States-Latin American relations.

HIST 05351: Modern Japan 3 S.H.
Prerequisites: HIST 05306
This course offers the analysis of the developments of island East Asia (Japan) from the time of the Tokugawa Shogunate's contribution to the development of modern Japan and Japanese involvement in modern Western expansionism to the emergence of Japanese expansionism and contemporary Japan, including the various aspects which affect historical development. This course may not be offered annually.

HIST 05355: Modern China 3 S.H.
Prerequisites: HIST 05306
This course analyzes the development of mainland and island East Asia (China and Japan) from the early involvement with the rising Western expansionism to the present. This course may not be offered annually.

HIST 05362: History of Mexico and the Caribbean 3 S.H.
Prerequisites: HIST 05306
This course focuses on the development of Mexico and her Central American and Caribbean island neighbors. Although the course deals mainly with events from the time of independence to the present, it also discusses key eras in the pre-Columbian and colonial periods. This course may not be offered annually.

HIST 05371: US Legal and Constitutional History to 1870 3 S.H.
Prerequisites: HIST 05306 or AMST 31021
In this course, students will learn how American law and the Constitution developed from its English roots. This English Common law heritage of American law means that historical development is a part of contemporary law, as justices interpret a Constitution written over 200 years ago. As a part of gaining a strong foundation in American law and government, the course will pause and spend significant time exploring the Constitutional era, in order to be able to evaluate competing ideas today like "original intent" and the "evolving Constitution." The course will continue through the Reconstruction Amendments to gain perspective on how American law and the Constitution survived and changed during its first chapter.

HIST 05372: US Legal and Constitutional History since 1870 3 S.H.
Prerequisites: HIST 05306 or AMST 31021
In this course, students will learn how American law and the Constitution developed in the late 19th and early 20th century beginning with the transformative Reconstruction movements. The course is structured thematically, looking at criminal law, professionalization of the law, the expansion of the federal government, and the rise of civil rights, in order to understand the current legal culture.

HIST 05373: Civil Rights/Black Power Movements 3 S.H.
Prerequisites: HIST 05306
This course offers a profound re-examination of the Civil Rights-Black Power movements since the 1970s. Special attention is given to ongoing debates over the origins, development, regional boundaries, leadership, protest strategies, and effects of the movement. We will cover a variety of themes ranging from post-WWII racial politics, gender, interracial alliances, grassroots activism, transnational movements, and the Cold War to the constructed images of Martin Luther King, Jr.

HIST 05375: America Since 1945: The Modern Era 3 S.H.
Prerequisites: HIST 05151 and (HIST 05306 or AMST 31021)
This course is designed to provide students with an in-depth study of the social, economic, cultural, technological and political forces that shaped modern America since 1945.

HIST 05376: Afro-American History to 1865 3 S.H.
Prerequisites: HIST 05306
This course surveys the major social, economic and cultural developments of the black community from Africa to the Civil War. It emphasizes a comparison of the transition from Africa to slave culture and studies the contribution of blacks to the making of America.

HIST 05377: Afro-American History Since 1865 3 S.H.
Prerequisites: HIST 05306 or AMST 13201
This course studies the development of the black community from emancipation to contemporary America, tracing such major themes as the pattern of migration and the various methods of black protest developed and employed in the 20th century.

HIST 05379: Ancient Egypt 3 S.H.
Prerequisites: HIST 05100 and HIST 05306
This course will study the culture and history of ancient Egypt from its predynastic beginnings to its formation as the first nation state (c. 3000 BCE) through its apex as an imperial power in the New Kingdom and decline (1050 BCE). Special attention will be paid to the African and Near Eastern origins of ancient Egyptian society; the institution of kingship; the place of ancient Egypt in the development of ethics and religion; and the complexities of imperialism. Emphasis will be placed upon Egyptologists' use of primary sources and their role in the recovery and reconstruction of ancient Egyptian history.

HIST 05380: Traditional Jewish History 3 S.H.
Prerequisities: HIST 05306
This course traces the origin, faith, law and development of the Jewish people to the 16th century, with emphasis on traditional Jewish culture and values; Jewish literature, the phenomenon of anti-Semitism and the Jewish contribution to Western civilization. This course may not be offered annually.

HIST 05381: Modern Jewish History 3 S.H.
Prerequisities: HIST 05306
This course examines the development of Jewry in Poland, Germany and the U.S. with special emphasis on modern Jewish thought, Zionism, the Nazi holocaust, the rise of Israel and the situation of Judaism and Jews at the present time. This course may not be offered annually.

HIST 05394: Sub-Saharan Africa to 1800 3 S.H.
Prerequisites: HIST 05306
This course surveys the regions and cultures of sub-Saharan Africa from the earliest origins to the beginning of European colonialism to provide an appreciation of the variety and significance of historical developments prior to the coming of the Europeans. This course may not be offered annually.

HIST 05397: Sub-Saharan Africa Since 1800 3 S.H.
Prerequisites: HIST 05306
Students survey the development of sub-Saharan Africa during the colonial period and the new national period which followed, making an analysis of colonialism both as a European venture and as an episode in African historical development. This course may not be offered annually.

HIST 05404: Arab-Israeli Conflict 3 S.H.
Prerequisites: HIST 05306
This course focuses on the history and development of the Arab-Israeli conflict from its genesis in the late 19th century to the present day. It covers a variety of topics including the origins of Zionism, Palestinian nationalism, the development of the conflict before 1948, the Arab-Israeli Wars, and peace plans. It is typically offered every other year.

HIST 05406: Jewish Holocaust 1933-1945 3 S.H.
Prerequisites: HIST 0506
This course examines this unprecedented human destruction by dividing it into two phases: origins in Germany before 1939 and the war itself. Its sweep encompasses the killers, the victims of all faiths and status and the onlookers. Because this is a case study of genocide, students are urged to form their own conclusions as to its meaning for our own time. This course may not be offered annually.

HIST 05407: History of World War II 3 S.H.
Prerequisites: (HIST 05306 or AMST 13201) and (HIST 05101 or HIST 05120 or HIST 05151)
This course studies the causes and events of the Second World War with special attention to diplomatic and military history as well as to the personalities and cultural trends of the war. This course may not be offered annually.

HIST 05408: Chinese Cultural History 3 S.H.
Prerequisites: HIST 05306
This course covers essential features of Chinese culture from the 5th century BC to the present, including philosophy, religion, literature, geography, social and family structure, foreign cultural relations, and art. Students will also learn current scholarship on the subject and recent cultural trend. This course may not be offered annually.

HIST 05409: Latin American Revolutions and Reform 3 S.H.
Prerequisites: HIST 05306
This course examines the often violent movements in Latin American history directed to achieve social, economic, and political reform. It emphasizes the Mexican, Cuban, and Chilean movements. This course may not be offered annually.

HIST 05410: European Intellectual History Since the 16th Century 3 S.H.
Prerequisites: HIST 05101 and HIST 05306
This course covers the major themes in European intellectual history. It includes such topics as the birth and diffusion of the Enlightenment, Romanticism, 19th century liberalism, positivism, the Darwinian Revolution, Marxism, nationalistic thought, irrationalism in political and philosophical thought, existentialism and contemporary ideas. This course may not be offered annually.

HIST 05411: Topics in Latin American History 3 S.H.
Prerequisites: HIST 05306
This course analyzes selected topics in Latin American history since 1808. It reviews various topics and historiographical controversies. This course may not be offered annually.

HIST 05412: Intellectual History of the U.S. 3 S.H.
Prerequisites: HIST 05150 and HIST 05151 and (HIST 05306 or AMST 13201)
This course deals with the main currents in American thought and society from colonial times to the present. It emphasizes discussion of high culture as essential to the understanding of the political and economic process of the American democratic experiment. This course may not be offered annually.

HIST 05413: Comparative Race Relations: South Africa, Brazil, and the U.S. 3 S.H.
Prerequisites: (HIST 05306 or AMST 13201) and HIST 05150 and HIST 05151
This course offers a comparative examination of the development of multi-racial societies in Brazil, South Africa and the United States, and the impact of race on the political, social and economic cultures of the respective countries. This course may not be offered annually.

HIST 05414: Diplomatic History of the U.S. to 1900 3 S.H.
Prerequisites: (HIST 05306 or AMST 13201) andHIST 05150
This course surveys U.S. diplomatic history from the Revolutionary period through the emergence of the U.S. as a colonial power. The course stresses the impact of public opinion, cultural and political relations, as well as economic and strategic factors. It will analyze conflicting scholarly interpretations. This course may not be offered annually.

HIST 05415: Diplomatic History of the U.S. Since 1900 3 S.H.
Prerequisites: HIST 05151 and (HIST 05306 or AMST 13201)
This course details the U.S. attempt to cope with the international complications and responsibilities brought about by 20th-century reality. The course stresses the impact of public opinion, cultural and political relations, as well as economic and strategic factors and analyzes conflicting scholarly interpretations. This course may not be offered annually.

HIST 05417: Women in Islam 3 S.H.
Prerequisites: HIST 05306
This course aims to acquaint students with the role of women in Islam as a religion. It focuses on the wide range of women's experiences in different periods of history and in diverse Muslim societies, and introduces students to a variety of works and approaches to the field, including primary and secondary sources. The course is typically offered every other year.

HIST 05418: Women in Europe to 1700 3 S.H.
Prerequisites: HIST 05100 and HIST 05306
This course traces the changing status and experience of women from classical civilizations through the early modern period of European history. Themes covered include women's role in religious life, early women's writings, women in the age of chivalry, early modern witch hunting, and the first stirrings of feminist thought. This course may not be offered annually.

HIST 05419: Women in Modern Europe 3 S.H.
Prerequisites: (HIST 05101 or HIST 05120) and HIST 05306
This course examines the history of women in modern Europe, from the 18th century to the 20th. Themes covered include the rise of domesticity, feminism in the age of revolutions, Victorian women, changing patterns of work and family, and the rise of women's activism. This course may not be offered annually.

HIST 05422: Women in American History 3 S.H.
Prerequisites: HIST 05306 or AMST 13201
This course focuses on the role of women in American history and culture, but some consideration is also given to Western traditions, myths and ideas which have affected American women. The range of topics is almost limitless. This course may not be offered annually.

HIST 05425: History of Feminisms 3 S.H.
Prerequisite: HIST 05306
This course examines the history and origins of modern feminisms from European and American traditions to emergence in developing nations. Students will analyze and comprehend the intellectual, social, philosophical, political, and religious underpinnings of the development of feminisms from the Middle Ages to the present day in western and non-western contexts. This course may not be offered annually.

HIST 05428: Family History 3 S.H.
Prerequisites: (HIST 05101 or HIST 05120) and HIST 05306
A comparative and thematic study employing the methods and techniques of new social historians, this course gives students an understanding of the interplay between family and historical processes. This course may not be offered annually.

HIST 05429: Proseminar in History 3 S.H.
Prerequisites: (HIST 05306 or AMST 13201) and HIST 05101 and AMST 13201)
This course introduces students to in-depth historical analysis of a selected theme, including work with historical sources, critical reading of historians' accounts, intensive writing and class discussion.

HIST 05436: U.S. Home Front 1941-1945 3 S.H.
Prerequisites: HIST 05306 or AMST 13201
This course explores the lives of ordinary people under the strains of war, examining social and economic factors which undergirded the military and political decisions of World War II. This course may not be offered annually.

HIST 05437: Twentieth Century African Nationalism 3 S.H.
Prerequisites: HIST 05306
In this course students will explore the history of 20th century Africa through an in-depth analysis of independence movements from their roots in the European conquest of the continent at the turn of the century to their legacies in Africa today. This course may not be offered annually.

HIST 05438: History of the Vietnam War 3 S.H.
Prerequisites: HIST 05306 or AMST 13201
This course will explore the political, economic, military, diplomatic, social, and cultural dimensions and ramifications of the war from the perspective of all peoples involved. This course may not be offered annually.

HIST 05441: Imperialism and Colonialism 3 S.H.
Prerequisites: HIST 05306 or AMST 13201
This course analyzes nineteenth and twentieth century imperialism in terms of its meaning, origins and development. It emphasizes institutional background, theory and practice and the "national liberation" movements, using readings in primary sources and secondary interpretations. This course may not be offered annually.

HIST 05443: Global Proseminar in History 3 S.H.
Prerequisites: HIST 05306
This course introduces students to in-depth historical analysis of a selected theme in global historym, including work with historical sourcesm, critical reading of historians' accountsm, intensive writing and class discussion. Past and proposed topics include the partition of Africa and Islamic reform movements.

HIST 05445: History of the Cold War 3 S.H.
Prerequisites: HIST 05306 or AMST 13201
This course explores the history of the Cold War by combining lecture and class discussion in a format that seeks to immerse students in the complex series of peaceful and violent interactions between the Soviet Union and the United States (and their allies and client states) that made up the Cold War. The course will focus on several critical issues and the dabates among historians over their causes and outcomes. Those issues include: the origins of the Cold War, Stalin and the Soviet system, the Berlin Crisis, war on the Korean peninsula, the Cuban Missile Crisis, the Vietnam War, detante, and the collapse of the Communist Bloc. This course may not be offered annually.

HIST 05455: Gender, Sexuality and History 3 S.H.
Prerequisites: HIST 05100, (HIST 05101 or HIST 05120) and HIST 05306
This course approaches the study of human sexuality from an historical point of view; i.e., how attitudes towards sexual behavior have varied over the centuries. The course uses the world of Western Civilization as an historical laboratory for the course. This course may not be offered annually.

HIST 05470: Issues in American History 3 S.H.
Prerequisites: HIST 05306 or AMST 13201
This course introduces a topical approach to U.S. history and involves an analysis of major events and ideas that have shaped U.S. society that uses historical methodology and interpretation. The course covers issues such as race, sex and youth in American society and protest movements. This course may not be offered annually.

HIST 05471: History of the American West 3 S.H.
Prerequisites: HIST 05150 and (HIST 05306 or AMST 13201)
This course considers the settlement and economic development of the American West from the arrival of Europeans in the sixteenth century to the present. Among the topics considered will be: the role of the frontier in American history; the settlement of the region first by Native Americans and later by Europeans, Africans, and Asians; conflicts between Europeans and Native Americans; Manifest Destiny and american expansionism; the Gold Rush; vigilantism; women and the frontier experience; farming on the Great Plains; Mexican immigration; high technology and the economy of the modern West; and the frontier in the American imagination. This course may not be offered annually.

HIST 05472: Cultural History of the U.S. 3 S.H.
Prerequisites: (HIST 05306 or AMST 13201) and (HIST 05150 or HIST 05151)
This course explores trends in the fine arts and literature from 1607 to the present on three different levels: high style or urban culture, popular culture and rural or folk culture. It emphasizes specific American interpretations of parallel European developments. This course may not be offered annually.

HIST 05473: American Military History, 1775-Present 3 S.H.
Prerequisites: HIST 05306 or AMST 13201
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 05474: U.S. Labor History 3 S.H.
Prerequisites: (HIST 05150 or HIST 05151) and (HIST 05306 or AMST 13201)
This course examines the changing nature of the work and working conditions and the workers' efforts to find their place in the American economy from colonial times to the era of the Wagner and Taft-Hartley Acts, with special attention to workers' organizations. This course may not be offered annually.

HIST 05475: History of New Jersey 3 S.H.
Prerequisites: HIST 05306 or AMST 13201
This course explores the historical background of the pre-European beginnings, colonial exploitation and settlement, the Revolution, growth of the state's leading industries, the development of transportation and problems of government. This course may not be offered annually.

HIST 05492: Seminar 3 S.H.
Prerequisites: Senior Status and HIST 05306
This course concentrates on a research paper of substantial length based upon primary as well as secondary sources. The course also requires critical analysis and discussion of the papers by seminar participants. Required of History majors during their senior year.

HIST 05493: Independent Study 3 to 6 S.H.
This course provides an opportunity to pursue individual specialized historical topics under the guidance of a staff member. This course may not be used as substitute for a course offered by the Department. This course may not be offered annually.

HIST 05495: Field Service in History 3 S.H.
Prerequisites: HIST 05306
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.

Honors

HONR 01111: Honors Writing Arts: College Composition I 3 S.H.
Prerequisites: Admitted to the Bantivoglio Honors Concentration or having a GPA of 3.00 or higher
This is a lower level interdisciplinary general education course that can be taken by Bantivoglio Honors Scholars or Honors-eligible students. The course will utilize an interdisciplinary approach to rhetoric, composition, argument, and research to study an interdisciplinary topic which will vary each

semester.

HONR 01112: Honors Writing Arts: College Composition II 3 S.H.
Prerequisites: HONR 01111 or COMP 01111 and Admitted to the Bantivoglio Honors Concentration or have a GPA of 3.00 or higher
This is a lower level interdisciplinary general education course that can be taken by Bantivoglio Honors Scholars or Honors-eligible students. The course will utilize an interdisciplinary approach to rhetoric, composition, argument, and research to study an interdisciplinary topic which will vary each semester.

HONR 05101: Honors: Participation 0 S.H.
Prerequisites: Admitted to the Bantivoglio HonorsConcentration.
This is a non-credit Honors course in which all Honors Concentration students are enrolled each semester. The course is graded on a Pass/No Credit basis. Each Honors student will complete a portfolio of her/his extracurricular activities in the areas of educational enhancement, service and social activities in accordance with the Honors Concentration requirements. The portfolio will consist of a one-page summary of each of the extracurricular educational, service and social activities in which the student participated during the past semester.

HONR 05180: Honors Mathematics 3 to 4 S.H.
Prerequisites: Admitted to the Bantivoglio Honors Concentration or have a GPA of 3.00 or higher
This is a lower level general education course which provides the student with a working knowledge of the foundations of mathematics. Basic concepts and principles in the philosophy of mathematics and mathematical logic, including set theory, and the concept of infinity and proof will be explored. Mathematical applications form a major portion of the course.

HONR 05205: Honors: Humanities 3 S.H.
Prerequisites: Admitted to the Bantivoglio HonorsConcentration or have a GPA of 3.00 or higher
This is an interdisciplinary course which will fulfill a Humanities/Languages General Education course. It introduces the student to significant primary texts, taken from literature, philosophy, religion, and history, within the Western and non-Western traditions and provides a common base of cultural literacy. Emphasis is placed on critical thinking and the qualitative evaluation of human experience.

HONR 05214: Honors: Artistic and Creative Experience 3 S.H.
Prerequisites: Admitted to the Bantivoglio Honors Concentration or have a GPA of 3.00 or higher
This is an interdisciplinary general education course which will fulfill a Rowan Experience artistic and creative experience requirement. The course will utilize an interdisciplinary approach to the study of the various types of fine and performing arts including art, music, theatre and dance, and radio/TV/film.

HONR 05217: Honors: Literature 3 S.H.
Prerequisites: Admitted to the Bantivoglio HonorsConcentration or have a GPA of 3.00 or higher
This is an interdisciplinary general education course which will fulfill a Rowan Experience literature requirement. The course will utilize an interdisciplinary approach to the study of the literature with the goals of increasing students' understanding and enjoyment of various types of literature including drama, novel, poetry and short story. The content and pedagogy of the course is qualitatively and quantitatively designed to meet the intellectual needs of Honors students. Topics will vary each semester and will be interdisciplinary in content and/or methodology. This course will satisfy the University's general education "literature" requirement.

HONR 05285: Honors: Natural Science 3 to 4 S.H.
Prerequisites: Admitted to the Bantivoglio Honors Concentration or have a GPA of 3.00 or higher
This is an interdisciplinary general education course which can be taken by honors students as a Natural Science Rowan Experience course. It permits students to explore the natural sciences from a problem-oriented perspective. Students are encouraged to examine evidence and assess scientific theories critically.

HONR 05290: Honors: Social Science 3 S.H.
Prerequisites: Admitted to the Bantivoglio Honors Concentration or have a GPA of 3.00 or higher
This is an interdisciplinary general education course which will fulfill a general education Social and Behavioral Science elective. It provides the student with the opportunity to examine, in-depth, a contemporary social issue. This course explores a given substantive concern from several social science perspectives; anthropological, historical, political, economic, psychological, social, and cultural theories and methods are applied to the analysis of that issue.

HONR 05390: Honors Selected Topics 3 to 6 S.H.
Prerequisites: Admitted to the Bantivoglio Honors Concentration or have a GPA of 3.00 or higher
This is an upper level interdiscplinary seminar style course that will address itself to topics and problems taken from various disciplines.

HONR 05400: Honors Independent Study 1 to 6 S.H.
Prerequisites: Admitted to the Bantivoglio Honors Concentration

Interdisciplinary

INTR 01102: 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.

INTR 01120: Biology, History, and Human Societies 3 S.H.
This course explores the ultimate causes of differences in the development of human societies over approximately the last 13,000 years. Students will be introduced to the methods of two disciplines, history and evolutionary biology. This course will reveal the importance of an interdisciplinary approach for addressing a major question in human history: why did early societies on different continents develop at different rates?

INTR 01130: Women and Gender in Perspective 3 S.H.
An introduction to Women's and Gender Studies, this course surveys the field, focusing on how both men and women are depicted and represented in culture: in the arts, in popular media, in the sciences and in psychology, sociology and history. This interdisciplinary course probes questions of sex roles, sexism in language, stereotyping in society.

INTR 01132: Biology, History, and the Fate of Human Societies 3 S.H.
This course explores the ultimate causes of differences in the development of human societies over approximately the last 13,000 years. Students will be introduced to the methods of two disciplines history and evolutionary biology. This course will reveal the importance of an interdisciplinary approach for addressing a major question in human history: why did early societies on different

continents develop at different rates.

INTR 01134: Readings in American Democracy 3 S.H.
This course will acquaint students with the theoretical and intellectual underpinnings of American democracy by providing opportunities to read, respond to, discuss, and write about seminal American political literature from diverse times and perspectives.

INTR 01136: Gateway to Asia 3 S.H.
Combining visual presentations with other innovative pedagogical methods, this course offers an introduction to various aspects of Asian culture, ranging from philosophy, history, and social structure to literature, martial arts, and family and gender relations. Students will not only learn and discuss important issues related to the study of Asian cultural developments and the Asian American experiences, they will also acquire first hand experience through field trips, live demonstrations, and the exchange of ideas in and outside the class.

INTR 01138: Issues in Sustainable Development 3 S.H.
This course is an introduction to local and global sustainability challenges. The course will discuss the environmental dimensions of development at the local and global level addressing issues such as resource use, greenhouse gas emissions, and population growth. The course will also focus on technological solutions to sustainable development.

INTR 01140: Diverse Approaches to Environmental Literature 3 S.H.
This is a multidisciplinary course that addresses the understanding of diversity of selected environmental issues at local, regional and global settings and in a historical context through the reading of literature pieces. The selected readings will help students to understand today's environmental challenges, and to think about the profound ethical, political, economic, religious, and technological implications of these challenges.

INTR 01142: Three Generations of Family Life: Diversity and Democracy Through Family 3 S.H.
Using the concepts of diversity and democracy as the common unifying scheme, students will employ a sociological perspective to explore the macro level changes in the family as an institution as well as the parallel micro level changes in the life of their own families. The historical period under examination extends from 1880 to 1970 and ,thus, captures approximately three generations of family life. The changes in family life will be explored within the larger context of the political, economic and social changes that characterize the historical period under examination.

INTR 01144: Human Ecology: An Evolutionary Approach 3 S.H.
This course will take an evolutionary approach to understand how the environment has shaped biological and cultural changes in humans, and how humans have and are continuously impacting the environment. The emphasis of this course will be to understand the biological, cultural and environmental diversity that has emerged through human history and its impact in the intricate interactions among humans and between humans and their environment.

INTR 01146: Identity, Culture, and Democracy: Being an American 3 S.H.
This interdisciplinary course strengthens writing and critical thinking skills through explorations of one's cultural history, an investigations on American society and national identity(ies). This multi-disciplinary course will acclimate students to American cultural and political roots and sensitize students to patterns of difference that constitute life in the twenty-first century United States.

INTR 01148: Environmental Ethics: Through the Lens of Diversity 3 S.H.
This is a multidisciplinary course that addresses ethical issues and concerns regarding the environment; the relationships between individual, society and the natural environment; the importance of different attitudes and world-views for understanding and responding to environmental challenges; and the need for changes in those attitudes and world-views. Students will be encouraged to think about the profound ethical, political, economic, religious, and technological implications of these environmental challenges.

INTR 01150: 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 01152: 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 01154: 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 01156: 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 be 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 01158: 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 01160: 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 01162: 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.

INTR 01164: 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 01166: 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 there elements functioned in diverse cultures and political systems from antiquity to the twentieth century.

INTR 01168: 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 emobodiment.

INTR 01170: Law and Order - RS 3 S.H.

This course explores the three components of the criminal justice system: police, courts, and corrections, based on our understanding of Nature's order. In particular, it presents the case for taking a mathematical and scientific approach to dealing with many of the issues facing our criminal justice system today: racial profiling, affirmation action hiring, cost of crime, cost effectiveness of prevention and rehabilitation programs, admissibility of evidence, standards of proff, incarceration policies. These issues will provide context for developing mathematical proficiencies such as calculating means, percentages, and rates of change; representing quantitative informationg visually; and making predictions by extrapolating from existing data. The underlying theme will be to quantitatively analyze whether our legal policies reflect and protect the interests of diverse groups in our society pertaining to issues of social order, civil liberties and fairness.

INTR 01172: Songs of Praise/Protest - RS 3 S.H.

This course will examine the ways in which music has served as an instrument for social change. African-American music in the form of Spirituals and Blackface Minstrelsy will provide a mechanism for exploring social change, tensions between races, confused dynamics of racial identity, and stereotypes. Hymns of the late 18th and early 19th century will demonstrate how women used song as a means of self-expression denied them in other spheres. Finally, the civil rights and protest songs of the 60s and 70s will provide a backdrop for exploring issues of race and social culture.

INTR 01174: Ethics and the Professions 3 S.H.

This course will provide students with a critical examination of moral and ethical issues that arise in the context of various professions. The course will address and seek to bridge conceptual issues with more practical real-life examples. Students will discuss longstanding philosophical questions concerning social justice, equality, and the place of religion in a diverse society.

INTR 01176: Historical Aesthetics of Suffering 3 S.H.

The subject of suffering is a universal one, and forces all human beings to acknowledge the commonality of a shared experience. Yet, while this phenomenon transcends time and place, and is inclusive of all communities and their members, reponses 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 intial, personal understanding of this complex topic, towards group empathy and cultural sensitivity, as well as fostering appreciation and respect for the many, and profound ways in which individuals and societies have wrestled with tragedy.

INTR 01178: In Search of Democracy: The Quest for Civil Liberties 3 S.H.

This course will explore critical issues in contemporary civil rights, placing them in their historical, philosohical and political contexts. Specific issues to be discussed include separation of church and state, freedom of speech, the role of the federal government in the protection of civil liberties, the right to privacy and its implications for women's reproductive rights, and Prohibition and its implications for gay marriage and marijuana.

INTR 01200: Issues in Women's Health 3 S.H.

This interdisciplinary course examines issues in women's health. Biological, socio-cultural, psychological, historical and political processes that shape and define women's health and healthcare experiences will be explored, including the ways in which medical knowledge has been applied to women.

INTR 01430: Women, Sex, and Power: A Capstone Seminar in Women's Studies 3 S.H.

This capstone seminar will be interdisciplinary in focus with a writing-intensive component. Students in this course will engage in critical analyses of selected readings on women and gender from six different subject areas, including biology, history, literature, psychology, philosophy and sociology. Students will study and learn the dominant issues and debates concerning the study of women and gender within these specific academic disciplines.

INTR 01486: Interdisciplinary Materials Science 3 S.H.

This interdisciplinary course discusses selected topics of current technological importance drawn from the field of materials science. Three faculty members from different backgrounds in engineering and science will co-teach this course, offering the students different perspectives to a given topic. The topics are chosen by the faculty and may include nanotechnology, semiconductors, polymers, inorganic materials, superconductors, fiberoptics, spintronics, and photonics.

INTR 02492: Senior Seminar in Math/Science 3 S.H.
Prerequisites: COMP 01112
This course provides the opportunity for students to engage in their own research into specific scientific topics and to significantly advance their own scholarly development in the field. Students will interact with the instructor and the other students in the seminar in the development and completion of their individual projects. The central theme will vary by semester. Topics will include case studies of applied and theoretical math and scientific research.

INTR 99300: 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.

MILS 01100: Military Science Lab 0 S.H.

MILS 01101: Basic Leadership Laboratory/Practicum 0 S.H.
Provides hands-on experience to reinforce leadership fundamentals, while emphasizing increased awareness of and proficiency in military skills. (No service obligation)

MILS 01102: Basic Leadership Laboratory/Practicum 0 S.H.
Provides hands-on experience to reinforce leadership fundamentals, while emphasizing increased awareness of and proficiency in military skills. (No service obligation)

MILS 01110: 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 01120: 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 01201: Basic Leadership Laboratory/Practicum 0 S.H.
Provides hands-on experience to reinforce leadership fundamentals, while emphasizing increased awareness of and proficiency in military skills. (No service obligation)

MILS 01202: Basic Leadership Laboratory/Practicum 0 S.H.
Provides hands-on experience to reinforce leadership fundamentals, while emphasizing increased awareness of and proficiency in military skills. (No service obligation)

MILS 01210: 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).

MILS 01220: Leadership in Changing Environments 3 S.H.
Prerequisites: MILS 01210, MILS 01110, MILS 01120 andMinimum 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 01301: Advanced Leadership Laboratory/Practicum 0 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 01302: Advanced Leadership Laboratory/Practicum 0 S.H.
Provides hands-on experience to reinforce leadership fundamentals, while emphasizing increased awareness of and proficiency in military skills.

MILS 01310: Leadership in Contact 3 S.H.
Corequisites: MILS 01301 Prerequisites: MILS 01101, MILS 01102, 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 01320: Complex Team Leadership Issues 3 S.H.
Prerequisites: MILS 01310 Minimum Grade of B, MILS 01101, MILS 01102, 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 01401: Senior Leadership Laboratory/Practicum 0 S.H.
Provides hands-on experience to reinforce leadership fundamentals, while emphasizing increased awareness of and proficiency in military skills.

MILS 01402: Senior Leadership Laboratory/Practicum 0 S.H.
Provides hands-on experience to reinforce leadership fundamentals, while emphasizing increased awareness of and proficiency in military skills.

MILS 01410: 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 01420: 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.

Journalism

JRN 02205: Journalism Principles and Practices **3 S.H.**

Prerequisites: COMP 01111

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 02210: Journalistic Writing **3 S.H.**

Prerequisites: COMP 01112

This course introduces students to a wide variety of news writing forms. The course covers material ranging from news writing to features, editorials, sports copy and blogging. Students learn how to strengthen their writing through techniques such as using active voice, varying sentence length, and copy editing.The course is designed for non-Journalism majors.

JRN 02305: Broadcast Journalism: TV Newscast **3 S.H.**

Prerequisites: JRN 02310

Students write, gather, edit, and present a cable newscast on Rowan University's closed-circuit cable system and adapt that newscast for transmission over the Web. During the semester, students rotate through various duties, including writing, anchoring, reporting and producing.

JRN 02307: On-Camera Field Reporting **3 S.H.**

Prerequisites: JRN 02341

On-Camera Field Reporting provides the fundamentals of reporting and includes writing, camera shooting techniques, editing, gathering sources, and on-camera presentation to perform "one-man band" responsibilities in any television market. Students will gain extensive hands-on experience that will produce a resume reel for their portfolio. Skills acquired can be used to edit online video components for news outlets.

JRN 02310: 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 02311: 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 02312: Feature Writing **3 S.H.**
Prerequisites: 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 02313: Magazine Article Writing **3 S.H.**
Prerequisites: JRN 02310 or JRN 02210 or PR 06301
Students get started as freelance magazine article writers by conceiving article ideas, interviewing, researching, and writing. The course provides instruction in adjusting style and slant to reach potential readers. Students learn to sharpen writing, resolve clarity problems, and add vigor to writing. The course analyzes freelance markets. Students submit work for publication.

JRN 02314: Photojournalism **3 S.H.**
Prerequisites: 45 credits required
This course covers the practices and techniques used by photojournalists on modern American newspapers. Students take digital photographs and edit in Photoshop. Weekly laboratory assignments are required.

JRN 02317: Publication Layout and Design **3 S.H.**
Prerequisites: 45 credits required
This course focuses on design, layout and make-up of brochures, magazine and newspaper pages, newsletters, and advertisements. It stresses how to coordinate art and typography with content. A workshop approach is used to show students how creativity in design can increase the effectiveness of communication. Students learn how to work with the QuarkXPress program on the Macintosh computers to achieve effective layout.

JRN 02318: Enterprise Journalism **3 S.H.**
Prerequisites: JRN 02310
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 02319: 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 02320: 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 02321: 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 02322: The Publishing Industry 3 S.H.
Prerequisites: completion of 45 semester hours.
The Publishing Industry examines the business and practice of publishing through broad readings and research related to industry operations and trends, field trips, guest speakers, interactive projects, and directed discussion. Students explore publishing aspects of books, magazines, newspapers, online material, blogging, podcasting, self-publishing, and editing. When students complete this course, they will have a better idea of the career path they would like to pursue.

JRN 02325: Online Journalism II 3 S.H.
Prerequisites: JRN 02321
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 02332: The Publishing Industry 3 S.H.
Prerequisites: 45 credits required
The Publishing Industry examines the business and practice of publishing through broad readings and research related to industry operations and trends, field trips, guest speakers, interactive projects, and directed discussion. Students explore publishing aspects or books, magezines, newspapers, online material, blogging, podcasting, self-publishing, and editing. When students complete this course, they will have a better idea of the career path they would like to pursue.

JRN 02335: Media Law 3 S.H.
Prerequisites: 45 credits required
This course examines laws that deal with the legal responsibilities of print, broadcast, online and film media as well as public relations and advertising practitioners. Students analyze topics such as libel, privacy, broadcast regulations, and copyright.

JRN 02341: Broadcast News Writing 3 S.H.
Prerequisites: JRN 02310
Broadcast News Writing provides instruction in the fundamentals of television news writing essential to all careers in television news. Students will explore the fast paced world of writing breaking news for television. They will learn how to write in TV broadcast style and write news blogs to build their student portfolios.

JRN 02355: Journalism Practicum I 1 to 3 S.H.
Prerequisites: 75 credits required
Journalism Practicum allows students to apply their skills and knowledge by working on-campus with department faculty on a variety of technical, creative, or research-related assignments. Students earn 1 credit for every 40 hours of work, with most practica implemented for 3 credit hours. Students keep a detailed log of working hours, prepare an extensive portfolio, write an analytical critiqe of the practicum and are evaluated by their faculty supervisor.

JRN 02356: Journalism Internship I 1 to 3 S.H.
Prerequisites: 75 credits required
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 02357: Journalism Practicum II 1 to 3 S.H.
Prerequisites: 75 credits required
Journalism Practicum allows students to apply their skills and knowledge by working on-campus with department faculty on a variety of technical, creative, or research-related assignments. Students earn 1 credit for every 40 hours of work, with most practica implemented for 3 credit hours. Students keep a detailed log of working hours, prepare an extensive portfolio, write an analytical critiqe of the practicum and are evaluated by their faculty supervisor.

JRN 02358: Journalism Internship II 1 to 3 S.H.
Prerequisites: 75 credits required
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 02359: Journalism Internship III 1 to 3 S.H.
Prerequisites: 75 credits required
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 summer session.

JRN 02400: Independent Study - Journalism 1 to 3 S.H.

JRN 02410: Problems in Contemporary Journalism - WI 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 02411: 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 02420: Newspaper Laboratory 3 S.H.
Prerequisites: JRN 02310
This laboratory course teaches students to use desktop publishing equipment and modern design principles to produce a newspaper. It emphasizes interview and research techniques. Students use concepts learned in liberal arts courses to go beyond the mere facts of a story to add depth that will help readers understand issues. Students function as editors, making assignments and directing production.

JRN 02425: Advanced Publication Layout 3 S.H.
Prerequisites: JRN 02317
This course provides a thorough experience in print production through its various stages: writing, 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/Justice

LAWJ 05116: Introduction to Corrections - WI 3 S.H.
This course studies the historical development of correctional practices in the handling of criminals from early to modern times. Students survey contemporary correctional organizational structures and treatment processes, as well as institutional and community based programs and problems.

LAWJ 05120: Introduction to Security 3 S.H.
This course presents the organization and management of the security function in industry, business, government and institutions. It also covers the protection of personnel, facilities and other assets as well as the administrative, legal and technical problems of loss prevention and control.

LAWJ 05175: Survey of Criminal Justice 3 S.H.
This general education approved social science elective course deals with the nature of crime and criminal responsibility, and elements of social control. It also surveys the criminal justice process from original law enforcement contact through the judicial and correctional phases. It includes professional roles and opportunities in the criminal justice field.

LAWJ 05200: Introduction to Corrections 3 S.H.
This course studies the historical development of correctional practices in the handling of criminals from early to modern times. Students survey contemporary correctional organized structures and treatment processes, as well as institutional and community based programs and problems.

LAWJ 05201: Introduction to Courts 3 S.H.
This course covers the organization of both the state and federal court systems; the management and administration of those courts; the relationship of courts to the police, corrections, and community; the criminal trial process, including pre-trial and post-trial processes; and the judiciary and judicial power, including the areas of separation of powers and judicial behavior.

LAWJ 05202: American Police 3 S.H.
This course covers the philosophy and history of the police role in society. It surveys organizational forms and basic procedures of police work; police ethics and professional preparation for law enforcement; and, major police problems confronting the police today.

LAWJ 05205: Minorities, Crime and Criminal Justice 3 S.H.
In this course students critically examine the involvement of minorities with crime in the U.S. both as perpetrators and victims. Additionally, they will be afforded the opportunity to understand, critically examine, and apply significant theoretical perspectives for the study of minority criminality. They will develop an understanding of the impact of race and class within the law-making process, the content of the law, and the quality of justice afforded minorities within the American criminal justice system.

LAWJ 05210: Restorative Justice 3 S.H.
This course surveys the major theoretical and applied concepts of Restorative and Community Justice. Students will examine how the Restorative and Community Justice processes differ from the traditional, retributive criminal justice system and how Restorative Justice models attempt to benefit the victim, offender and the community. Some of the issues to be covered are: informal justice practices, reintegrative shaming, forgiveness and resentment, and the efficacy of Restorative and Community Justice initiatives. Additionally, students may have opportunities to interact with adjudicated youth from New Jersey's Restorative Justice Project.

LAWJ 05220: Victimology 3 S.H.
This course gives students insight into the "forgotten" party in a crime, the victim. The course covers victims' rights in the Justice System with specific coverage of the following: the social, economic and racial impacts of crime on victims; victims and courts; police reaction to victims; restitution; offender accountability and the dramatic increase in victims programs and services.

LAWJ 05250: The Scholarship of Criminal Justice 3 S.H.
Prerequisites: COMP 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 05255: Criminal Law 3 S.H.
This course offers a comprehensive review of the major common law and statutory crimes including homicide, rape and all related personal and property offenses. The students will be introduced to domestic violence offenses. Considerable attention is given to the social, moral and constitutional frameworks of the criminal law with a review of recent and standard judicial interpretations. It also offers a review of defenses and mitigation.

LAWJ 05274: Criminal Justice and Community Relations 3 S.H.
This is a broad-based course on the relationship between the community and crime and the criminal. The course covers such topical areas as police-community relationships, the culture of the inner city, human service delivery systems, the role of citizen and business groups and the criminal justice system, and the various ways in which criminal justice agencies have an obligation to the community at large.

LAWJ 05276: Parole, Probation and Community Corrections 3 S.H.
A comprehensive review of the noninstitutional response to criminal behavior, this course covers probation, parole and community corrections in depth. It includes topics like work release, education release, half-way houses, drug and alcohol centers, legal aspects of these processes and the effectiveness of these programs.

LAWJ 05285: Criminal Investigation 3 S.H.
Students study the criminal investigation process. Analysis of problems encountered in interviewing, interrogating and investigating is included. The course covers investigative techniques that may be applied to investigative problems and develops application of criminal investigation theories to the administration of justice.

LAWJ 05290: Forensic Law 3 S.H.
This class offers a comprehensive analysis of legal issues involving forensic techniques in the justice systems. This course examines the importance of admissibility, relevance and materiality as it relates to the evidence and the various experts in Forensics. The topics include bloodstain patter and trace evidence, pathology and gunshot wounds, DNA fingerprinting, micrography, postmortem determinations and case studies in Forensic Science.

LAWJ 05305: Law and Evidence 3 S.H.
This course covers the basic principles of criminal evidence, including burdens of proof, judicial notice, presumptions, testimonial privileges and hearsay; the rule of exclusion of evidence, confessions, identifications and electronic eavesdropping; and the use of physical and demonstrative evidence including fingerprints, exhibits, photographs, documents and writings, scientific evidence and the polygraph.

LAWJ 05310: Criminal Jurisprudence 3 S.H.
Students study the history and philosophy of modern criminal law. This course covers problems of contemporary jurisprudence and especially the typology of constitutional issues as it relates to due process and its requirements.

LAWJ 05312: Criminal Procedure II 3 S.H.
This course will examine the legal procedures by which the criminal justice system operates. Students will assess United States Supreme Court opinions so as to explore issues related to the Fourth, Fifth, Sixth, Eighthm, and Fourteenth Amendments to the Constitution, including pre-trial processes, speedy trial, the prosecution function, bail, the identification of suspects, the right to counsel, the adjudication process, the law of confessions and interrogation, and the privilege against compelled selp-incrimination. This course has two primary objectives. The first is to introduce students to the analysis of judicial opinions, a primary sourse of law in the American legal system. The second is to become familiar with both the fundamental doctrines of constitutional criminal procedure and the important policy issues that emanate therefrom.

LAWJ 05315: Criminal Justice and Social Conflict 3 S.H.
This course covers the major crises in our basic American institutions. Students examine the various aspects of social mobility, population explosion, social stratification, sex revolution, militarism, and the generation gap as they relate to problems of social justice in our society.

LAWJ 05320: Civil Aspects of Law Enforcement 3 S.H.
Students undertake an analysis of those areas in civil law with which law enforcement professionals frequently encounter. Topics include family law, torts, administrative and environmental issues, property disputes, liens, business and consumer transactions.

LAWJ 05322: Drugs and Crime in America 3 S.H.
This course explores and analyzes the relationship between illegal drugs and crime and all the relevant issues and ramifications. These include, but are not limited to: national and international trafficking, control of the problem, legalization, and explanations for drug use.

LAWJ 05324: Sentencing and the Rights of the Convicted 3 S.H.
Students explore, analyze, and critique the relevant structures, processes, and impacts of criminal sentencing and sentences. The course is designed to examine critically the relevant political, philosophical and social driving forces of change and their impacts on the system and society.

LAWJ 05325: Comparative and International Criminal Justice 3 S.H.
Prerequisites: LAWJ 05175
The course is an introduction to comparative and international criminal justice. It compares the criminal justice system in the Unit States with other national systems in the five continents and major regions of the world. Areas examined include crime, criminal law, policing, court processes, and corrections. This course also provides an introduction to the globalization of crime including terrorism, drug trafficking, human smuggling, and war crimes and the development of domestic and international efforts in fighting these crimes. The goal of this course is to help students develop comparative and international perspectives in addressing problems facing the criminal justice system.

LAWJ 05330: Problems in World Justice 3 S.H.
This multidisciplinary course examines the principles of justice and their application to the criminal justice system and society at large. Additionally, a critical examination of significant issues and concerns of world justice will be offered.

LAWJ 05335: Criminal Procedure I 3 S.H.
This course will examine the legal procedures by which the criminal justice system operates. Students will assess United States Supreme Court opinions so as to explore issues related to the Fourth Amendment to the Constitution, including search and seizure of premises and persons, the arrest and detention of suspected criminals, and the remedies available for constitutional violations. This course has two primary objectives. The first is to introduce students to the analysis of judicial opinions, a primary sourse of law in the American legal system. The second is to become familiar with both the fundamental doctrines of constitutional criminal procedure and the important policy issues that emanate therefrom.

LAWJ 05337: Treatment of the Offender 3 S.H.
This course covers the major therapeutic approaches to the correction of criminal and delinquent behavior and a review of processes and procedures of corrections and of research on the outcome of various treatment approaches. Students analyze the ethical and legal problems related to rehabilitation in a correctional setting.

LAWJ 05342: Counseling and Guidance of the Offender 3 S.H.
A survey of basic principles and techniques of counseling of offenders, this course includes interviewing, case conferences, case histories, individual and group counseling, classification procedures, and team treatment participation.

LAWJ 05346: Women, Crime and Criminal Justice 3 S.H.
This course covers the many facets of women, crime and criminal justice, including past and present trends of female crime along with its relationship to the three major components of the criminal justice system: police, courts and corrections. Furthermore, this course addresses gender as a significant variable in all aspects of society, both criminal and non-criminal.

LAWJ 05356: Criminal Justice Internship I 3 to 6 S.H.
Prerequisites: COMP 01112 or HONR 01112
This course provides practical immersion in a criminal justice-related agency for pre-service students; this course will for in-service students (law enforcement, courts and corrections personnel) involve placement in a social service related agency, or a research paper. A criminal justice related cooperative education experience may be substituted for the internship. In unusual circumstances other coursework may be substituted for the internship; this requires the approval of the department chair. (Implemented Spring 2004)

LAWJ 05357: Criminal Justice Internship II 3 S.H.
Prerequisites: COMP 01112 or HONR 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 (LAWJ05356) prior to enrolling in this course. Students are also encouraged to discuss this course with the internship coordinator prior to enrolling.

LAWJ 05361: Introduction to Juvenile Justice 3 S.H.
This course covers the history and philosophy of the juvenile justice system, which includes the development of the system through the 19th and 20th centuries and the decisions rendered by the United States Supreme Court. The student also scrutinize the various steps in the police, courts and corrections stages of the juvenile justice system.

LAWJ 05367: Theories of Justice 3 S.H.
This course covers the nature and varieties of justice, including numerous historical perspectives on justice and the relationship between justice and society.

LAWJ 05369: Theories of Crime and Criminality 3 S.H.
In this course students explore the extent of crime and delinquency in the United States and the full range of relevant theories of causation. They also synthesize and apply appropriate theories to such concepts and topics as race, social class, gangs, drugs, family, schools, and neighborhoods.

LAWJ 05370: Theories of Crime and Criminality - WI 3 S.H.
This is a writing intensive course in which students explore the extent of crime and delinquency in the United States and the full range of relevant theories of causation. They also synthesize and apply appropriate theories to such concepts and topics as race, social class, gangs, drugs, family, schools, and neighborhoods.

LAWJ 05379: The "Political Prisoner" 3 S.H.
This course examines the causes and significance of the political prisoner concept on the criminal justice system generally and the U.S. prison systems specifically. The course deals with varying perceptions of different segments of the population about the existence and scope of this phenomenon in depth.

LAWJ 05380: Criminal Justice Research 3 S.H.
Prerequisites: LAWJ 05369
Students study the basic principles of research and statistics. This course undertakes a review of contemporary criminal justice research projects, emphasizing evaluation of journal studies and basic planning and writing of the research paper.

LAWJ 05392: Criminal Justice Administration 3 S.H.
This course provides upper level students with the concepts, theories, and principles of managing and administering criminal justice organizations. The content of the course is applied to police, courts, and corrections agencies and gives the student a total system approach to the subject.

LAWJ 05395: The Incarceration Experience 3 S.H.
This course focuses on the exploration of various aspects of incarcerating criminals. It includes the history of incarceration, the prisonization process, prison subcultures, violence and victimization, and the underground prison economy.

LAWJ 05401: Law and Human Rights 3 S.H.
This course reviews individual civil rights and liberties in detail with a particular emphasis on federal-state legislation on discrimination, substantive and procedural due process materials and 1st amendment problems. Specific attention is given to the role police, courts and correctional systems play in the enforcement and enhancement of such rights.

LAWJ 05415: Selected Topics in Criminal Justice 3 S.H.
This course promotes intensive research and analysis in Special Topics in Criminal Justice. Students engage in either theoretical or applied research in topics that can be mutually agreed upon between faculty and student. Topics will vary but may include female criminality, XYY theory, insanity, mental health and the justice systems, advanced security systems or radical criminology.

LAWJ 05461: Seminar in Corrections-WI 3 S.H.
Prerequisites: LAWJ 05175, LAWJ 05255, LAWJ 05380 andone of: LAWJ 05200, LAWJ 05201, or LAWJ 05202

LAWJ 05465: Seminar is Social Justice- WI 3 S.H.
Prerequisites: LAWJ 05175, LAWJ 05255, LAWJ 05380 andone of: LAWJ 05200, LAWJ 05201, or LAWJ 05202
This seminar is a capstone experience offering in particular depth a number of special areas concerning social justice. The student will engage in class discussions, conduct research, write papers, and participate in problem solving examinations, all of which will be centered around a variety of aspects of

social justice.

LAWJ 05467: Seminar in Law - WI 3 S.H.
Prerequisites: LAWJ 05175, LAWJ 05255, LAWJ 05380 andone of: LAWJ 05200, LAWJ 05201, or LAWJ 05202
This seminar is a capstone experience offering in particular depth a number of special areas concerning law and the court system. The student will engage in class discussions, conduct research, write papers, and participate in problem solving examinations, all of which will be centered around a variety of aspects of the law/court process.

LAWJ 05468: Seminar in Police Science - WI 3 S.H.
Prerequisites: LAWJ 05175, LAWJ 05255, LAWJ 05380 andone of: LAWJ 05200, LAWJ 05201, or LAWJ 05202
This seminar covers a wide variety of police science topics, including constitutional review and police process, investigation and forensic problems, special problems in the criminal law and its enforcement, and any other appropriate senior level topics in police studies. Students are expected to participate in a research paper, design, or project and to present oral presentations.

LAWJ 05469: Seminar in Law/Justice - WI 3 S.H.
Prerequisites: LAWJ 05175, LAWJ 05255, LAWJ 05380, one of: LAWJ 05200, LAWJ 05201, or LAWJ 05202 and senior standing.
This seminar will cover topics relating to how law and justice are put into practice by the police, courts, and corrections system. Important issues affecting society and the criminal justice system as a whole will be examined in depth. Students will be expected to read scholarly work exploring these issues; participate in class discussions; conduct library research; write short, informal memos and a senior level research paper; present oral reports on their research; and demonstrate their understanding of assigned readings and the research reported by classmates in a final examination.

LAWJ 05479: Seminar in Police Science - WI 3 S.H.

Management and Entrepreneurship

BUS 01105: 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.

BUS 01303: Business Practicum 3 S.H.

ENT 06240: Entrepreneurship and Innovation 3 S.H.
Prerequisites: Junior standing, 57 credits required
This course provides a broad framework for understanding the nature of entrepreneurship in multiple organizational settings. The course introduces students to the innovation and idea generation process and helps students determine the most desirable educational path for them to achieve their career goals.

ENT 06326: Entrepreneurship and Small Business Management 3 S.H.
Prerequisites: Junior standing, 57 credits required
This course provides complete coverage of entrepreneurial models of organization and decision making. Topics include making the decision to go into business, what to expect, and the areas of small business operations (finance, purchasing, production, and sales) and management (planning,

organizing, directing, and controlling). Students will develop an entrepreneurial profile of an existing entrepreneur or do a preliminary feasibility analysis for a complete business plan for a business of their choice. This course will acquaint students with the opportunities and perils of starting and managing their own firms.

ENT 06327: Strategic Issues in Family Business 3 S.H.

Prerequisites: Junior standing, 57 credits required

This course examines a new discipline that has developed in the last 10 years and focuses on the unique aspects of family business. Organizational behavior, law, finance operations, and basic small business concepts are integrated into this course. Students will have an opportunity to consult with and develop transition plans for a family firm in a live field project.

ENT 06328: Evaluating Franchising Opportunities 3 S.H.

Prerequisites: Junior standing, 57 credits required

This course is designed for students who are interested in learning about the opportunities and threats that abound in the modern world of franchising. Franchising is pervasive in our economy. The practice spans virtually every retail and wholesale product category. The logic of this course is that franchising is one of the development models that minimize risk for the ¿small business¿ focused student. Many of these opportunities offer the chance for high incomes if the model is developed fully. Some franchising oriented people may want to start a franchise and grow it rapidly. This option is often a first step into business ownership for inexperienced owners.

ENT 06342: Financing and Legal Aspects of Entrepreneurship 3 S.H.

Prerequisites: Junior standing, 57 credits required

This course provides an overview of the legal and financing issues most frequently encountered by entrepreneurs and others involved in start-ups and small, closely-held, or family businesses. The course covers various aspects of financing an entrepreneurial venture. Major topics include attracting seed and growth capital from sources such as venture capital, investment banking, government, and commercial banks; creating, protecting and leveraging intellectual property. Among the issues discussed are valuing a company, going public, selling out, acquisitions, bankruptcy, different legal forms of organization, employment relationships, partnerships, and taxes.

ENT 06344: Entrepreneurial Growth Strategies 3 S.H.

Prerequisites: Junior standing, 57 credits required

The course goal is to transform the strategic process for entrepreneurs into a growth-oriented approach. The course is organized to flow in the following manner: understanding the entrepreneurial perspective and the challenge of entrepreneurial growth, gaining an appreciation for strategic planning in emerging ventures, and finally a discussion of the emerging entrepreneurial issues confronting the economy today.

ENT 06346: Social Entrepreneurship 3 S.H.

Prerequisites: Junior standing, 57 credits required

The Social Entrepreneurship course provides a broad theoretical perspective and practical framework for understanding social entrepreneurs and the social ventures they create ranging from local social organizations to large international social ventures leading global change. The course introduces students to the possibilities of social entrepreneurship and an introduction to the entire social venture creation process and life cycle.

ENT 06415: Management Consulting Field Study 3 S.H.
Prerequisites: Junior standing, 57 credits required
This course is designed to provide education and training opportunities in the art and application of techniques from various business and non-business courses primarily to firms with under $25 million in sales. The overall purpose of the course is the acquisition of knowledge and skills that will enable students to provide consulting advice to entrepreneurs and small business owners that will be understood, accepted, implemented, and will improve the performance of the firms. The emphasis in the course is on experiential approaches that provide a participative type of learning about the crucial issues firms face.

ENT 06426: New Venture Development 3 S.H.
Prerequisites: Junior standing, 57 credits required
This course provides an opportunity to develop a business plan for a new venture or expansion of an existing company. Students are expected to acquire skills in evaluating business ventures, learn alternative financing sources, develop ideas for differentiating products, and develop an understanding of what is required to harvest the profits in a growing business.

ENT 06450: Technology Entrepreneurship 3 S.H.
Prerequisites: Junior standing, 57 credits required
This course provides the student with insights into the creation, development, management, and transfer of intellectual assets. Real world product based projects will form the central core of the learning process. Students will gain an increased appreciation for the details of technology transfer and commercialization and an awareness of these critical issues from both industry and university perspectives. Examples of typical license, sponsored research, and other agreements will be provided.

HRM 06302: Management of Human Resources 3 S.H.
Prerequisite: Junior standing 57 credits required
This course examines the human resource management system: staffing and organization, recruitment, employee development, motivation, performance evaluation, management-labor relations, remuneration and security.

HRM 06315: Recruitment and Selection 3 S.H.
Prerequisite: HRM 06302 or PSY 08220
This course focuses on the human resource recruitment and selection functions of organizations. Topics covered include recruitment, organizational chocie, validation, interviewing, and testing. Both the theoretical foundations fo the recruitment and selection functions as well as the practical application of these activites are presented.

HRM 06318: Human Resource Information Systems 3 S.H.
Prerequisite: MIS 02334
This course will provide students with a working knowledge of the structure, use, and evaluation of human resource information systems

HRM 06319: Special Topics in Human Resource Management 3 S.H.
Prerequisite: Junior standing, 57 credits required
This course presents human resource management topics related to recent development in HRM practice and research.

HRM 06420: Principles of Training and Training Management 3 S.H.
Prerequisite: HRM 06302 or MGT 06309 or PSY 08220 MGT 06300
This course will expose students to various theories and methodologies used to plan, design, conduct and evaluate training and management development programs in organizations. The learning experience within the course is designed to provide the student with the knowledge, information and skills required to develop and implement a training program. The course material offers a practical ¿how-to¿ approach to training and development, as well as managing the training function. Each student in the course will participate in the development of a training program or module, which will be presented and critiqued at the end of the semester.

HRM 06425: Management of Compensation 3 S.H.
Prerequisite: HRM 06302 or PSY 08220
This course will expose students to various theories and methodologies used to plan, design, conduct and evaluate training and management development programs in organizations. The learning experience within the course is designed to provide the student with the knowledge, information and skills required to develop and implement a training program. The course material offers a practical ¿how-to¿ approach to training and development, as well as managing the training function. Each student in the course will participate in the development of a training program or module, which will be presented and critiqued at the end of the semester.

HRM 16401: Labor and Employee Relations 3 S.H.
Prerequisites: HRM 06302 or PSY 08220
This advanced course studies union-management relations. The course provides students with the essentials of labor law, collective bargaining, contract administration, and dispute settlement. The course uses case studies and simulations extensively.

HRM 98335: Legal Aspects of Human Resource Management 3 S.H.
Prerequisites: MGT 98242 and MGT 06302 or HRM 06302
This course introduces students to three areas of human resources management which are extensively regulated by federal and state legislation. Legislation studied includes the Occupational Safety and Health Act (OSHA), the Equal Employment Opportunity Act (EEO), and the Employee Retirement Income Security Act (ERISA). The course emphasizes practical applications to the human resource function.

HRM 98337: Legal Aspects of Human Resource Management (WI) 3 S.H.
Prerequisites: MGT 98242 and either HRM 06302 orPSY 08220
This course introduces students to three areas of human resources management which are extensively regulated by federal and state legislation. Legislation studied includes the Occupational Safety and Health Act (OSHA), the Equal Employment Opportunity Act (EEO), and the Employee Retirement Income Security Act (ERISA). The course emphasizes practical applications to the human resource function.

MGT 06300: Organizational Behavior 3 S.H.
Prerequisite: Completion of 57 semester hours
This course examines human relations in management. The course studies the concern for both task and process in the light of structure, goals and human relationships found in organized efforts. It also covers the application of new management theories in the areas of motivation, leadership and group problem-solving by a variety of means, including simulation, case studies, and role playing.

MGT 06304: Organizational Change and Development 3 S.H.
Prerequisites: MGT 06300 or MGT 06309 orPSY 08220
This course studies factors that facilitate or inhibit organizational change as well as research findings and theory which deal with methods for diagnosing organizational climate, and selecting and utilizing techniques for bringing about change and overcoming resistance to change. It also analyzes and evaluates roles and strategies used by change agents to initiate structure and direct organizational change.

MGT 06305: Operations Management 3 S.H.
Prerequisites: STAT 02260 and MATH 01130 and MATH 01125 and completion of 57 semester hours
This course provides a critical study of the operational functions of the business enterprise. Its topics include capital costs and investment criteria, plant location and layout, process planning and production design, job designs, work methods and cost controls.

MGT 06309: Organizational Behavior (WI) 3 S.H.
Prerequisites: COMP 01112 and 57 credits required
This course examines human relations in management. The course studies the concern for both task and process in the light of structure, goals and human relationships found in organized efforts. It also covers the application of new management theories in the areas of motivation, leadership and group problem-solving by a variety of means, including simulation, case studies, and role playing.

MGT 06310: Leadership and Supervision for Managers 3 S.H.
Prerequisites: CMS 04205 and 57 credits required
The course is designed for undergraduate business students. Course content will cover the theories of business leadership and supervision- with the focus on first line supervisors. Students will focus on the theory and acquisition of various business leadership and supervisory tasks and skills necessary to work with other business managers in a global market world and to supervise workers with diverse backgrounds. These business skills will include establishing workplace goals, organizing work units for productivity, conducting interviews, giving feedback to subordinate employees, designing and implementing employee motivation programs, and supervising workteams. By the end of the course, students will be able to effectively diagnose the complex dynamics of leadership and supervision in business environments and take action as leaders and supervisors to improve individual and organization performance.

MGT 06311: Decision-Making Tools for Managers 3 S.H.
Prerequisites: MGT 06305 and 57 credits required
The course will focus on how the quality of managerial problem solving and decision-making can be enhanced by the use of business statistical tools and quantitative models. It will increase students' knowledge of how to identify business situations which would benefit by the application of common business analytical methods and models and require that they use these methods and models to solve realistic business problems. Spreadsheet applications will be emphasized.

MGT 06312: Selected Topics in Management I 3 S.H.
Prerequisites: 45 credits required
The course will provide students with the opportunity to learn about and respond to situations which are causing changes in the current business environment. Students will collect business information about the change and analyze it, make business decisions, discuss implementation of these decisions, and modification of those decisions in these situations. Students will also have the opportunity to become thoroughly familiar with all of the business aspects of the industries in South Jersey in which

most of them will be employed.

MGT 06313: Selected Topics in Management II 3 S.H.
Prerequisites: 45 credits required
The course will provide students with the opportunity to become thoroughly familiar with all of the business aspects of the industries in the local economic environment in which most of them will be employed. Students will become knowledgeable about a specific industry in the multiple business facets of accoutint, 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 06330: Managing International Business 3 S.H.
Prerequisites: MGT 06300, ECON 04101 and ECON 04102
Students will learn about the evolution and current environment for international trade and investment and understand the challenges and issues facing business organizations with international operations. They will apply these insights to the analysis of actual business decision-making situations by means of case studies and research projects.

MGT 06354: Managerial Data Analysis 3 S.H.
Prerequisites: MATH 03125, STAT 02260 and 57 credits required
This course is designed to acquaint management students with the knowledge to collect and analyze business information from a variety of sources and under various conditions of uncertainty in order to analyze this data in order to increase the productivity and effectiveness of the businesses by which they are employed. The focus is placed upon the ability to collect relevant business data and report the findings of their analysis in order that the findings may be applied in specific business situations. The emphasis will be on the use of realistic business data, business analysis processes, business applications, and business reporting techniques.

MGT 06361: Supervised Internship 3 to 6 S.H.
Prerequisites: MGT 06300 and 57 credits required
This course includes field experience in government, business, industry or non-profit organizations. Trainees are given assignments that prepare them for productive employment upon graduation. The learning process is monitored by the College of Business faculty members.

MGT 06375: Managing Services 3 S.H.
Prerequisites: MGT 06304 and MGT 06309
This course is oriented to service industries, such as medical services, financial institutions, airlines, transportation companies and retail establishments. The course covers understanding services, designing and delivering services, managing capacity and demand, service quality, customer service, human resources in service organizations, information systems and service strategies.

MGT 06401: Independent Study - Management 1 to 6 S.H.

MGT 06402: Business Policy 3 S.H.
Prerequisites: CS 02334 or MIS 02334 and MGT 98242, MKT 09300, MGT 06300, MGT 06305, 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.

MGT 06404: Quality Management 3 S.H.
Prerequisites: MGT 06305 and 57 credits required
This course is designed to acquaint students with a fundamental knowledge of the principals and techniques of quality management and operational control. Emphasis will be given to systems and the function of quality, technical methods and tools used in quality management, quality improvement and problem solving, and managerial issues of quality management as a new paradigm. Practical application with actual case studies for both product- and service-oriented fields will be provided.

MGT 06405: Business Management Simulation 3 S.H.
Prerequisites: FIN 04300, MKT 09200, MGT 06310, MGT 06311,MGT 06330 and WA 01408
This course is designed to provide students with the opportunity to experience many of the problems of risk and uncertainty that managers face when making decisions in the real world. Students work in teams while managing a computer simulated corporation in a highly competitive international business environment. Students are challenged to use and improve their business and leadership skills utilizing knowledge from previous business courses.

MGT 06430: Business Field Research Experience 3 S.H.
Prerequisites: MGT 06305, and 57 credits required
Students will choose a business activity approved by their instructor and do an in-depth research study of that activity. It will include library research as well as interviews with local businesses. Students will be guided by the instructor with the help of a classroom component during which students will share their research and experience with other students.

MGT 98242: Legal Environment of Business 3 S.H.
Students in this course examine the legal process and the legal environment within which business must operate, as well as the interrelationship of government and business. Students develop an understanding of the methods by which legal decisions are formulated as they affect both individual rights and business transactions.

Marketing and Business Info Sys

MIS 02150: Integrated Business Software Tools 3 S.H.
Students will expand their use of integrated software tools that include database management systems, spreadsheets, and other business applications. They will apply these tools to actual business decision-making situations by means of case studies and research projects.

MIS 02320: Seminar in Management Information Systems 3 to 16 S.H.
Prerequisites: 57 credits required
A seminar course providing a broad overview of information system management technology, this course emphasizes investigation and application of state-of-the-art concepts. Topics will be relevant to current trends in the industry.

MIS 02322: Principles of System Design 3 S.H.
Prerequisites: 57 credits required
This course explores the methodology and techniques in analysis and design of computer information systems. The systems analyst, the architect of information systems, is a liaison between user and programmer. The roles and responsibilities of the systems analyst are emphasized at all stages of the systems development life cycle.

MIS 02325: Project Management 3 S.H.
Prerequisites: 57 credits required
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 02327: Network Management 3 S.H.
Prerequisites: 57 credits required
This course introduces students concepts associated with managing a network within a business setting. Furthermore, to solve business problems, students will apply theoretical concepts to fully design, specify, and justify networking solutions.

MIS 02330: Business Systems 3 S.H.
Prerequisites: 57 credits required
This course is designed to introduce students to business systems in general, and client-server systems in particular. Specifically, students will learn the terminology, concepts, and issues associated with the design and management of various computing architectures as well as how to develop the presentation-tier for business systems.

MIS 02332: E-Business - Information Systems Perspectives 3 S.H.
Prerequisites: 57 credits required
Students will explore the issues involved in e-business from a business, technological and societal viewpoint. Topics will include: B2C and B2B e-business models and strategies, concepts for building an effective e-business site, e-business security and encryption, e-payment systems, legal, ethical and international issues in e-commerce.

MIS 02333: E-Business - Information Systems Perspectives - WI 3 S.H.
Prerequisites:COMP 01112 and 57 credits required
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.

MIS 02334: Management Information Systems 3 S.H.
Prerequisites: 57 credits required
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 02336: Advanced Database Management 3 S.H.
Prerequisites: MIS 02338 and 57 credits required
The course provides students with an understanding of client-server databases, and the skills to develop one using a reputed database development. Students learn to use Structured Query Language (SQL) extensively to create an integrated database application. Knowledge of a programming language and a basic understanding of relational database concepts are expected.

MIS 02338: Design of Database Systems 3 S.H.
Prerequisites: 57 credits required
This course explores the fundamentals of designing a database for a business organization. It emphasizes the relational model; however, the course also explores the hierarchical and network models. Additionally, the course covers such topics as recovery, integrity, security, concurrency, distributed databases, data dictionaries and the role of the database administrator.

MIS 02344: Supervised Internship in Management Information Systems 3 S.H.
Prerequisites: 57 credits required

MIS 02428: Business Web Applications 3 S.H.
Prerequisites: CS 04140, admission into a Business Program and 90 credits required
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. Huban factors will be considered for all design aspects.

MIS 02450: MIS Capstone Experience 3 S.H.
Prerequisites: Completion of 90 semester hours and Admission into a Business Program
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.

MKT 09101: Marketing and the Bus Development (RS) 3 S.H.
Prerequisites: No more than 12 earned semester hours (freshman standing) and Admitted to the marketing major (0510) or permission of the marketing department
A required course for freshman majoring in marketing, this Rowan Seminar (RS) is designed to help students adjust to college, provides information needed to be a successful Rowan student, and introduces students to their chosen program of study. Upon completing the course, students will understand the current trends in business and scope of marketing in the modern business organizations. The course is limited to freshman students in the marketing major.

MKT 09200: Principles of Marketing 3 S.H.
Prerequisites: COMP 01105 or COMP 01111 and 12 Credits Required
This course provides an overview of the theory and practice of marketing within a corporate and societal context in a dynamic environment. The major functions of marketing are covered from the perspective of management strategy seeking competitive advantage.

MKT 09305: Internet Marketing 3 S.H.
Prerequisites: MKT 09200 and 57 Credits Required
This course examines the Internet as a tool to enhance firms' marketing activities. The course presents a customer-centric view of marketing and focuses on how firms can create or maintain relationships with their potential or existing customers. Key online and offline marketing activities to that end are also discussed.

MKT 09315: Personal Selling 3 S.H.
Prerequisites: MKT 09200 and 57 Credits Required
This course examines the role of personal selling in the marketing mix. Students learn theory and gain practice in prospecting, presenting, overcoming objections, closing, and follow-up.

MKT 09330: Marketing Channels 3 S.H.
Prerequisites: MKT 09200 and 57 Credits Required
This course discusses how channels can be managed strategically to serve as a competitive advantage for the firm. Key topics include power and conflict within the channel, middlemen, vertical marketing systems and managing channel members.

MKT 09350: Management of Advertising and Promotion 3 S.H.
Prerequisites: MKT 09200 and 57 Credits Required
This course explores the role of the V.P. Marketing in the development of the corporate mission statement and the translation of corporate objectives into advertising and promotion objectives, strategy and practice. The course also explores the relationship of the marketing management function to the advertising department, promotion department, market research, the advertising agency and other outside vendors.

MKT 09360: Services Marketing 3 S.H.
Prerequisites: MKT 09200 and 57 Credits Required
The course provides students with an understanding of the unique characteristics of services and the application of standard marketing tools in service marketing. It emphasizes consumer decision-making, marketing planning, and development of the marketing mix. Students will apply theoretical knowledge learned in class to real world case studies and projects.

MKT 09372: Retailing 3 S.H.
Prerequisites: MKT 09200 and 57 Credits Required
This course examines retailing as part of the marketing process. It emphasizes the qualitative and quantitative factors in location and merchandise selection, merchandise pricing, planning and management, as well as promotional activities. Other topics include market research, consumer behavior, organizational patterns and internal control procedures and their impact on the retail process.

MKT 09374: Research Methods in Marketing 3 S.H.
Prerequisites: MKT 09200, STAT 02260 and 57 Credits Required
This course focuses on the relevant methodologies and analytic tools that marketing researchers apply to obtain information for decision-making. Students are expected to get hands-on experience and develop proficiency in using primary and secondary sources of data.

MKT 09375: Business Logistics 3 S.H.
Prerequisites: MKT 09200 and 57 Credits Required
This course focuses on the logistics of physical distribution and supply chains. Topics include traffic routing, inventory analysis and control, warehousing, location of production and storage facilities, and transportation.

MKT 09376: Consumer Behavior 3 S.H.
Prerequisites: MKT 09200 and 57 Credits Required
This course analyzes both the societal norms and the internal processes which impact on the consumer's purchase decisions. How consumers process product information and make decisions is evaluated for strategic marketing implications.

MKT 09378: Product, Price, New Venture Management 3 S.H.
Prerequisites: MKT 09200 and 57 Credits Required
In this course, students analyze new product development and new product management. The course covers idea screening, concept testing, new product evaluation, pricing theory and practice. Students study the use of marketing techniques, including advertising, promotion and pricing for each phase of the product life cycle.

MKT 09379: International Marketing 3 S.H.
Prerequisites: MKT 09200 and 57 Credits Required
Basic marketing concepts as they relate to foreign markets are analyzed in depth in this course. Two approaches are used: the environmental approach introduces the setting in which international marketing takes place; and the managerial approach incorporates marketing strategies of firms that choose to venture abroad.

MKT 09382: Sales Force Management 3 S.H.
Prerequisites: MKT 09200 and 57 Credits Required
From the viewpoint of a district manager, this course focuses on planning, directing, and controlling the marketing plan through a sales force. Topics include recruiting, selecting, training, motivating, and evaluating the sales force, as well as sales forecasting and time and territory management. Additionally, this course examines the role of personal selling in the marketing mix. Students learn theory and gain practice in prospecting, presenting, overcoming objections, closing and follow-up.

MKT 09384: Research Methods in Marketing-WI 3 S.H.
Prerequisites: MKT 09200, COMP 01112 and 57 Credits Required
This course focuses on the relevant methodologies and analytic tools that marketing researchers apply to obtain information for decision-making. Students are expected to get hands-on experience and develop proficiency in using primary and secondary sources of data. Writing is an essential component of the course as students will learn to present the results of their data analysis in professional and understandable written form.

MKT 09386: The Marketing Plan 3 S.H.
Prerequisites: MKT 09200 and at least 6.0 semester hours of upper division (300 or 400 level) marketing coursework
The course designed to provide students with a thorough understanding of the market planning process and the creation of the market plan. Students will be exposed to the use of market information, data analysis, and forecasting in the development of market plans. Case analysis and project-based learning will be utilized in order to provide students with hands on experience.

MKT 09390: Selected Topics in Marketing 3 S.H.
Prerequisites: MKT 09200 and 57 Credits Required
Students will investigate new areas and developments in theory, research and practice in Marketing. Specialized topics will vary each semester. Course activities will include in-depth study of current topics and preparation of case analyses and/or research papers. Students may consult with the department chair or the instructor for course details.

MKT 09391: Business to Business Marketing 3 S.H.
Prerequisites: MKT 09200and 57 Credits Required
Students will investigate key concepts and strategic issues associated with marketing to business and organizational customers. Strategic differences between business and consumer marketing will be examined. Students will apply course concepts by means of analysis of case studies of actual decision situations.

MKT 09403: Strategic Marketing Management 3 S.H.
Prerequisites: MKT 09376 and 87 Credits Required
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 09411: Supervised Internship in Marketing. 3 S.H.
Prerequisites: 9.0 s.h. of upper division Marketing Courses and 72 Credits Required
This course is intended to provide students with actual business experience. Fieldwork is combined with reports and online discussion sessions in the classroom. Registration in the course and prior approval from the instructor are required.

Mathematics

MATH 01115: 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 1 and Basic Skills Reading.

MATH 01122: Precalculus Mathematics 4 S.H.
This course helps prepare students for Calculus I or Calculus T&A. The contents include: a brief review of intermediate algebra, the structure of the real number system, elementary analytic geometry, and algebraic, exponential, logarithmic and trigonometric functions (including their inverses and related functions). Graphs of functions and conic sections also are studied. A graphing calculator is required. Students are expected to have completed an equivalent of Basic Algebra II.

MATH 01123: 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 Basic Algebra II or its equivalent.

MATH 01130: Calculus I 4 S.H.
This course begins with a discussion of functions, the limit concept and continuity. The concept of a derivative is introduced and the student learns to differentiate algebraic functions, exponential, functions, logarithmic and trigonometric functions. Differentiation is applied to analysis of functions, extreme problems and to problems in related rates. The integral as the unit of a sum is linked to the antiderivative by the Fundamental Theorem of Calculus and used to find areas. A graphing calculator is required for this course, and so is the use of a computer software, such as Mathematica. Students are

expected to have completed an equivalent of (Math 01.122) Precalculus.

MATH 01131: Calculus II 4 S.H.
Prerequisites: MATH 01130
This course begins with applications of integration (such as volume of a solid of revolution work, arc length, area of a surface of revolution, center of mass) and derivatives of inverse trigonometric functions. Integration by parts, partial fractions and other more advanced integration techniques are introduced, along with a discussion of numerical integration, improper integrals, indeterminate form, sequences and infinite series. A graphing calculator is required for this course, and so is the use of computer software, such as Mathematica.

MATH 01140: Accelerated Calculus I 4 S.H.
This course covers limit concept and continuity, derivative and its applications, the integral and its applications. The techniques of integration as well as numerical integrations will be discussed. Students are expected to be familiar with basic ideas of calculus. A graphing calculator is required for this course, and so is the use of computer software, such as Mathematica.

MATH 01141: Accelerated Calculus II 4 S.H.
Prerequisite: MATH 01140
This course covers sequences and infinite series, polar coordinates and parametric equations, vectors, vector functions, velocity, acceleration, partial differentiation, directional derivitives, and multiple integrations. The student is expected to use computer software, such as Mathematica, in addition to a graphing calculator.

MATH 01201: 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 Basic Algebra II.

MATH 01202: 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 Basic Algebra II.

MATH 01205: 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 01210: 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 01230: 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 01231: 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 01235: 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 01236: 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 01310: 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 01330: 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.

MATH 01331: 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 01332: 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 01340: 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 01341: 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 01352: 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 01354: Introduction to Topology **3 S.H.**

Prerequisites: MATH 01330

This course covers the properties of general topological spaces, separation, compactness, connectedness and the Heine-Borel and Bolzano-Weierstrass theorems.

MATH 01386: Introduction to Partial Differential Equations **3 S.H.**

Prerequisites: 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 01410: 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 01421: Mathematics Field Experience 3 S.H.
Prerequisites: MATH 01131 and STAT 02360
Students accept assigned projects in a professional environment. These projects normally involve applied mathematics or statistics. Students are expected to work at least 150 hours during the semester for which they receive credit. Written reports are required.

MATH 01430: Introduction to Complex Analysis 3 S.H.
Prerequisites: MATH 01330
This course includes properties of complex numbers and their conjugates, functions of a complex variable, limits, continuity and derivatives for complex functions. Also included are: Integration and the Cauchy integral theorems, uniform convergence, Taylor's and Laurent's series and conformal mapping.

MATH 01498: Math Seminar (WI) 3 S.H.
Prerequisites: MATH 01340, MATH 01231, MATH 01330, MATH 01310 or MATH 01340, MATH 01231, 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 foundation. Additionally, each student is required to write and to present orally, a research report on a mathematical topic.

MATH 03125: Calculus: Techniques and Applications 3 S.H.
Introduces students to the techniques of differential and integral calculus. Emphasis is placed on practical applications of limits, derivatives, and integrals with business applications highlighted. This course also provides experience with and information about the significance and specific uses of the calculus in today's world. A graphing calculator is required. Students are expected to have completed an equivalent of College Algebra.

MATH 03150: Discrete Mathematics 3 S.H.
This course provides an overview of the branch of mathematics commonly known as discrete mathematics. Topics included are sets, relations, functions, induction and other methods of proof, recursion, combinatorics, graph theory, and algorithms. Emphasis is placed on the solution of problems and proofs. The use of graphing calculator is required.

MATH 03160: Discrete Structures 3 S.H.
Prerequisites: MATH 01122 or MATH 01130
This course covers mathematical topics essential for work in computer science. This material includes number bases, mathematical induction, sets, relations, functions, congruence, recursion, combinatorics, graphs, trees, logic, Boolean algebras, and proof techniques. While this is a course in mathematics, many of the examples and applications will be taken from computer science. The instructor may require use of a graphing calculator and/or computer. This course covers much of the same material as Discrete Mathematics (MATH03.150), but with a computer science focus. In no case will a student be allowed to receive credit for both courses. Both courses will be treated as equivalent for the purposes of satisfying prerequisites and course requirements.

MATH 03305: Patterns in Nature I: Visual Geometry 3 S.H.
Prerequisites: BIOL 01105, CS 01200, STAT 02260, 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 03315: 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 03400: 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 03411: 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.

MATH 03412: 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 02100: Elementary Statistics 3 S.H.
This course gives a basic introduction to the fundamental concepts and methods of statistics. Its topics include: basic measures of central tendency and variability, graphical displays, elementary design of experiments, descriptive simple linear regression, elementary probability, the normal and t-distributions, confidence intervals and hypothesis testing. Use of a statistical calculator, graphing calculator or software package is required. Note: many majors require a different introductory statistics course; students should check their major requirements before signing up for this course.

STAT 02260: Statistics I 3 S.H.
Students learn to use various graphical displays and measures of location and variability to describe data. The course considers elementary probability and sampling distributions, and uses the normal and t-distributions in estimation and hypotheses testing. It includes descriptive techniques for simple linear regression and correlation. Use of a graphing calculator is required; computer software may be used. Students are expected to have completed an equivalent of College Algebra.

STAT 02261: Statistics II 3 S.H.
Prerequisites: STAT 02260
This course is a continuation of Statistics I. Confidence intervals and hypothesis tests are studied in more detail, beginning with two sample inference for means and proportions. The inferences in simple linear regression and multiple regression are presented. Analysis of variance and experimental design are introduced. Other topics include chi-square tests for goodness-of-fit and independence, and the principles of nonparametric tests. Use of statistical software such as Minitab, SPSS or SAS, is also required.

STAT 02280: Biometry 4 S.H.
Prerequisites: MATH 01130 and BIOL 01104 and BIOL 01106 or MATH 01130 and BIOL 01202 or MATH 01130 and BIOL 01100 and BIOL 01101
This laboratory course considers elementary data analysis, probability and sampling distributions. It uses the normal and t-distributions to introduce estimation and hypotheses testing. It includes descriptive tecniques 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 02290: Problems and Statistics Inference Comp Systems 3 S.H.
Prerequisites: MATH 03160 and MATH 01131 and (CS 04113 or CS 04112)
This course is designed to integrate students¿ knowledge of mathematics and to further develop their problem solving abilities. The course content includes problem-solving techniques, a review of the literature of mathematics, solving problems drawn from a variety of current resources, and study of techniques of proof and issues in the philosophy of mathematics and its foundation. Additionally, each student is required to write and to present orally, a research report on a mathematical topic. This course is designed to integrate students¿ knowledge of mathematics and to further develop their problem solving abilities. The course content includes problem-solving techniques, a review of the literature of mathematics, solving problems drawn from a variety of current resources, and study of techniques of proof and issues in the philosophy of mathematics and its foundation. Additionally, each student is required to write and to present orally, a research report on a mathematical topic.

STAT 02360: Probability and Random Variables 3 S.H.
Prerequisites: MATH 01131 and MATH 03150 or MATH 01131 and MATH 03160
This course is an introduction to the theory and application of probability and random variables, with a short introduction to mathematical statistics, as the post-calculus level. Topics covered include sample spaces, random variables, discrete and continuous probability distributions, mathematical expectation, and multivariate distributions. At the end of the course the concept of estimation, from mathematical statistics, will be introduced. A few of the concepts of descriptive statistics will be introduced as needed. Use of a graphing calculator is required.

STAT 02361: Mathematical Statistics 3 S.H.
Prerequisites: STAT 02360
A continuation of STAT 02.360, the course emphasizes the theory of inferential statistics and its applications. The Central Limit Theorem is more fully developed as are the concepts of estimation and hypothesis testing. The properties of estimators are covered and tests using normal, t, chi-square, and F distributions are studied. Nonparametric methods, regression, and correlation are also covered. Use of a graphing calculator is required.

STAT 02371: 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.

STAT 02372: 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 10201: 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 10241: 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 10311: 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 10312: 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 10313: 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 10341: 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 10342: 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.

ME 10343: 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 10401: 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 10403: 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 10405: 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 10406: Introduction to Computational Materials Science 3 S.H.
Prerequisites: (ENGR 01281 or INTR 01486) and MATH 01236 and CS 04203
This course is intended to introduce two classes of computational stimulation techniques used in materials science: molecular structure and molecular statics. In addition, emphasis is placed on the numerical methods utilized in each. Topics to be covered include molecular gelation/polymerization stimulations, basic Monte Carlo methods, use of the Lennard-Jones potential, static minimum energy unit-cell crystallographic configurations and nonlinear minimization techniques. Students should have a working knowledge of computer programming methods.

ME 10411: 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 10412: 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 10413: 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 10414: 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 10421: 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.

ME 10422: 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 10441: 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 10442: 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 10443: 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 10444: Introduction to Automotive Engineering 3 S.H.

Prerequisites: ENGR 01291, ME 10241, ME 10341, ME 10312, ME 10313 and CHE 06311

This Course deals with the engineering of automobiles at the undergraduate level. The course draws upon knowledge fromthe fields of dynamics, thermodynamics, fluid mechanics, heat transfer, and machine design. Topics covered include vehicle dynamics, internal combustion engines, power transmission, and advanced technology vehicles. The course includes appropriate exams and automobile related design project.

ME 10450: Introduction to Advanced Solid Mechanics 3 S.H.

Prerequisites: ENGR 01272 and MATH 01236

This course will provide students with a basic understanding of the methods involved in solving problems that combine stresses, strains, and displacement in solid bodies. The course extends topics covered in the sophomore-level solid mechanic course to include derivations of well-used solutions, transformations between coordinate systems, strength, and failure used in design, and, most importantly, application of these topics to the solution of relevant problems.

ME 10451: Introduction to the Mechanics of Continuous Media 3 S.H.

Prerequisites: ENGR 01271, 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 10452: 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 10454: Introduction to the Elastic Stability of Structures 3 S.H.

Prerequisites: ENGR 01291 and ENGR 01272

Many important structures (e.g. buildings, bridges, aircraft frames) have buckling as a primary mode of failure. Because of this, it is important for structrual engineers to have at least a cursory knowledge of elastic stability phenomena. This course will provide senior level Mechanical Engineering students with an overview of elastic stability in structures, and a brief introduction to dynamic stability, as applied to rotating shafts. Applications of mathematical theory to real-world structural design problems will be emplasized.

ME 10470: 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, anthropomethy applied to the synthesis of human movement and muscle mechanics.

ME 10471: 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 10472: 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 10475: 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.

Music

MUS 04050: Student Recitals 0 S.H.
Students perform for both faculty and students. Seven or eight semesters are required, depending on the chosen curriculum.

MUS 04110: Sight Singing and Ear Training 2 S.H.
The techniques of singing at sight, solfeggio, and taking dictation are reviewed and applied.

MUS 04118: Music Fundamentals 3 S.H.
This course leads to a broader understanding of music through study of its basic elements: melody, rhythm, harmony and form.

MUS 04121: Professional Applied Instrument 1 4 S.H.

MUS 04122: Professional Applied Instrument 2 4 S.H.

MUS 04125: Music Composition I 3 S.H.
A detailed study of compositional devices emphasizing the twentieth century is made. Compositions are written for available media and performed in class.

MUS 04126: Music Composition II 3 S.H.
This is a continuation of Music Composition I. A detailed study of compositional devices emphasizing the twentieth century is made. Compositions are written for available media and performed in class.

MUS 04129: Jazz Improvisation 1 to 2 S.H.
This course presents the blues scale, major, and minor scales/chords for a thorough understanding of the blues form. Students learn the fundamentals of improvisation through performance and written composition.

MUS 04130: Music Theory I - Written 2 S.H.
A detailed study of the visual aspects of writing and performing music. The corresponding aural theory section must be taken concurrently. The departmental entrance exams for written and aural theory must be passed before admission to these courses. These courses must be taken in sequence.

MUS 04131: Music Theory II - Written 2 S.H.
Corequisites: MUS 04133 Prerequisites: MUS 04130 and MUS 04132
A detailed study of the visual aspects of writing and performing music. The corresponding aural theory section must be taken concurrently. The departmental entrance exams for written and aural theory must be passed before admission to these courses. These courses must be taken in sequence.

MUS 04132: Music Theory I - Aural 2 S.H.
A detailed study of the aural aspects of writing and performing music. The corresponding written theory section must be taken concurrently. The departmental entrance exams for written and aural theory must be passed before admission to these courses. These courses must be taken in sequence.

MUS 04133: Music Theory II - Aural 2 S.H.
Corequisites: MUS 04131 Prerequisites: MUS 04130 and MUS 04132
A detailed study of the aural aspects of writing and performing music. The corresponding written theory section must be taken concurrently. The departmental entrance exams for written and aural theory must be passed before admission to these courses. These courses must be taken in sequence.

MUS 04140: Wind Ensemble 0 to 1 S.H.
Variable credit is given to those students who participate.

MUS 04141: String Ensemble 0 to 1 S.H.
Variable credit is given to those students who participate.

MUS 04142: College Band 0 to 1 S.H.
Variable credit is given to those students who participate.

MUS 04143: Jazz Band 0 to 1 S.H.
Variable credit is given to those students who participate.

MUS 04144: Orchestra 0 to 1 S.H.
Variable credit is given to those students who participate.

MUS 04145: Lab Band 0 to 1 S.H.
Variable credit is given to those students who participate.

MUS 04146: Concert Choir 0 to 1 S.H.
Variable credit is given to those students who participate.

MUS 04147: Contemp Music Ensemble 0 to 1 S.H.
Variable credit is given to those students who participate.

MUS 04148: Percussion Ensemble **0 to 1 S.H.**
Variable credit is given to those students who participate.

MUS 04149: Guitar Ensemble **0 to 1 S.H.**
Variable credit is given to those students who participate.

MUS 04150: Flute Ensemble **0 to 1 S.H.**
Variable credit is given to those students who participate.

MUS 04151: Opera Company **0 to 1 S.H.**
Variable credit is given to those students who participate.

MUS 04152: Saxophone Ensemble **0 to 1 S.H.**
Variable credit is given to those students who participate.

MUS 04153: Clarinet Ensemble **0 to 1 S.H.**
Variable credit is given to those students who participate.

MUS 04154: Women's Chorus **0 to 1 S.H.**
Variable credit is given to those students who participate.

MUS 04155: Men's Chorus **0 to 1 S.H.**
Variable credit is given to those students who participate.

MUS 04160: 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 04161: 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 04162: Professional Applied Instrumental: Cello **1 to 4 S.H.**
An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

MUS 04163: Professional Applied Instrumental: Clarinet **1 to 4 S.H.**
An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

MUS 04164: Professional Applied Instrumental: Euphonium 1 to 4 S.H.
An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

MUS 04165: Professional Applied Instrumental: Flute 1 to 4 S.H.
An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

MUS 04166: Professional Applied Instrumental: French Horn 1 to 4 S.H.
An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

MUS 04167: Professional Applied Instrumental: Guitar 1 to 4 S.H.
An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

MUS 04168: Professional Applied Instrumental: Harp 1 to 4 S.H.
An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

MUS 04169: Professional Applied Instrumental: Oboe 1 to 4 S.H.
An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

MUS 04170: Professional Applied Instrumental: Organ 1 to 4 S.H.
An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

MUS 04171: Professional Applied Instrumental: Percussion 1 to 4 S.H.
An intensive study of one's major instrument in preparation for college teaching and/or concertizing professionally. The student must pass a departmental audition before being accepted into these courses. Performance in student recitals and ensembles is required each semester. See Department Music Curriculum Guides for specific requirements for instrument majors.

MUS 04172: Professional Applied Instrumental: Piano 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 04173: 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 04174: Professional Applied Trombone 1 to 4 S.H.

MUS 04175: 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 04176: 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 04177: 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 04178: 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 04179: 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 04180: 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 04202: 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 04203: 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 04204: 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 04221: Professional Applied Instrument 3 4 S.H.

MUS 04222: Professional Applied Instrument 4 4 S.H.

MUS 04225: 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 04226: 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 04229: 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.

MUS 04230: 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 04240: 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 04241: 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 04242: 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 04243: 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 04309: 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 04310: 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 04321: Professional Applied Instrument 5 4 S.H.

MUS 04322: Professional Applied Instrument 6 4 S.H.

MUS 04325: 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 04326: 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 04329: 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 04333: 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.

MUS 04344: 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 04350: 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 04351: 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 04361: 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 04363: 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 04403: 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 04404: Orchestration 2 S.H.
Prerequisites: MUS 04130, MUS 04131, 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 04409: 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 04410: 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 04411: Project Audio Recording 3 S.H.
Prerequisites: MUS 04344, MUS 97105, MUS 97106, MUS 97205, MUS 97206, 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 04421: Professional Applied Instrument 7 4 S.H.

MUS 04422: Professional Applied Instrument 8 4 S.H.

MUS 04425: Music Composition VII 3 S.H.
This is a continuation of Music Composition VI. A detailed study of compositional devices emphasizing the twentieth century is made. Compositions are written for available media and performed in class.

MUS 04426: Music Composition VIII 3 S.H.
This is a continuation of Music Composition VII. A detailed study of compositional devices emphasizing the twentieth century is made. Compositions are written for available media and performed in class.

MUS 04430: Senior Recital 0 S.H.
Prerequisites: MUS 97406 and MUS 97408 or MUS 97406 and MUS 04422 or MUS 97406 and MUS 04424
The Senior Recital is the recital performance culminating eight semesters of applied lessons for majors in the Bachelor of Music programs.

MUS 04450: Form and Analysis 3 S.H.
An in-depth study and examination of musical scores from various style periods with an emphasis on large-scale forms and structures.

MUS 04455: Counterpoint 3 S.H.
This course is a study of the principles of constructing a multilinear musical texture and the application of those principles analytically to music literature.

MUS 97100: 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 97101: 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 97102: 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 97103: Piano II for Non-Music Majors 3 S.H.
A continuation of Piano I for Non-Music Majors. Not for music majors.

MUS 97111: String Class-Low 1 S.H.
The fundamentals of cello and bass are studied.The fundamentals of cello and bass are studied.

MUS 97112: String Class-High 1 S.H.
Fingering and bowing patterns, tone production, tuning, methods and materials are studied for the violin and viola.

MUS 97114: Secondary Applied Instrument 1 1 S.H.

MUS 97115: Secondary Applied Instrument 2 1 S.H.

MUS 97200: 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 97201: 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 97212: Conducting-Instrumental I 1 S.H.
This course demonstrates and rehearses the skills of instrumental conducting through music for instrumental ensembles.

MUS 97213: 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 97229: Guitar Class I 3 S.H.
A study of the guitar performance and a study of the materials available.

MUS 97230: Guitar Class II 3 S.H.
A continuation of the study of the guitar through performance and a study of the materials available.

MUS 97300: French Horn Class .5 S.H.
The fundamentals of the French horn are studied.

MUS 97301: Trombone Class .5 S.H.
The fundamentals of the trombone are studied.

MUS 97302: Percussion Class 1 S.H.
A study of rudimental and ensemble techniques of snare drum, timpani, bass drum, cymbals and accessory instruments.

MUS 97309: Trumpet Class .5 S.H.
The fundamentals of trumpet are studied.

MUS 97310: Tuba Class .5 S.H.
The fundamentals of tuba are studied.

MUS 97312: 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 97313: 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 97400: 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 97401: Bassoon Class .5 S.H.
This course teaches the fundamentals of the bassoon.

MUS 97402: Clarinet Class .5 S.H.
This class teaches the fundamentals of the clarinet.

MUS 97403: Saxophone Class .5 S.H.
The fundamentals of the saxophone are studied.

MUS 97404: Reedmaking and Instrument Repair .5 to 3 S.H.
The fundamentals of reedmaking and repair of instruments are studied.

MUS 97409: Flute Class .5 S.H.
The fundamentals of the flute are studied.

MUS 97410: Oboe Class .5 S.H.
The fundamentals of the oboe are studied.

MUSG 06102: 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 06109: Music Appreciation 3 S.H.
Music literature is approached through recordings, live performance and appropriate reading.

MUSG 06115: 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 06117: Expressing Music 3 S.H.
The language of music is learned through singing, rhythmic reading, creative, instrumental and playing activities.

MUSG 06120: Keyboard Literature 3 S.H.
The course is a survey of the important compositions written for keyboard instruments, primarily piano, from ca. l600 to the present. This course may not be offered annually.

MUSG 06210: 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 06211: 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 06214: 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 06215: 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 06220: 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 06303: Choral Literature 2 S.H.
A chronological study and analysis of small and large choral works from the early chant to the present is stressed through recordings, live performances and class participation. Conducting of choral work is a major activity of this course.

MUSG 06335: 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 06337: Music and the Theater 3 S.H.
The variety of musical styles, the function of music in this environment and its psychological effect on audiences of the past and present are studied. This course may not be offered annually.

MUSG 06435: Collegium Musicum 1 S.H.
An investigation of little known musical works, utilizing instruments and techniques of style of the period in study. Performance of these works will constitute much of the study of them.

MUSG 06439: New Jazz Structures 3 S.H.
A comprehensive study of compositional and improvisational techniques employed by contemporary (1960-) jazz writers and performers; i.e., John Coltrane, Ornette Coleman, David Baker, Cecil Taylor, Sun Ra.

MUSG 06447: Music in World Cultures: Asia & Oceania 3 S.H.
A survey is made of the musical cultures of the world (excluding western art music), the role of music in society, and its relationship to other arts. Consideration will also be given to scale structure, instruments, musical forms and performance standards. Cultural areas of particular concern are Asia and Oceania.

MUSG 06448: Music in World Cultures: Africa, India, Near & Middle East 3 S.H.
A survey is made of the musical cultures of the world (excluding western art music), the role of music in society and its relationship to other arts. Consideration will also be given to scale structure, instruments, musical forms and performance standards. Cultural areas of particular concern are Africa, India, and the Near and Middle East.

SMED 01120: Foundations of Music Education 3 S.H.
Foundations of Music Education is an introductory course in the music education program. It provides a broad overview of the field of music education, addressing the historical development of music education in the United States as well as current approaches and issues in the field. The course is framed by three guiding questions: What is the purpose of music education?; How can students best

explore music?; and How can teachers best create music learning experiences for their students? In addition, two projects that extend throughout the music education major are introduced: a personal philosophy of music education, and a digital portfolio.

SMED 32218: 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 32219: 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 32329: Teaching/Learning Music A: Elementary General Music 3 S.H.
Prerequisites: MUS 04130, MUS 04131, MUS 04132, MUS 04133, MUS 04240, MUS 04241, 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 32330: Teaching/Learning Music B: Vocal Methods and Techniques 3 S.H.
This course, along with other courses in a series, helps to prepare students to teach the choral arts in the public schools with particular attention to grades 7-12. Techniques of teaching, vocal training, choral organization and the philosophy of teaching choral music are the areas to be emphasized.

SMED 32331: Teaching/Learning Music B: Instrumental Methods and Techniques 3 S.H.
A survey is made of the necessary understanding, techniques, and materials to develop an effective instrumental music program. Consideration is given to the place of instrumental music and its relationship to the total school program.

SMED 32335: Business of Music 3 S.H.

SMED 32411: Clinical Practice in Music 10 S.H.
Corequisites: SECD 03350 and SMED 32412
This senior level course provides the teacher education candidate with opportunities to demonstrate the professional knowledge, pedagogic skills and problem-solving ability developed in preservice, professional course work. The student teaching experience is a supervised, full-time activity conducted off-campus in a public secondary school classroom. The experience requires demonstrated proficiency in lesson planning and evaluation, instructional techniques, student assessment and classroom management. Admission to student teaching requires near completion of academic major, minimum grade point average of 3.0 in major and recommendations by major field academic department and teacher education faculty.

SMED 32412: Clinical Practice Seminar in Music 1 S.H.
Corequisites: SECD 03350
This capstone seminar for music student teachers provides an opportunity to establish structural knowledge apriori that will enable the integration of applied music classroom experiences during the subsequent weeks of student teaching, and creates a forum for students to process their new experiences in the schools with music professionals who share the context for the music classroom.

SMED 32440: Marching Band Techniques 3 S.H.
This course applies the fundamentals of precision marching and marching maneuvers along with new materials and techniques for the half-time show.

Philosophy-Religion

PHIL 09110: The Logic of Everyday Reasoning 3 S.H.
This course in informal logic aims at improving the student's reasoning through a thorough exposure to common logical fallacies as these appear in ordinary language, and through a study of rational procedures for problem-solving. Students have opportunities for extensive practice at discovering and overcoming their own logical faults in writing and speech as well as practice at rational problem-solving.

PHIL 09120: Introduction to Philosophy 3 S.H.
This basic course in the methods of philosophical inquiry investigates how these methods have been applied to selected philosophical issues by classical and contemporary philosophers.

PHIL 09121: Introduction to Philosophy - WI 3 S.H.
Prerequisites: COMP 01112
Same as PHIL09.120, but meets general education writing intensive guidelines with a variety of graded and ungraded writing assignments.

PHIL 09130: Introduction to Symbolic Logic 3 S.H.
This course provides students with a working familiarity with the principles and procedures involved in deductive logic.

PHIL 09211: World Philosophy I 3 S.H.
Prerequisites: COMP 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 09213: World Philosophy II 3 S.H.
Prerequisites: COMP 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 09226: 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 09227: Philosophy of Mind - WI 3 S.H.
Prerequisites: COMP 01112
Same as PHIL09.226, but meets general education writing intensive guidelines with a variety of graded and ungraded writing assignments.

PHIL 09240: 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 09241: Philosophy and Society - WI 3 S.H.
Prerequisites: COMP 01112
Same as PHIL09.240, but meets general education writing intensive guidelines with a variety of graded and ungraded writing assignments.

PHIL 09250: 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 09251: 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 09310: Aesthetics 3 S.H.
This course offers students an approach to such philosophical issues as the nature; the role of the arts in human culture; and the articulation of criteria for interpretation and criticism. Students will refine their own approach to these issues by attending to specific works of poetry, fiction, drama, music, painting, sculpture, and other arts, including student.

PHIL 09311: Aesthetics - WI 3 S.H.
Prerequisites: COMP 01112
Same as PHIL09.310, but meets general education writing intensive guidelines with a variety of graded and ungraded writing assignments.

PHIL 09322: 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 09323: Environmental Ethics 3 S.H.
This is a multidisciplinary course that addresses ehtical issues and concerns regarding the environment; the relationships between the idividual, society and the natural environment; the importance of common attitudes and prevailing world-views for understanding and responding to environmental challenges; and the need for changes in those attitudes and world-views. Students will be encouraged to think about the profound ethical, political, economic, religious, scientific, and technological implications of these environmental challenges.

PHIL 09325: American Philosophy 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 Pierce, William James and John Dewey.

PHIL 09328: Philosophy and Gender 3 S.H.
This course will explore philosophical issues relating to gender as considered by classical, modern and contemporary philosophers. Recent work by feminist philosophers will be emphasized.

PHIL 09329: Philosophy and Gender - WI 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 09330: 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 09341: 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 09346: 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, prostitution, medical and reproductive ethics, aging, disability, theological ethics.

PHIL 09368: Philosophy of Science 3 S.H.
This course offers the student a basic understanding of some of the philosophical issues involved in modern science. The nature of scientific explanation and prediction, the structure and function of scientific theories, and the confirmation of scientific hypothesis are among the issues treated.

PHIL 09369: Philosophy of Science - WI 3 S.H.
Prerequisites: COMP 01112 or ENGR 01102
Same as PHIL09.368, but meets general education writing intensive guidelines with a variety of graded and ungraded writing assignments.

PHIL 09370: Epistemology 3 S.H.
This course addresses philosophical questions concerning the nature of knowledge. Some of these questions include: How can we be sure that our knowledge of the world is accurate? What is the relation of evidence to our understanding of the world? What distinguishes mathematical knowledge from scientific and ethical knowledge? Students will study and criticize both traditional and contemporary approaches to the understanding of knowledge. Students will also develop and refine their own views in response to these issues.

PHIL 09371: Epistemology- WI 3 S.H.
This course addresses philosophical questions concerning the nature of knowledge. Some of these questions include: How can we be sure that our knowledge of the world is accurate? What is the relation of evidence to our understanding of the world? What distinguishes mathematical knowledge from scientific and ethical knowledge? Students will study and criticize both traditional and contemporary approaches to the understanding of knowledge. Students will also develop and refine their own views in response to these issues. Meets general education writing intensive guidelines with a

variety of graded and ungraded writing assignments.

PHIL 09372: Topics in the History of Philosophy 3 S.H.
This course offers in-depth study of an important philosopher, movement or school. Topic varies. May not be offered every semester. May be taken more than once.

PHIL 09392: Contemporary Moral Problems 3 S.H.
This course will acquaint the student with recent work in applying moral theory to such issues as the environment, nuclear war and deterrence, and computers and to such professions as medicine, nursing, business, education and law.

PHIL 09393: Contemporary Moral Problems- WI 3 S.H.
Prerequisites: COMP 01112
Same as PHIL09.392, but meets general education writing intensive guidelines with a variety of graded and ungraded writing assignments.

PHIL 09440: Selected Topics in Philosophy 3 S.H.
This course offers advanced study in a particular topical area of philosophy. Topic varies. May not be offered every semester. May be taken more than once.

PHIL 09490: Independent Study 3 to 6 S.H.

PHRE 11340: Selected Topics in Philosophy & Religion Studies 3 S.H.
This interdisciplinary course examines intersections between philosophy and religion studies. May not be offered every year.

PHRE 11490: Senior Seminar in Philosophy and Religion 3 S.H.
This captone course for the Philosophy and Religion major engages students in advanced level work in the disciplines of philosophy and religion studies, by focusing on a particular topic of the instructor's choice. Students complete individual projects. Required for Philosophy and Religion majors.

REL 10100: Introduction to Religion 3 S.H.
This introductory course studies the relationship of religion to culture. It explores varieties of religious expression as well as methods used in studying religion as a human phenomenon.

REL 10110: 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 10200: Religions of the World 3 S.H.
This course surveys the major world religions in both the Eastern and Western traditions.

REL 10210: Religion in America 3 S.H.
This course explores the wide variety of religious movements that have existed and continue to exist in America. Both traditional religions and cults are considered within the context of American culture.

REL 10214: Religions of the Western World 3 S.H.
This course will offer you the opportunity to explore the beliefs, literature, ethics and social implications of Judism, Roman Catholocism, Orthodoxy, Protestantism, Islam and other religions as time permits.

REL 10220: 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 10230: Religions of Asia 3 S.H.
This course introduces students to major religions in Asia: Hinduism, Buddhism, Confucianism, Taoism and Shinto. It focuses on the historical contexts, central teachings and traditional practices of these religions and their dynamic relations with societies and cultures. Instructional methods include observation of religious practice as well as study of religious scriptures.

REL 10300: 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 10301: Introduction to Judaism 3 S.H.
This course introduces the student to the primary beliefs, texts, and spiritual approaches of the Jewis religious tradition. Covering approximately 3,000 years, this tradition has undergone many changes as the conditions of Jewish life changed. Students will study primary texts such as biblical accounts and commentaries along with contemporary personal reflections.

REL 10320: Introduction to Christianity 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 10330: 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 10340: 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.

Physics and Astronomy

ASTR 11120: 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 11209: Astronomy Research I 1 to 3 S.H.

Prerequisites: minimum 3.0 GPA within major/minor and permission of instructor.

This course introduces and/or develops modern research techniques used in astronomy. Research is performed in collaboration with astronomy faculty. Emphasis will be placed on developing research skills, developing technical writing skills, and the development of skills needed for scientific presentations.

ASTR 11212: Astronomy Research II 1 to 3 S.H.

Prerequisites: minimum 3.0 GPA within major/minor and permission of instructor.

This course introduces and/or develops modern research techniques used in astronomy. Research is performed in collaboration with astronomy faculty. Emphasis will be placed on developing research skills, developing technical writing skills, and the development of skills needed for scientific presentations.

ASTR 11221: 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 11231: Methods and Techniques in Modern Astronomy (Lecture and Lab) 4 S.H.

Prerequisites: MATH 01122 or MATH 01130 or permission of instructor.

This course surveys current methods in modern astronomy research and education. The topics include, but are not limited to, modern telescopes (optical and radio), CCD cameras, astronomical data, imaging software, solar observing, and planetarium operation. Topics during a given term may be chosen around a theme of either research or education. This course features the use of precision instruments and quantitative methods. Evening observational projects, field trips, and oral presentations are part of this course.

ASTR 11241: Astronomy and Astrophysics (Lecture and Lab) 4 S.H.

Prerequisites: MATH 01130 or permission of instructor.

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 11312: Astronomy Research III 1 to 3 S.H.
Prerequisites: PHYS 02.300, minimum 3.0 GPA within major/minor and permission of instructor.
This course introduces and/or develops modern research techniques used in astronomy. Research is performed in collaboration with astronomy faculty. Emphasis will be placed on developing research skills, developing technical writing skills, and the development of skills needed for scientific presentations.

ASTR 11412: Astronomy Research IV 1 to 3 S.H.
Prerequisites: PHYS 02.300, minimum 3.0 GPA within major/minor and permission of instructor.
This course introduces and/or develops modern research techniques used in astronomy. Research is performed in collaboration with astronomy faculty. Emphasis will be placed on developing research skills, developing technical writing skills, and the development of skills needed for scientific presentations.

ASTR 13101: 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 17110: Principles of Earth Science 3 S.H.
This course examines the basic concepts of astronomy, meteorology, geology and the principles derived from those concepts.

PHSC 01110: Principles of Physical Science 3 S.H.
This course provides experiences and information that will develop a better understanding of the function and significance of science in today's world. It emphasizes the general principles of physics and stresses their influences in the development of all the physical sciences.

PHSC 01310: Independent Study (Physical Sciences) 1 to 6 S.H.
Prerequisites: permission of instructor.
Students who enter the independent study program working under the supervision of a faculty member are required to identify and select an appropriate project area, develop an achievable plan, execute the project and prepare a presentation of the completed study.

PHYS 02120: 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 02140: 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 02150: 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 02175: 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 02200: Introductory Mechanics 4 S.H.
Co/Prerequisite: MATH 01130
This course studies the basic principles or mechanics and is equivilant to most calculus based introductory mechanics courses often entitled Physics I. The course is designed to cover introductory mechanics. (Newton's laws, energy and momentum conservation, rotating systems, statics, gravity and simple harmonic motion) at a level appropriate for future scientists and engineers. The course includes a laboratory component and it emphasizes problem-solving techniques.

PHYS 02201: Introductory Electricity & Magnetism 4 S.H.
Prerequisites:PHYS 02200
This course studies the basic principles of electricity and magnetism and is equivalant to most calculus based introductory electricity and megnetism courses often entitled Physics II. The course is designed to cover introductory electricity and megnetism (charge, current, potential, fields, AC and DC circuits, Maxwell's Equations, and electromagnetic waves) at a level appropriate for future scientists and engineers. The course includes a laboratory component and it emphasizes problem-solving techniques.

PHYS 02202: Physics I (For the life sciences - Lecture and Lab) 4 S.H.
This course studies the principles of mechanics, heat, and fluids. Calculus is not used. The course emphasizes problem work involving the use of Algebra, Trigonometry, and Geometry.

PHYS 02203: Physics II (For the life sciences - Lecture and Lab) 4 S.H.
Prerequisites: PHYS 02202 or PHYS 02200
This course studies the basic principles of electricity, magnetism, and light. Calculus is not used. The course emphasizes problem work involving the use of Algebra, Trigonometry, and Geometry.

PHYS 02210: Introduction to Thermodynamics/Waves/Optics 4 S.H.
Prerequisites: PHYS 02200 or HONR 05185, Co/Prerequisite: Math 01131
This introductory course studies the basic principles of thermodynamics, fluids, waves, and optics and their application. The concepts will be applied through problem solving and laboratory experiences. A large portion of the content of this course builds from the concept of conservation of energy covered in the introductory mechanics course. The course is required for any physical science major and recommended for those majoring in biochemistry, chemistry, biology, engineering, or mathematics. The specific topics covered include elastic properties of materials, fluid mechanics, mechanical waves, sound, conduction of heat, kinetic theory of gasses, the laws of thermodynamics, light, geometric optics, interference and diffraction.

PHYS 02211: Physics Research I **1 to 3 S.H.**

Prerequisites: minimum 3.0 GPA within major/minor and permission of instructor.

This course introduces and/or develops modern research techniques used in physics. Research is performed in collaboration with one or more faculty in an area of specialization of the faculty. Emphasis will be placed on developing research skills, developing technical writing skills, and the development of skills needed for scientific presentations.

PHYS 02212: Physics Research II **1 to 3 S.H.**

Prerequisites: minimum 3.0 GPA within major/minor and permission of instructor.

This course introduces and/or develops modern research techniques used in physics. Research is performed in collaboration with one or more faculty in an area of specialization of the faculty. Emphasis will be placed on developing research skills, developing technical writing skills, and the development of skills needed for scientific presentations.

PHYS 02300: Modern Physics (Lecture and Lab) **4 S.H.**

Prerequisites: MATH 01131, PHYS 02201 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 02305: Optics and Light (Lecture and Lab) **4 S.H.**

Prerequisites: MATH 01131, PHYS 02201 and PHYS 02203 or permission of instructor.

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 02311: Physics Research III **1 to 3 S.H.**

Prerequisites: PHYS 02.300, minimum 3.0 GPA within major/minor, and permission of instructor.

This course introduces and/or develops modern research techniques used in physics. Research is performed in collaboration with one or more faculty in an area of specialization of the faculty. Emphasis will be placed on developing research skills, developing technical writing skills, and the development of skills needed for scientific presentations.

PHYS 02315: 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 02325: Mathematical Physics (Lecture Only) **3 S.H.**

Prerequisites: MATH 01131, PHYS 02201 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 02333: Introduction to optical design program ZEMAX 3 S.H.
Prerequisites: Junior or Senior standing; science or engineering major.
The ZEMAX optical design program is a comprehensive software tool for opitcal 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 02387: 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 02399: Electric Circuits (Lecture and Lab) 4 S.H.
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.

PHYS 02401: 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 02402: 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 02411: Physics Research IV 1 to 3 S.H.
Prerequisites: PHYS 02.300, minimum 3.0 GPA within major/minor, and permission of instructor.
This course introduces and/or develops modern research techniques used in physics. Research is performed in collaboration with one or more faculty in an area of specialization of the faculty. Emphasis will be placed on developing research skills, developing technical writing skills, and the development of skills needed for scientific presentations.

PHYS 02430: 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 02431: 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 02440: 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 02470: Selected Topics in Advanced Physics **3 S.H.**
Prerequisites: PHYS 02300 or permission of instructor.
This course is aimed to expose students to advanced physics topics that are important for their career development and their involvement with faculty research. The topics include, but are not limited to, Solid State Physics, Atomic and Molecular Physics, Occupational Physics, Special Relativity, and Elementary Particles. One topic from the above list will be chosen each time the course is offered.

PHYS 02499: Independent Study - Physics **1 to 4 S.H.**

Political Science

EDPA 02320: 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 02410: 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 02412: 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 02490: 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.).

POSC 07100: Introduction to Government and Politics **3 S.H.**
Professors who teach this course will normally focus on some, but not all, of the following topics: political and governmental structures, functions, and processes; political behavior; public law and public policy; and political values or philosophies.

POSC 07110: American Government 3 S.H.
This course focuses on the American Federal government, emphasizing the structure, operation and processes of our political system. Coverage will include political values as they are reflected in major public policies.

POSC 07200: 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 07220: 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 07230: Comparative Political Systems 3 S.H.
Prerequisites: POSC 07110
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 07303: 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 07305: 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 07306: 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 07308: Current Problems in American Politics 3 S.H.
This course deals with selected issues of topical concern in American politics. Issues may be "headlines" that are receiving current media attention (usually policy debates), or they may focus on more persistent problems of the kind that concern political scientists, e.g. the consequences of party decline, the role of media in elections, etc. This course may not be offered annually.

POSC 07310: American Constitutional Law 3 S.H.
Prerequisites: POSC 07110
An introduction to major concepts of constitutional law as reflected in landmark cases, this course considers such matters as judicial review, national supremacy, the separation of powers, constitutional federalism and the commerce clause as well as the impact of various judicial philosophies on the decisions of the Supreme Court.

POSC 07311: Women and American Politics 3 S.H.
This course examines the historical role of women in a variety of political movements, varied views of feminism and the impact of participation on the changing status of women in American society. This course may not be offered annually.

POSC 07312: Freedom of Expression 3 S.H.
This course considers the range of first amendment issues relating to speech, the press and the right to assemble. Issues of censorship and national security, obscene speech, commercial speech, and libel, among others, will be discussed. This course may not be offered annually.

POSC 07320: International Relations 3 S.H.
Prerequisites: POSC 07110
This course studies the distribution of power among states in the international system, the effect of system change on national behavior, external and domestic sources of international influence and the relationship of capabilities and intentions in foreign policy decisions.

POSC 07321: Contemporary World Problems 3 S.H.
This course examines selected problems such as terrorism, world population and hunger, regional conflicts and arms control and disarmament.

POSC 07323: Politics of Race, Poverty, and Welfare in the U.S. 3 S.H.
This course studies the social structure of race and poverty in the United States and explores the constituencies for anti-poverty and anti-discrimination legislation. This course may not be offered annually.

POSC 07324: Black Americans and American Politics 3 S.H.
This course examines the role of Black Americans in the political system, the forms and changing nature of their participation and a review of judicial and administrative decisions affecting the political and social status of Black Americans. This course may not be offered annually.

POSC 07330: Contemporary U.S. Foreign Policy 3 S.H.
Prerequisites: POSC 07110
This course presents historical themes and patterns of U.S. foreign policy with special focus on the post-World War II period. It considers the sources of influence on policy-making and the major issues in contemporary policy. This course may not be offered annually.

POSC 07340: Civil Rights and Civil Liberties 3 S.H.
Prerequisites: POSC 07110
This course examines major trends and court decisions which have affected civil rights and civil liberties. Topics which may be raised include religion, speech, press, privacy, voting, equal protection, and due process.

POSC 07341: 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 07346: 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 07350: 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 07351: 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 07360: Methodology and Statistics in Political Science Research 3 S.H.
Prerequisites: POSC 07360 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 07370: 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.

POSC 07375: 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 07380: Politics on Film 3 S.H.
Prerequisites: POSC 07110
This course in American national politics and government uses film and other examples of popular culture as tests to supplement conventional readings, lectures, and assignments. Topics include political culture, political institutions, campaigns, and public policy.

POSC 07400: 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 07401: Contemporary Political Thought 3 S.H.
This course considers major l9th 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 07410: Selected Problems in Constitutional Law 3 S.H.
Prerequisites: POSC 07310
This course explores specific issues in recent Supreme Court decisions, and the process through which such issues are resolved, emphasizing one or two areas of current interest. This course may not be offered annually.

POSC 07415: In-depth Study of the Current Supreme Court 3 S.H.
Students spend three days hearing oral arguments at the Supreme Court. Prior research on an assigned case will culminate in a paper in which the student will predict the outcome of the Court's decision.

POSC 07420: International Law 3 S.H.
This course considers the role of law among nations, the source of international law in practice and convention and the national courts, international courts and other vehicles for adjudicating and enforcing international law. This course may not be offered annually.

POSC 07421: International Organizations 3 S.H.
This course studies the League of Nations, the United Nations and other international and regional organizations in relation to such functions as peace-keeping, conflict resolution, international consensus-building, etc. This course may not be offered annually.

POSC 07441: Political Problems of Modern Africa 3 S.H.

POSC 07489: Seminar in Political Science - WI 3 S.H.
Prerequisites: COMP 01112 and POSC 07360
This course stresses careful reading and research in primary and secondary material related to selected problems in political science. Primary emphasis will be on writing a critical and analytical paper.

POSC 07490: Seminar in Political Science 3 S.H.
(Open only to senior political science majors) This course stresses careful reading and research in primary and secondary material related to selected problems in political science. Primary emphasis will be on writing a critical and analytical paper.

POSC 07491: Independent Study in Political Science 3 to 9 S.H.
This course focuses on individual projects under the guidance of a faculty member; it cannot be used as a substitute for a course offered by the department. This course may not be offered annually.

Psychology

PSY 01105: The Psychology of Ethnic Identity & Community in America 3 S.H.
Prerequisites: PSY 01100 or PSY 01107
This course will facilitate students' development of knowledge and appreciation of racial/ethnic identity formations and their impact on intergroup relations and orientations toward community in America. Students will engage in a variety of individual and collaborative strategies for studying their own and others' racial/ethnic identities, interracial and interethnic relations and the prospects for constructing a sense of pluralistic and egalitarian communities.

PSY 01106: Psychology of Scientific Thinking 3 S.H.
Students will be introduced to the methods of science and the role that science plays in the understanding of how the world works. The development of critical thinking skills and an evidence based approach to evaluating scientific claims will be emphasized. Students will also be introduced to the psychological processes that underlie the scientific method and the persistence of belief in pseudoscientific and non-scientific claims.

PSY 01107: Essentials of Psychology 3 S.H.
Students will be introduced to psychology, the scientific study of behavior. This course will highlight the key areas in psychology that help to explain human behavior. This course will include discussion of diverse topics such as, perception, learning, thinking, memory, motivation, emotion, stress, and health, personality, physiological processes, psychological disorders and treatment, development, intelligence, and social psychology.

PSY 01200: Psychology of Women & Cultural Experience 3 S.H.
Prerequisites: PSY 01100 or PSY 01107
This course explores the influence of gender, race, and class in the psychological development and experience of women in cultural contexts. Although it will primarily focus on the lives of women in the United States, an attempt will be made to provide linkage to women's experiences globally. Topics covered will include the role of gender bias in the history of psychology, female personality development, women in the workplace, women's psychosexual issues, and the role of gender in health and wellness.

PSY 01230: Psychology of Personality 3 S.H.
Prerequisites: PSY 01100 or PSY 01107
Students study major theories of personality and techniques for measuring personality. Personality is that field of psychology that investigates the predispositions or inherited characteristics and the acquired or learned qualities that affect an individual.

PSY 01235: African American Psychology 3 S.H.
Prerequisites: PSY 01100 or PSY 01107
This course introduces students to a critical analysis of the psychosocial development, behavior and relationships of Black people within the sociohistorical context of the United States. It facilitates students' examination of issues relating to methodology and assumptions underlying past and current research on the psychological study of African Americans. The course also enables students to examine theory and research on the effects of significant sociocultural factors on the lives of African Americans,

with particular focus on physical development, language and communication styles, models of identity and social-emotional development, intellectual and academic development, sexual behavior and attitudes, health issues, and empowerment.

PSY 01302: Research in Perception - WI 4 S.H.

Prerequisites: PSY 01104 and PSY 07210

This course provides an overview of how the study of perception integrates psychophysics, sensory and physiological psychology, and neuropsychology in an attempt to understand the principles guiding the way in which humans obtain information about the world. Topics include the scientific study of the sensory systems, classical and contemporary psychophysical methods, principles of perceptual organization, aftereffects, perceptual illusions, and the real-world implications of these phenomena. This course contains a laboratory component that emphasizes the use of scientific methodologies in Perception. Only matriculated psychology majors may register for this course.

PSY 01305: Psychology and Law 3 S.H.

Prerequisites: PSY 01100 or PSY 01107

A course in the relationship of psychology and law, this course studies how the law has used psychological concepts and data. It examines legal issues of significance for psychologists and examines psychological research as it relates to the legal process.

PSY 01308: Lifespan Development 3 S.H.

Prerequisites: PSY 01100 or PSY 01104 or PSY 01107

This course provides an overview of human development across the lifespan, including physical, cognitive, social, and personality development. All the major lifespan developmental theories and research will be presented, with heavy emphasis on students' critical thinking about research. This course will cover both normative and atypical development across the lifespan, including the major physical, mental health, and social problems occurring during the life span.

PSY 01310: Psychology of Racism and Ethnocentrism: Causes, Development, Consequences, Solutions 3 S.H.

Prerequisites: PSY 01100 or PSY 01107

This course provides an opportunity for students to develop critical understanding of psychological perspectives regarding the root causes, complex patterns, and the individual, group, and societal consequences of racism and ethnocentrism in the United States of America. The course will draw upon comparative data regarding the psychological factors involved in historic or contemporary race and ethnic relations within selected international contexts to explore parallel and unique cross-cultural phenomena.

PSY 01316: Behavioral Assessment and Measurement 3 S.H.

Prerequisites: PSY 01104 or PSY 01107

This course provides students with the knowledge and skills needed to conduct behavioral assessments and choose appropriate target outcomes and intervention strategies. Additionally, students will learn to objectively measure behavior, display data graphically, and experimentally evaluate the effectiveness of behavioral interventions. This course is one of the courses required for the Specialization in Behavioral Services for Children and Their Families in the psychology department.

PSY 01326: Perception 3 S.H.
Prerequisites: PSY 01100 or PSY 01104 or PSY 01107
This course involves the study of sensation and perception. Topics include the scientific study of sensory systems, classical and contemporary psychophysical methods, principles of perceptual organization, aftereffects, illusions and space perception.

PSY 01327: Cognitive Psychology 3 S.H.
Prerequisites: PSY 01100 or PSY 01104 or PSY 01107
This course involves the study of information processing. Its topics may include the history and methods of cognitive psychology, selection and processing of sensory information, pattern recognition, memory processes, language acquisition and cognition.

PSY 01419: 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 01420: Advanced Research-WI 3 S.H.
Prerequisites: (PSY 07202 and COMP 01112) or (PSY 07202 and HONR 01112) and matriculation as a Psychology major
Students will complete an empirical research project, including a literature review, conceptualization of the hypothesis, design of the methodology, data collection, statistical analysis, and interpretation of results. The project will be reported in a major research paper. Students will be exposed to ethical review board procedures.

PSY 01422: Field Experiences in Psychology 3 to 6 S.H.
Prerequisites: PSY 01104 and PSY 01100 or PSY 01107
Because of the limited enrollment in this course, priority is given to psychology majors. It is suggested that the student have a minimum of 60 hours of college credit which should include at least 15 hours in psychology. Students are assigned placements in supervised settings such as community mental health centers, drug rehabilitation centers, crisis intervention facilities and schools.

PSY 01423: Seminar in Psychology: Topics 3 to 6 S.H.
Prerequisites: (PSY 01104 and PSY 01100) or PSY 01107
This course enables the faculty to offer substantive courses in specialty areas which are not offered on a regular basis. Students should have substantive preparation in the specialty area of the course.

PSY 01429: History & Systems in Psychology 3 S.H.
Prerequisites: (PSY 01104 and PSY 01100) or PSY 01107
This course presents the history of psychology, giving a comprehensive treatment of theories and systems in psychology. The student should have a substantial background in psychology before taking this course.

PSY 02257: Psychology as a Profession and Practice 3 S.H.
Prerequisites: PSY 01.107 or both PSY 01.100 and PSY 01104
This course will introduce students to traditional and emerging applied areas in psychology, with the goal of increasing students' knowledge about how psychological information is used to impact peoples lives. In addition, students will learn how psychological knowledge can be applied in ways that allow us to better understand the individual and the broader social world. Finally, students will explore possible career paths in psychology and learn how to best prepare themselves for a career in psychology or related

fields post graduation.

PSY 02305: Applied Behavior Analysis 3 S.H.
Prerequisites: PSY 01100 or PSY 01104 or PSY 01107
This course deals with the principles, procedures and utility of behavior modification in normal and clinical settings.

PSY 02307: Research in Cognitive Psychology - WI 4 S.H.
Prerequisites: PSY 01104 and PSY 07210
This course involves the study of information processing. Its topics may include the history and methods of cognitive psychology, selection and processing of sensory information pattern recognition, memory processes, language acquisition and cognition. A laboratory component is appended to the course, but does not fulfill General Education laboratory requirements.

PSY 02308: Research in Learning and Behavior-WI 4 S.H.
Prerequisites: 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 02309: Research in Social Psychology - WI 4 S.H.
Prerequisites: PSY 01100 and PSY 07210
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 02310: Learning and Behavior 3 S.H.
Prerequisites: PSY 01104 or PSY 01107
This course provides an overview of the experimental analysis of behavior with minor attention to other theories of learning. Topics may include classical conditioning, operant conditioning, and schedules of reinforcement.

PSY 03200: Abnormal Psychology 3 S.H.
Prerequisites: PSY 01100 or PSY 01107
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 03205: Intake and Interviewing Skills in Psychology 3 S.H.
Prerequisites: PSY 01100 or PSY 01107
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 05205: Environmental Psychology 3 S.H.
Prerequisites: PSY 01100 or PSY 01107 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 05206: Social Psychology 3 S.H.
Prerequisites: PSY 01100 or PSY 01107
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 05310: Psychology of Human Sexuality 3 S.H.
Prerequisites: PSY 01100 or PSY 01104 or PSY 01107
This course provides an overview of the current scientific knowledge concerning human sexuality. It examines data from national surveys and controlled laboratory studies.

PSY 05402: Psychology of Conflict and Conflict Resolution 3 S.H.
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.

PSY 05410: Community Psychology 3 S.H.
Prerequisites: PSY 05206 and PSY 01107 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 06300: Psychological Tests and Measurements 3 S.H.
This course examines the nature and use of psychological tests and the social and ethical implications of testing. It emphasizes principles of test construction: reliability, validity and item analysis. Statistics should be completed before or concurrently with this course.

PSY 07201: Research Methods in Psychology 4 S.H.
Prerequisites: (PSY 01107 or PSY 01104 or 01100) and PSY 01106
This course addresses research design and methodologies for data collection in psychological research. Observation, correlational, and experimental techniques are studied. Also examined are ethics in research and responsible interpretation of research results.

PSY 07202: Statistics in Psychology 4 S.H.
Prerequisites: PSY 07201 and STAT 02260
This course focuses on the many statistical procedures used in psychological research. Students will learn to select and calculate appropriate perocedures to analyze both quantitative and qualitative data. they will gain an understanding of how to select and perform descriptive, correlational, and inferential procedures. there will alsp be emphasis throughout the course on learning to use statistical software

PSY 08215: Consumer Psychology 3 S.H.
Prerequisites: PSY 01100 or PSY 01107
This course introduces behavioral science research and methods in consumer behaviors. It emphasizes the processes of learning, perception, motivation, and social behavior and their effect on consumer attitude, buying behavior, advertising and effective mass persuasion. The course also includes product design and evaluation and consumer protection and awareness.

PSY 08220: Personnel Psychology 3 S.H.
Prerequisites: PSY 01100 or PSY 01107
This course introduces the application of psychological principals and research findings in the personnel systems of organizations. Its topics include personnel testing and selection; instrument development; job analysis and evaluation; performance appraisal; training systems, and the models for human resource utilization.

PSY 08310: Industrial/Organizational Psychology 3 S.H.
Prerequisites: PSY 01100 or PSY 01107
This course studies application of psychological theories, methods, principles and findings to various problems of industrial, business and public organizations. It covers personnel selection, testing, and training; organizational behavior; safety, equipment and systems design, and consumer behavior.

PSY 09209: Child Development 3 S.H.
The content of this course includes the physical, cognitive, perceptual, linguistic, emotional, and social development of the child. Both the stages of development within each of these domains and the biological and sociocultural mechanism underlying the development are emphasized. This course in intended for nonmajors and will not fulfill requirements of the Psychology majors. Psychology majors must take lifespan development PSY 01308 in order to fulfill the requirements of the major. This course is intended for nonmajors and will not fill requirements of the Psychology major. Psychology majors must take Lifespan Development (PSY 01.308) in order to fulfill the requirements of the major.

PSY 09210: Adolescent Development 3 S.H.
This course studies current theory and practice related to biological, cognitive, psychoanalytic, psychosocial, sexual and moral development in adolescence. Students gain experience in developing beginning levels skills in selection and use of evaluative techniques and in the use of activities appropriate to the various levels of adolescent development. This course is intended for nonmajors and will not fulfill requirements of the Psychology major. Psychology majors must take Lifespan Development (PSY 01308) in order to fulfill the requirements of the major.

PSY 09305: Developmental Psychopathology 3 S.H.
Prerequisites: PSY 01100 or PSY 01107
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 10315: Physiological Psychology 3 S.H.
Prerequisites: PSY 01100 or PSY 01104 or PSY 01107
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 22215: Educational Psychology 3 S.H.
Prerequisites: PSY 01100 or PSY 01104 or PSY 01107
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.

Public Relations-Advertising

ADV 04330: Introduction to Advertising 3 S.H.
Prerequisites: 30 Credits Required
The course provides an overview, including techniques and terminology that are useful in the professional world. Topics include history of advertising, marketing, ethics, law, consumer behavior, print and electronic media, and retail and corporate advertising. The course combines theory of advertising with practical applications.

ADV 04331: Print Media Copywriting 3 S.H.
Prerequisites: ADV 04330 , for majors or minors only
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 04352: 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 04355: Advertising Practicum 1 to 3 S.H.
Prerequisites: 75 Credits Required
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 04360: Integrated Marketing Communication 3 S.H.
Prerequisites: PR 06350 and ADV 04330
This course explores the expanded as well as the communication portion of the organization's business and marketing plans. Emphasis is placed on how to translate marketing strategies into a well-defined and seamless communication program directed at all of the organization's publics.

ADV 04405: Independent Study - Advertising 1 to 6 S.H.

ADV 04430: Electronic Media Copywriting 3 S.H.
Prerequisites: ADV 04331 , for majors or minors only
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 04432: 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 04434: Advertising Campaigns - WI 3 S.H.
Prerequisites: ADV 04352 and ENGL 01112
This course prepares students to undertake and complete an extensive, creative, effective professional advertising campaign. The course includes instruction on how to prepare the speech which is made when the campaign is pitched to the client, extensive marketing and advertising research, final polishing of copywriting skills and a well prepared final oral presentation.

PR 01403: Special Topics in Public Relations 1 to 3 S.H.

PR 06301: 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.

PR 06303: Writing Basics in Public Relations and Advertising 1 S.H.
Writing Basics in PR and Advertising is a 5-week writing boot camp that helps students to better transition into more advanced forms of public relations writing. The course helps polish students¿ writing and provides an overview of grammar and usage rules along with sentence structure, organization, and proof reading.

PR 06305: 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 06310: Introduction to Public Relations/Advertising Research 3 S.H.
Prerequisites: 60 credits required
The course studies both qualitative and quantitative research methods necessary for success in the fields of public relations and advertising. Emphasis is placed on evaluation of secondary searches, individual and group interviews, media audience measurements, market structure, segmentation and usage studies, and tracking studies.

PR 06350: Introduction to Public Relations 3 S.H.
This course explores the history and role of public relations in society. Students explore mass media, persuasion, publicity, radio and television. Students examine special events, crisis management, communication techniques, research and evaluation, communication law and ethics. Basically a theory course, this introduction also applies ideas practically to real clients and organizations.

PR 06353: Case Studies in Public Relations - WI 3 S.H.
Prerequisites: PR 06305 and COMP 01112
This course reviews and predicts how organizations solve their public relations challenges. Students write case statements, position papers and solutions involving publicity demands, special events, promotions, image problems and other challenges. Students role-play key personnel, working through problems in seminar simulations. Writing, speaking, thinking and presenting ideas are emphasized.

PR 06354: Impact of Public Relations on the News 3 S.H.
Prerequisites: PR 06301 or JRN 02310
The course is a semester-long journey into the information management world where the professions of journalism and public relations often find strong parallels but equally as often are locked in competiton over how important local, national and world events and issues will be reported and explained to the public.

PR 06359: Public Relations Practicum 1 to 3 S.H.
Prerequisites: 75 credits required
Public relations practicum allows students to apply their skills and knowledge by working on-campus with department faculty on a variety of technical, creative, or research-related assignments. Students can earn 1 credit for every 40 hours of work, with most practica implemented for 3 credit hours. Students can earn credit for working for PRAction, Rowan University's in-house agency for its Public Relations Student Society of America Chapter. Students keep a detailed log of working hours, prepare an extensive portfolio, write an analytical critique of the practicum and submit the work to the faculty supervisor for grading.

PR 06360: Public Relations/Advertising Internship I 3 S.H.
Prerequisites: PR 06350, PR 06301,, PR 06305 or ADV 04330, ADV 04331, 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 06362: Public Relations/Advertising Internship II 3 S.H.
Prerequisites: PR 06350, PR 06301 and PR 06305 or ADV 04330, 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 06364: Public Relations/Advertising Internship III 6 S.H.
Prerequisites: PR 06350, PR 06301, PR 06305 or ADV 04330, 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 and 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.

PR 06405: Independent Study 1 to 6 S.H.

PR 06454: Public Relations Planning - WI 3 S.H.
Prerequisites: PR 06353 and COMP 01112
This course introduces students to the components of a comprehensive public relations campaign: research, audience identification, message construction, channel selection and evaluation. Working with clients, students create and write an entire program for a variety of challenges, including image change, new product or service introduction, information, recruitment, crisis management, employee relations, persuasion and others. Students practice a complete PR plan.

PR 99362: Public Opinion 3 S.H.
Prerequisites: PR 06310
This course includes the nature and role of public opinion, the dynamics of public opinion processes and the numerous factors which shape or influence opinion. Students examine the mass media, evaluating their roles as molders and reflectors of public opinion. Major topics that influence public opinion are discussed, including gratifications, agenda setting, knowledge gaps, censorships and propaganda.

Radio/TV/Film

RTF 01402: Special Topics 3 S.H.

RTF 03205: TV History and Appreciation 3 S.H.
Prerequisites: COMP 01112 and 45 credits required
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 fl all entertainment and informational programming. As well, students examine how television has affected American society and how American society has affected television.

RTF 03220: The Television Industry 3 S.H.
Prerequisites: (COMP 01111 and COMP 01112) or (COMP 01105 and COMP 01112) or (COMP 01110 and COMP 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 03221: The Radio Industry 3 S.H.
Prerequisites: (COMP 01111 and COMP 01112) or (COMP 01105 and COMP 01112) or (COMP 01110 and COMP 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 03222: Television Production I 3 S.H.
Prerequisites: RTF 03224 and RTF 03275 andRTF 03220
The course introduces students to the principles and techniques of TV production. Students work in production teams within a professional television studio setting. Students gain experience in all phases of production, including conception of ideas, scripting, directing, and operation of equipment to produce various types of programs. Programming includes newscasts and talk shows. Students also learn to edit 30-second commercials and PSAs.

RTF 03224: Sound Communication 3 S.H.
Prerequisites: COMP 01112 or ENGR 01201 and 30 credits required
This course introduces students to the production process through the medium of sound. Topics include the history, physics, and function of sound recording as it relates to radio, television, and film media. Students will be introduced to basic storytelling concepts and will write, create, and edit projects that incorporate sound as a primary communication tool.

RTF 03270: Film History and Appreciation I 3 S.H.
Prerequisites: 45 credits required
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 1 is not a prerequisite for Part II; these courses may be taken in any order; students may opt for one or both courses.

RTF 03271: Film History and Appreciation II 3 S.H.
Prerequisites: 45 credits required
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 03272: Images of Women in Film 3 S.H.
Prerequisites: 30 credits required
This course uses the medium of motion pictures to study cultural perspectives on women at various times through history and in differing cultural environments. Students discuss a wide range of film treatments to examine women's changing role, as well as social attitudes toward women as expressed by representative works of a cultural era and by writers, directors and actors.

RTF 03273: The Movie Industry 3 S.H.
Prerequisites: COMP 01111 and COMP 01112 or COMP 01105 and COMP 01112 or
This course introduces students to the language of the technical elements of the motion picture and to a method for analyzing the artwork created and the messages communicated by the motion picture. Students analyze the components of motion pictures including color, lighting, editing, scripting, directing and acting.

RTF 03275: Applied Media Aesthetics: Sight, Sound and Story 3 S.H.
Prerequisites: COMP 01112 and 30 credits required
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 03280: African American Film History 3 S.H.
Prerequisites: COMP 01112
This course offers students an introduction to the little-known yet important area of African American Film History, beginning with the development of Race Movies by such directors as Oscar Micheaux, and continuing to the present day. Through lectures, screenings and reports students will study, discuss and analyze the historical and cultural significance of these films and their influence on society.

RTF 03294: Contemporary International Cinema 3 S.H.
Contemporary International Cinema is designed as a basic introduction to world cinema, defined as the film output of other nations, regions and non-Hollywood cinema. Students will examine the major filmmakers, production and distribution practices of the global filmmaking community. Students will explore definitions of national and transnational cinema, issues of representation and post-colonialism, and concepts of authorship and genre from a global perspective. Students will gain a critical awareness of the ways in which cinema shapes our attitudes or perceptions of other cultures, and an appreciation of cinematic representations that originate from within other cultures. Through readings, discussion, screenings and research students will gain a broader perspective of the current state of film as an art form, a globalized industry and cultural products.

RTF 03295: Introduction to New Media 3 S.H.
Prerequisites: COMP 01.111 and 30 hours required
Introduction to New Media surveys, emerging digital communication and entertainment media. otherwise learned new media from the perspective of the producer. Students will discuss the evolution, social and historical implications, and production of media forms with an emphasis on social networking, user generated and other web media.

RTF 03321: Television Production II 3 S.H.
Prerequisites: RTF 03221
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 03331: Radio Broadcasting II 3 S.H.
Prerequisites: RTF 03224 and RTF 03275
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 03335: 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 03340: RTF Research & Criticism 3 S.H.
Prerequisites: CMS 06202 and COMP 01112 and 75 credits required
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.

RTF 03350: RTF Practicum 3 S.H.
Prerequisites: 75 credits required
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 03351: RTF Internship I 3 S.H.
Prerequisites: 75 credits required
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 03352: RTF Internship II 3 S.H.
Prerequisites: 75 credits required
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 03353: RTF Internship III 3 S.H.
Prerequisites: 75 credits required
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 03354: RTF Internship IV 3 S.H.
Prerequisites: RTF Major, 75 credit hours earned, and minimum GPA of 2.500
Students earn 3 credit hours for 120 hours of intership 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. No part is a prerequiste for another; order is not a factor in selecting this course.

RTF 03370: Film Production I 3 S.H.
Prerequisites: RTF 03224 and RTF 03275
The course introduces students to the principles and techniques of film style production. Students work in production teams to make a series of short films designed to familiarize them with film production techniques including camera operation, shot composition, and editiing. In addition students gain experience applying basic cinimatic narrative concepts.

RTF 03371: Film Production II 3 S.H.
Prerequisites: RTF 03370
This is an intermediate synch-sound 16mm production course which emphasizes studio production techniques. Students work in crews on short dialogue scenes designed to familiarize them with directing, script analysis, art direction, color cinematography, lighting, and synch-sound digital editing.

RTF 03372: American Film Directors 3 S.H.
Prerequisites: 45 credits required
Through historical perspective and criticism, this course provides an in-depth study of films by American directors. This course may not be offered annually.

RTF 03380: 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 sperate scenes that will be vidotaped and critqued

RTF 03393: Film Scenario Writing - WI 3 S.H.
Prerequisites: 45 credits required
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 03394: New Media Production 3 S.H.
Prerequisite: RTF 03295
This is the second in a sequence of three courses in the Interactive Media specialization. Students will apply content production skills from radio, television, and film to the production of hybrid media. Students work in teams to plan, design, produce, and test multimedia products. Students are expected to demonstrate a high level of professionalism in completing all work on schedule to professional standards and in their interactions.

RTF 03420: Current Issues in Electronic Media 3 S.H.
Prerequisites: RTF 03220 and COMP 01112
This course analyzes and discusses the impact that current trends in media technology, economics, regulation, and management have on content development, distribution, acquisition and consumer use.

RTF 03433: Television Program Packaging - WI 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 03450: 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 03470: 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 03471: Techniques of Documentary Film Production 3 S.H.
Prerequisites: RTF 10370
This course introduces students to the study of documentary form and techniques of production. It provides students with and 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 17100: Improving Personal Reading Skills 3 S.H.
This basic skills course helps students whose reading skills need improvement in order to cope with the demands of college course work. Instruction in the full semester course emphasizes vocabulary, comprehension and study skills. This course is not counted toward graduation. It is a required course for entering students who do not pass the Rowan University Basic Skills competency requirement in Reading.

READ 30120: Literacies in Today's World 3 S.H.
This course will provide students with historical and cultural perspective of how and why people acquire and use literacy to meet personal and societal needs. By viewing literacy through different lenses students will acquire an understanding of the interrelationship of language, thought, and social practice.

READ 30280: Teaching Literacy 3 S.H.
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 30320: Language Development, Emergent Literacy, and Reading in Young Children 4 S.H.
Corequisites: ECED 23320 Prerequisites: ECED 23221
Students will gain an understanding of five phases of Literacy: Awareness and Exploration; Experimental Reading and Writing; Early Reading and Writing; Transitional Reading and Writing; Independent Reading and Writing. Students will learn how to integrate literacy across all curricula in

the forms of reading, writing speaking, listening, and viewing. They will be able to identify, assess, adapt and implement a variety of strategies that take into account children with special needs. Further, students will be able to recognize the impact of cultural, linguistic, and other diversities that affect engagement in literacy learning and they will be able to identify and utilize effective teaching strategies that address these differences. This course also requires a weekly field experience in a pre-school setting.

READ 30347: Phonics and Spelling Instruction 3 S.H.
Prerequisites: READ 30280 or REED 30280
This course prepares prospective teachers to blend evidence-based phonemic awareness, phonics, word identification, and spelling instruction strategically into an integrated language arts approach to teaching literacy. Major topics include the development of children's phonic/spelling knowledge; what teachers should know about language; informal techniques to assess children's early literacy, word identification, and spelling understandings; systematic and meaningfully applied instruction to meet development, cultural, and linguistic differences; and communicating with parents and professionals about phonics and/or spelling.

READ 30350: Using Children's Literature in the Reading/Writing Classroom 3 S.H.
Prerequisites: REED 30280 or READ 30280
This course prepares prospective teachers to integrate reading and writing in a language arts program through the use of book selections that reflect quality writing in the genres typically found in children's literature. The course will provide students with sufficient background and knowledge in children's literature so that they may teach reading by using trade books, emphasizing process writing and developing thematic units. Language, literacy, and learning will be enhanced by integrating children's literature across the curriculum.

READ 30351: Differentiated Literacy Instruction 2 S.H.
Prerequisite: READ 30280
This course prepares teacher candidates to provide differentiated literacy instruction in diverse classrooms with a wide range of developmental levels, instructional needs, interests, and backgrounds. Teacher candidates will learn how to select, administer, and analyze various assessment tools to inform instruction. Field experience is required.

READ 30421: School Reading Problems-Writing Intensive 3 S.H.
Prerequisites: READ 30351, 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.

READ 30451: Supervised Clinical Practice in Reading 3 S.H.
Prerequisites: READ 30421 or READ 30350
Students in this course apply diagnostic, reflective teaching procedures in order to teach struggling readers in a clinical setting. They select materials and instructional strategies that meet the specific needs of the child. Emphasis is placed on on-going, diagnostic teaching that integrates the language arts in instruction that adjusts to the needs and interests of struggling readers. Students will conduct informal reading assessments at the end of the clinic session in order to write a formal report that includes assessment data; students' strengths and needs; and recommendations to parents, classroom teachers, and future tutors for further instruction.

READ 30495: 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 08120: Introduction to Sociology 3 S.H.
Prerequisites
This course analyzes the characteristics of social organization and focuses on the study of social relationships and interaction. It examines the social basis of behavior patterns, the nature of social problems and the possibilities for social change. (Required for Sociology majors)

SOC 08220: The Sociology of the Family 3 S.H.
This course examines the relationships between the family and other societal institutions as well as the related interaction patterns within the family, both from an historical and a cross-cultural perspective. The course also includes such specific topics as gender roles, women's movement, sexuality and social class differences.

SOC 08221: Social Problems 3 S.H.
This course examines major social problems in the society as a part of the ongoing social process, with particular reference to their economic, political and other social roots. Topics covered can include such areas as mental illness, poverty, structured inequality, various forms of addiction, war, racism and crime.

SOC 08223: The Sociology of Social Welfare 3 S.H.
Prerequisites: SOC 08120
This course examines the socio-historical development of social welfare, focusing upon changes in the theory and practice of social welfare in American and other societies. This course may not be offered annually.

SOC 08230: The Sociology of Minority Groups 3 S.H.
Prerequisites: SOC 08120
This course analyzes the nature of the relationships among ethnic, racial and other groupings in our society. It examines and tests sociological theories by the study of specific past and present minority group situations.

SOC 08269: Self and Society 3 S.H.
This introductory course in the study of behavior in everyday life examines the sociology of the familiar, looking at the socialization processes, the effect of social interaction and re-socialization. The course focuses on the individual as a social interacting organism.

SOC 08320: Urban Sociology 3 S.H.
Prerequisites: SOC 08120
This course examines the process, conditions and problems of urbanization. It emphasizes the social phenomena of the contemporary urban scene, the problems of mass society and their possible solution, mass organization, mass communication and regional interdependence.

SOC 08322: The Sociology of Religion 3 S.H.
Prerequisites: SOC 08120
This course studies sociological theories of the origin and nature of religion. It includes the relationship of religion to family life, sexuality, ethnic identity, economic inequality and political power. Students also study conservative and radical religious movements in contemporary society and secularization and secular substitutes for religion. This course may not be offered annually.

SOC 08323: The Sociology of Social Work 3 S.H.
Prerequisites: SOC 08120 and SOC 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 08325: Deviant Behavior and Social Control - WI 3 S.H.
Prerequisites: Soc 08120
This course explores the major theoretical and research issues in the study of deviant behavior. Then, drawing on a wide variety of types of deviant behavior, the course studies three levels of social reality: the interpersonal, the organizational and the structural. The course seeks to place deviant behavior within the context of traditional social processes and structures.

SOC 08326: The Socialization of The Child Through Adolescence - WI 3 S.H.
Prerequisites: SOC 08120 or SOC 08220
This course focuses upon the processes and social forces which facilitate the ways in which individuals are prepared to enter various groups within the life cycle.

SOC 08327: Comparative Education in Sociological Perspective 3 S.H.
Prerequisites: SOC 08120
This course compares the educational systems of different societies and their relationships to other social institutions in their societies. Such features as the overall purposes and goals of education, its accessibility to different social strata, gender differences, services to special populations in the society, and the teaching profession are compared. In each case study studied, both unique characteristics of the educational system are highlighted aswell as those similar to other societies, with the focus on social forces which influence the makeup and functioning of different educational systems.

SOC 08330: Social Stratification 3 S.H.
Prerequisites: SOC 08120
This course examines the major classic and modern theories of social stratification and analyzes the forms and functions of social inequality in contemporary societies. It stresses the influence of class membership on individual behavior and examines the implications of institutionalized inequalities for democratic societies.

SOC 08331: Classical Sociological Theory 3 S.H.
Prerequisites: SOC 08120
This course studies the historical and conceptual development of the major schools of thought within the "sociological tradition." It emphasizes an understanding of the nature of theory and systems of theory, the application of theory, the problems inherent in theorizing about society and social life and the relations between sociological theory and research. (Required for sociology majors)

SOC 08332: Contemporary Sociological Theory 3 S.H.
Prerequisites: SOC 08120
Contemporary Sociological Theory is one of two core courses that starts with the classical period and culminates with this course covering theory in recent times. Contemporary Sociological Theory examines the state of the field in the twentieth century, focusing on theoretical issues and frameworks that have come to define Sociology, its research and methods. It will include consideration of the Parsonian structural functionalism of the 1950s, the critique of Positivism that emerged during the 1960s, and the fragmentation of the field into the many perspectives and approaches there are today.

SOC 08333: 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 08336: 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.

SOC 08339: 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 08351: 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 08353: 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 08362: Sociology of Disability 3 S.H.
prerequisite: SOC 08120
The Sociology of Disability adopts a narrative approach from the perspectives of disabled persons, based on memoirs, short stories, and novels, which are applied to relevant sociological theories, concepts, and perspectives. Sociological issues examined in this course include how professionals and practitioners variously define disability, the history of how sociologists have discussed the concept, the analysis of "disabled" cultures both in the US and abroad, and the effects of the Disability Rights Movement on selfhood and collective identity. Most importantly, the course examines how persons

with disabilities cope with devalued roles, manage stigma, and incorporate disability into identity.

SOC 08370: 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 08375: 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 08376: Social Statistics 3 S.H.
Prerequisites: SOC 08120
This course familiarizes the student with the basics in elementary statistical methods used in the social sciences and the uses and misuses of 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 08399: Sociology of the Holocaust - WI 3 S.H.
Prerequisites: SOC 08120
This course primarily deals with structural and experiential dimensions of the genocidal process affecting the European Jews, their ethnicity, culture and religious communality after 1933. Gypsies, Jehovah's Witnesses, prisoners of conscience, Russian prisoners of war, the Polish intelligentsia, who with the Jews, became a subject of Nazi persecution are also among those remembered. The Holocaust or 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 08400: Environment, Policy and Society 3 S.H.
Prerequisites: SOC 08120
This course emphasizes the interaction between the social and ecological environments including: technological mechanisms by which societies shape their environments; cultural values that cause people to use the environment in particular ways; and policy implications that may result in social consensus or conflict concerning manipulation of the natural environment.

SOC 08401: Human Service Organizations 3 S.H.
Prerequisites: SOC 08120
This course will focus on the micro and macro aspects of human service organizations of various kinds; for example, hospitals, courts, nursing homes, public agencies, schools, and the like. These organizations will be examined in terms of their structure, delivery of services, their function of "processing" human beings, the internal and external environments in which they operate, and the policy implications for delivery of services and organizational change.

SOC 08425: Senior Seminar in Sociology 3 S.H.
Prerequisites: SOC 08210, SOC 08331, SOC 08375 and SOC 08376 or permission of the instructor.
This seminar is a capstone experience designed to help students integrate what they have learned as sociology majors in a liberal arts setting. Students will engage in oral discussions and presentations as well as written exercises and essays to demonstrate an understanding of the sociological perspective, theoretical approaches and methods. The substantive focus of the seminar will vary by instructor.

SOC 08426: Sociology Senior Seminar - WI 3 S.H.
Prerequisites: SOC 08120, SOC 08331, SOC 08375 and SOC 08376 or permission of the instructor.
This Senior Seminar is a writing intensive capstone experience designed to help students integrate what they have learned as sociology majors in a liberal arts setting and to write at a publication-ready level within the field or for specific audiences in different professional climates. Students will engage in oral discussions and presentations as well as written exercises and essays, demonstrating as they do an understanding of the field, its theoretical approaches and methods. The substantive focus of the seminar will vary by instructor.

SOC 08427: Senior Seminar: Sociological Imagination-WI 3 S.H.
Prerequisites: SOC 08120, SOC 08331, SOC 08375 and SOC 08376 or permission of the instructor.
This Senior Seminar course is for the Bachelor of Arts, Liberal Studies: Humanities/Social Science sequence, an interdisciplinary program. It is the writing intensive component of the sociology sequence and is expected to make this senior seminar an especially rich capstone experience, helping students develop as scholars and professionals. The sociological imagination will be evidenced in all of a student's work for the course and be reflected in oral discussions and presentations, as well as written exercises and essays.

SOC 08431: 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 08436: Sociology of Medicine 3 S.H.
Prerequisites: SOC 08120
This course analyzes medicine as a major institution in American society. It covers concepts of health and illness, attributes of a profession, the hospital, national health care, ethical issues and biomedical research.

SOC 08440: Selected Topics in Sociology 3 S.H.
Prerequisites: SOC 08120
This course provides a seminar experience in areas of sociology that are not a part of the recurring course offerings. Enrollment is limited, and student participation is maximized. Consult the Master Schedule each semester for specific topics being offered. This course may not be offered annually.

SOC 08491: Independent Study in Sociology 1 to 4 S.H.
Prerequisites: SOC 08120
This course gives students an opportunity to pursue individual, specialized research under guidance of a staff member. This course may not be used as a substitute for any course offered by the department. Entrance is only with the permission of the instructor and the chairperson of the department. This course may not be offered annually.

SOC 08493: Seminar on Gender Roles 3 S.H.
Prerequisites: SOC 08220
Students develop and present a major seminar paper in the area of the role of men and/or women in society. The range of topics covered in any semester depends upon the interests of the enrolled students. Students will read all class papers prior to presentation.

SOC 08494: Field Experience Seminar in Sociology - WI 3 to 6 S.H.
Prerequisites: Permission of Instructor
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 09323: The Sociology of Crime and Criminal Law 3 S.H.
Prerequisites: SOC 08120
This course analyzes crime and criminal law, emphasizing the nature and extent of crime within the context of the nature and functions of criminal law. It stresses problems of sociological theory and research in the area.

SOC 09333: The Sociology of Punishment and Correction 3 S.H.
Prerequisites: SOC 08120
This course examines historical and contemporary theories of punishment within a sociological framework. It gives a critical survey of the structure, goals and problems of the American criminal justice system.

SOC 15322: The Sociology of Population 3 S.H.
Prerequisites: SOC 08120
This course analyzes population growth and change, especially the American population. It emphasizes urban, rural, ethnic, racial, religious and social class differences. It also examines population variables and population theories. This course may not be offered annually.

Special Ed Services-Instr

SNUR 92430: Methods and Materials in Health Teaching for School Nurses 3 S.H.
This course emphasizes the school nurse's expanding role as a classroom health teacher as well as a resource person to the school staff. Discussions and experiences will center on theories of teaching and learning, planning for teaching, curriculum development, the New Jersey Core Curriculum Content Standards (NJCCCS), teaching strategies, educational resources, classroom management, assessment, and the integration of health teaching into varied school subjects. A K-12 classroom experience is included to facilitate the integration of theory into the clinical practice.

SNUR 92444: Practicum in School Nursing 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 92445: 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 92448: 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 92466: School Health Services 3 S.H.
The framework for school health services and policies within the functions of the school nurse will be discussed, as well as specific functions and roles. Particular emphasis eill be placed on the school and community activities relating to students, their families and other eductional personnel.

SPED 08130: Human Exceptionality 3 S.H.
This general education course is designed to develop students' awareness and understanding of the nature and needs of individuals with exceptionalities. It provides a lifespan perspective that will assist students in better understanding and, hopefully, accepting and advocating for individuals with disabilities. A field component is required.

SPED 08307: Assessing Students with Exceptional Learning Needs I (K to Grade 5) 3 S.H.
Prerequisites: SPED 08130
This course emphasized linking assessment with educational instruction. Prospective classroom teachers will learn how to routinely use norm-referenced instruments and criterion-referenced techniques, with an emphasis on performance assessment. Introduction to statistical factors in testing, observation of testing, and administration of selected assessment instruments will be included. Teacher candidates will also have the opportunity to develop informal assessments in conjunction with a required field experience component.

SPED 08308: Assistive Technology and Transition Planning 3 S.H.
Prerequisites: SPED 08130
This course will focus on exposing students to a variety of technologies used by and with students with exceptional learning needs. Students will gain hands-on skills in designing technology-based instructional materials for students with a wide range of exceptionalities. A focus on Universal Design for learning is at core of this course- with a goal of providing students with the ability to adapt technology, instruction, and assessment to meet a range of student needs. Exposure to adaptive and assistive technologies, as well as state-of-the-art software and hardware, is also emphasized in the course. All of this will be addressed as part of the development of Individual Educational Plans (IEPs) for students, with special emphasis on transition planning. Transition planning will address all major life

transitions(e.g., early intervention to preschool; preschool to elementary; elementary to secondary; and secondary to post-secondary and work environments). A field component will be required.

SPED 08316: Differentiated Instruction in the Inclusive Classroom 2 S.H.

Prerequisite: Human Exceptionality (SPED 08.130)

This Junior Level (300) course will focus on how the diverse needs of individuals with educational disabilities/differences can be met within the general education classroom environment. Emphasis will be on developing communication/collaboration, instructional and assessment strategies that will assist the classroom teacher in diversifying instruction to meet individual needs. A field component is required.

SPED 08330: Workshop in Special Education 3 S.H.

This course provides instruction in current issues and topics related to the field of special education which are compatible with the student's prerequisites and interest. The course can be designed to meet the in-service needs of agencies and/or local school systems. Number of credits will be determined by course content each time the course is offered. Students should consult current registration booklet for the topic and the specific number of credits to be offered.

SPED 08360: 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 08415: Specialized Instruction for Students with Exceptional Learning Needs I (K to Grade5) 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 08416: Specialized Instruction for Students with Exceptional Learning Needs II (K to Grade 12) 5 S.H.

Prerequisites: SPED 08316

This senior-level course enhances the systematic progression of skills initiated during the earlier stages of the Teacher of Disabilities Program. The course prepares canidates with Subject Area Specialization to teach children from Kindergarden thru 12th grade with exceptional learning needs, covering instructional methods and strategies to teach self-help, motor, reading, math, language, study skills, science, and social studies. The course also emphasizes supporting students with exceptional learning needs in inclusive classrooms. There is a required, supervised field experience component with this course.

SPED 08445: Clinical Seminar in Special Education 1 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.

SPED 08450: Clinical Practice in Special Education 4 S.H.
Prerequisites: SPED 08415 or SPED 08416
This is the culminating field experience for candidates in the Teacher of Students with Disabilities Endorsement Program. Clinical Practice provides candidates with full-time placement in a classroom setting that serves students with exceptional learning needs. Under University supervision and working with a clinical teacher, candidates assume full responsibility for planning, teaching, and managing a special education program during this placement. As the culminating field experience for seniors in the Teacher of Students with Disabilities Endorsement Program, Clinical Practice provides candidates with one full-time placement in a classroom setting, serving students with exceptional learning needs. Under college supervision, and working with a clinical teacher, teacher candidates assume full responsibility for planning and teaching during this placement.

SPED 19410: Cerebral Palsy: Its Individual and Community Problems 3 S.H.
Prerequisites: SPED 08326
This course presents a focus on a comprehensive multi-disciplined approach to the diagnosis and habilitation of the cerebral palsied individual. It covers the roles of the medical, psychological, therapeutic, social work and rehabilitation professions to assist teachers to provide appropriate instructional programs.

Teacher Education

ECED 23220: Teaching in Learning Communities II: Early Childhood Education 3 S.H.
Prerequisite: EDUC 01270
Built on the learning community philosophy developed in TLC I, this course is a broad overview of the field of inclusive early childhood education and the issues that affect it. Teacher candidates are introduced to the impact of historical, political, social, and economic issues on the classroom for all children, including children with special needs. Standards, philosophies, theories, and teaching and learning principles that underpin inclusive early childhood education are revealed to enable teacher candidates to begin developing a personal philosophy of how children learn and what teachers need to do for their learning. This course will include field visits in inclusive early childhood education settings.

ECED 23221: Family, Community and School Relationships 3 S.H.
Prerequisite: EDUC 01270
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 only.

ECED 23320: Growth and Learning: The PreSchool Age Child, Birth - 5 3 S.H.
Corequisite: READ 30320 Prerequisites: PSY 09209 and ECED 23221
This course will build upon General Education coursework. Students will use practical applications that stem from these foundational courses to understand how young 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 only.

ECED 23321: Growth and Learning: The Primary Grade Child: Kindergarten - 3rd Grade 3 S.H.
Corequisite: ECED 23322 Prerequisites: ECED 23320 and READ 30320
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 23322: Planning, Integrating, and Adapting Curriculum: Math and Science 3 S.H.
Corequisite: ECED 23321 Prerequisites: READ 30320, ECED 23320, MATH 01201 and MATH 01115

ECED 23430: Observation, Assessment, and Evaluation of Diverse Learners 3 S.H.
Corequisite: 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. Course offered in the fall only.

ECED 23431: Planning, Integrating and Adapting Curriculum Across Content Areas 3 S.H.
Corequisite: 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. This course requires field visits. Course offered in the Fall only.

ECED 23446: Clinical Practice in Early Childhood Education 10 S.H.
Corequisites: ECED 23447 and SECD 03350 Prerequisites: ECED 23430 and ECED 23431
The clinical practice experience is a supervised, full-time activity conducted in an early childhood classroom. In this course, teacher candidates must demonstrate abilities related to planning and implementing developmentally appropriate practice for all children, including children with special needs. They also need to show abilities to integrate activities/lessons for balanced development, write lesson plans, adopt multiple instructional strategies, assess learners' performance with different types of assessment tools, document the results of assessments, build safe and positive learning environment, manage all aspects of classroom activities, guide students behaviors, and work collaboratively with families, colleagues, and community of children with and without special needs. This is a full time field-based course and should be taken senior year.

ECED 23447: Early Childhood Education Clinical Seminar 1 S.H.
Corequisites: ECED 23446 and SECD 03350 Prerequisites: ECED 23430 and ECED 23431
The main goals of this course are to synthesize the pre service components of the early childhood teacher education in inclusive setting and to facilitate the transition into the profession. For these, teacher candidates have opportunities to reflect on their understanding of typical and atypical children's developmental characteristics and needs, to communicate and collaborate with family and community, to plan effective curricula for all children, to assess and document children's performance and progress, and to understand professional development of teachers in inclusive settings. Candidates are also expected to establish their philosophy of teaching in an inclusive setting; to discuss clinical practice issues and current issues of inclusive early childhood education; and to assemble thier professional portfolio.

EDUC 01102: 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 01200: Literacy, Learning and Curriculum 6 S.H.
Prerequisites: EDUC 01102 and EDUC 01103
This course is a continuation of the sequence of courses in the Co-Teach program. This course builds knowledge about literacy and literacy development as it pertains to regular and special education. The focus of the course is to integrate the major concepts of curriculum development and literacy. The emphasis will be on the interface between literacy development and social studies through appropriate curricular planning. An observational field experience will be required.

EDUC 01270: Teaching in Learning Communities I 3 S.H.
prerequisites:
This course for teacher candidates in undergraduate teacher certification programs provides an introduction to the elements of successful, caring learning communities and will serve as a foundation for Teaching in Learning Communities II and future education courses. Teacher candidates will learn about, observe, participate in, and reflect on various aspects of learning communities and types of collaborative teaching and learning. They will begin their understanding of the interactions between and among curriculum, planning, instructional approaches, assessment, culture, diversity, and

management within a learning community environment. Field visits will provide the opportunity for teacher candidates to begin to make the connection between the content of the course and its application in elementary classrooms.

EDUC 01272: Teaching in Learning Communities II 3 S.H.
Corequisite: READ 30280 Prerequisite: EDUC 01270
This course provides in depth examination and practice of instructional planning and assessment in a caring learning community. Candidates study viable learning community approaches where content - rich, research-based, and culturally responsive teaching and democratic and inclusive practices are used in caring learning environments. Candidates develop skills in objective, lesson, unit, and assessment design. A field component is required.

EDUC 01282: Teaching in Learning Communities II-Art 3 S.H.
Corequisite: READ 30280 and SMED 33420 Prerequisite: EDUC01270
Teaching in Learning Communities II Art furthers the understanding f successful and caring learning communities begun in Learning Communities I. This course provides broad and in-depth knowledge of instructional planning and assessment in the art classroom for grades K through 12, specifically as it pertains to the teaching practices used in caring learning environment. A field component is required.

EDUC 01284: Teaching in Learning Communities II-Music 3 S.H.
Prerequisite: EDUC 01270
Teaching in learning Communities II Music, is specifically desgined to continue the deveopment of an understanding of successful and caring learng communities begun in the Teaching in Learning Communities I course and apply it specifically to the music classroom as a "learning community." This course wil be music eductaion specific to develop a broad and deep knowledge of music education processes throughout grades K-12 in music settings. A field component is part of this course.

EDUC 01300: Instructional Planning and Collaboration 3 S.H.
Prerequisite: EDUC 01200
This course focuses on developing a thematic unit plan in the area of literacy. Students learn about various instructional approaches and how to select the best approach for a specific student. Students identify new developments in the field of technology and their applications in teaching all children. Students participate in a literacy clinic in which they will work with children experiencing difficulty in some aspect of literacy, related to their field placement.

EDUC 01301: Instructional Implementation and Collaboration 3 S.H.
Prerequisites: EDUC 01102 and EDUC 01103
During the spring semester, the focus is on instructional implementation and collaboration. Students learn about collaborative problem-solving models and participate in a problem-solving activity. Students learn how to design, structure and manage daily classroom routines. They also learn about the principles of action research and develop an action research project.

EDUC 01400: Teaching in Inclusive Classrooms 4 S.H.
Prerequisites: EDUC 01300 and EDUC 01301
This course is designed to enable students in the Collaborative Education major to develop and implement methods for teaching, managing, and evaluating children with special needs. Students will learn about the impact of specific disabilities on learning and behavior, the rationale for inclusive education, and academic adaptations for children with special needs. Students will be responsible for developing and implementing instructional and/or behavior management adaptations in their field placements and reporting on these to the class.

EDUC 01401: Developing and Adapting Instruction in Elementary Classrooms 4 S.H.
Prerequisites: EDUC 01300 and EDUC 01301
This course is designed to prepare teacher candidates to use a variety of teaching models and strategies to make mathematics and science instruction accessible to all students. Instructional standards developed by NCTM and NSTA will be reviewed. A technology component addressing the use of technology as a tool for teachers and learners will be incorporated. Issues of equity, curriculum integration, collaboration, and reflection will be emphasized in both course and field assignments. The course includes a field assignment in an inclusion classroom.

EDUC 01402: Developing and Adapting Assessment for all Learners 3 S.H.
Prerequisites: EDUC 01300, EDUC 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.

ELEM 02319: Curriculum Assessment in Elementary Classroom 4 S.H.
Corequisites: SPED 08316 Prerequisites: EDUC 01272
This course examines the use of established elementary education content standeards in science, social studies, health, and the arts and how interdisciplinary, thematic units of inquiry facilitate meeting those standards. Current research about the way children learn effective teaching is stressed. Students apply research on the way children leanr and effectively 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 differenting that instruction for elementary students. Building on school district materials and mandates, teacher candidats plan, teach, and assess in interdisciplinary unit of inquiry, which reflects candidates understanding of appropriate content and pedagogy in science, social studies, health, and the arts for the grade and student in the classroom. Teacher candidates will also review, administer as approporiate, and relfect on results of varied assessments of student learning that are typically used in that classroom. The course includes a field experience, and assignments are coordinated with a concurrent course on differentiating instruction.

ELEM 02336: Mathematics Pedagogy for Elementary Teachers 2 S.H.
Corequisites: ELEM 02338 and READ 30351 Prerequisites: ELEM 02319 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 02338: Practicum in Mathematics and Literacy 1 S.H.
Corequisites: ELEM 02336 and READ 30351 Prerequisites: ELEM 02319 and SPED 08316
This field experience course provides an opportunity for candidates in the Elementary Education Specialization to practice their developing instructional skills once a week in a K-5 classroom setting. Candidates will work with partners in assigned classrooms to assist with literacy and mathematics instruction and to take the lead in developing and teaching lessons in literacy and mathematics.

ELEM 02445: Elementary Education Clinical Seminar 1 S.H.
Corequisites: ELEM 02448 SECD 03350
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 curren critical and contemporary issues facing educators and those who hold stake in education. Interviewing skills and a professional portfolio will be developed.

ELEM 02448: Clinical Practice in Elementary Education 10 S.H.
Corequisites: ELEM 02445 and SECD 03350
The clinical practice experience is a supervised, full-time activity conducted in a public elementary classroom. In this course, candidates must demonstrate mastery of subject area content, lesson planning, and use of multiple instructional strategies; ability to assess learner progress, manage all aspects of classroom activity, work collaboratively with all colleagues, administrators, families, and community, and to document evidence of doing all of the above. This is a full-time field-based course taken in the senior year.

SECD 03330: Practicum in Teaching and Learning A 1 S.H.
Practicum in Teaching and Learning A is a co-requisite with Teaching and Learning Mathematics A, Teaching and Learning English/Language Arts A, Teaching and Learning Social Studies A, or Teaching and Learning Foreign Language A, Teaching and Learning Science A. The course will consist of general opening session, a general closing session, sessions at a cooperating public middle school, and visits to government agencies, commercial sites, community sites, campus-based laboratories (when appropriate) and/or museums.

SECD 03332: Practicum in Teaching and Learning B 1 S.H.
Practicum in Teaching and Learning B is a co-requisite with Teaching and Learning Mathematics B, Teaching and Learning English/Language Arts B, Teaching and Learning Social Studies B, or Teaching and Learning Foreign Language B, Teaching and Learning Science. The course will consist of a general opening session, a general closing session, sessions at a cooperating public high school, and visits to governmental agencies, commerical sites, community sites, campus-based laboratories (when appropriate) and/or museums.

SECD 03350: Teaching Students of Linguistic and Cultural Diversity 1 S.H.
Corequisites: ECED 23446 and ECED 23447 or ELEM 02445 and ELEM 02448 or ELEM 03435 and SECD 03436
The issues of inclusion form an integral part of a teacher preparation program. The schooling of all children demands that diversity in multiple forms be addressed in the inclusive classroom, including cultural and linguistic diversity. Knowledge about diversities and the performance of appropriate instructional strategies are emphasized in this course, and attention is directed to the sensitivity needed to assist the learning of students of linguistic and cultural diversity.

SECD 03435: 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 03436: Subject Matter Clinical Seminar 1 S.H.

Corequisites: SECD 03350 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.

SMED 33330: Teaching/Learning A: Mathematics 3 S.H.

Corequisites: SECD 03330 and SPED 08316 Prerequisites: EDUC 01272

This first in a sequence of two three-credit courses is designed for students majoring in mathematics and planning careers as K-12 mathematics teachers. Teacher candidates will learn to organize instructional materials into standards-based mathematics units and daily lessons focused on scaffolding learning experiences in number sense, operations, and algebraic thinking. In conjunction with a co-requisite practicum, this course includes both community- and public school-based experiences dealing with a range of topics necessary to building a functioning learning community, including mathematics pedagogy and praxis, learner diversity, lesson and unit planning, and national and state standards for mathematics.

SMED 33331: Teaching/Learning B: Mathematics 3 S.H.

Corequisites: SECD 03332 Prerequisites: SMED 33330

This second in a sequence of two three-credit courses is designed for students majoring in mathematics and planning careers as K-12 mathematics teachers. Teacher candidates will learn to organize instructional materials into standards-based mathematics units and daily lessons focused on scaffolding learning experiences in geometry, measurement, probability, statistics, and discrete mathematics. In conjunction with a co-requisite practicum, this course includes both community- and public school-based experiences dealing with a range of topics necessary to building a functioning learning community, including mathematics pedagogy and praxis, learner diversity, lesson and unit planning, and national and state standards for mathematics.

SMED 34330: Teaching/Learning A: Science 3 S.H.

Corequisites: SECD 03330 and SPED 08316 Prerequisites: EDUC 01272

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.

SMED 34331: Teaching/Learning B: Science 3 S.H.
Corequisites: SECD 03332; Prerequisites: SMED 34330 and SECD 03330 Minimum Grade of C
This second in a sequence of two three-credit courses, in conjunction with the matching field experience/practicum, 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 50330: Teaching/Learning A: English Language Arts 3 S.H.
Corequisites: SECD 03330 and SPED 08316 Prerequisites: EDUC 01272
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 50331: 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 51330: Teaching/Learning A: Foreign Languages 3 S.H.
Corequisites: SECD 03330 and SPED 08316 Prerequisites: EDUC 01272
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 51331: Teaching/Learning B: Foreign Language 3 S.H.
Corequisites: SECD 03332 Prerequisites: SMED 51330 Minimum Grade of C
This course is the second of two sequential junior level courses designed for the teacher candidate preparing to teach foreign languages K-12. The focus of this course is the instruction of students 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.

SMED 52330: Teaching/Learning A: Social Studies 3 S.H.
Corequisites: SECD 03330 and SPED 08316 Prerequisites: EDUC 01272
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 52331: Teaching/Learning B: Social Studies 3 S.H.
Corequisites: SECD 03332 Prerequisites: SMED 52330 Minimum Grade of C
This second in a sequence of two three-credit courses is designed for teacher candidates majoring in one of the social studies disciplines and planning careers as K-12 social studies teachers. Building upon understandings of elementary and middle-grade content and instructional planning as developed in Teaching and Learning A, teacher candidates will learn to create standards-based social studies units and daily lessons for the middle and/or high school grades. In conjunction with a co-requisite practicum, this course includes both community- and public school-based experiences dealing with a range of topics necessary to building a functioning learning community in social studies classrooms, including standards-based lesson and unit planning, social studies pedagogy, classroom management, learner diversity, and ongoing professional development.

Theatre-Dance

THD 07103: 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 07105: Introduction to Performance 3 S.H.
This is designed as a first course in performance for majors in the Department of Theatre & Dance. It will stress basic techniques and fundamentals of movement and interpretation. Class exercises will help students to explore the dynamics of stage performance. This course lays the groundwork for advanced study. Open to Theatre Majors only.

THD 07106: Voice and Articulation 3 S.H.
This course introduces use of the vocal instrument. Students study the physical elements of correct breathing, resonation 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 07111: Colloquium in Theatre I .5 S.H.
These courses will provide a core experience for all majors. Through an on-going series of lectures, discussions, demonstrations and seminars, students will explore various aspects of Theatre Art and evaluate career options available to the theatre graduate. A maximum of 3 s.h. credit can be earned in colloquium, but not more than .5 s.h. in any one term.

THD 07112: Colloquium in Theatre II .5 S.H.
These courses will provide a core experience for all majors. Through an on-going series of lectures, discussions, demonstrations and seminars, students will explore various aspects of Theatre Art and evaluate career options available to the theatre graduate. A maximum of 3 s.h. credit can be earned in colloquium, but not more than .5 s.h. in any one term.

THD 07113: Colloquium in Theatre III .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 07114: 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 07115: 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 07116: 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.

THD 07130: The Living Theatre 3 S.H.
This course helps students develop critical appreciation of the various dramatic media (stage, films, television, radio). By introducing them to aims and techniques as well as significant products, the course gives students insight into theatrical art, thereby enriching their enjoyment and sharpening aesthetic judgment.

THD 07135: Oral Interpretation of Literature 3 S.H.
This course studies the basic principles of vocal control applied to oral communication of various forms of literature. It emphasizes such vocal techniques as stress, pause, rate, etc. and these are coordinated with body and facial expression to achieve clarity of meaning and mood.

THD 07195: Exploring Social Issues through Theatre 3 S.H.
The student will study theatrical styles as a response to the problems of society. Issues like sexism, racism, aging, intercultural conflicts and the AIDS crisis will be explored as they appear in theatrical forms such as the problem play, comedy and the epic theatre.

THD 07201: Introduction to Theatre and Dance 3 S.H.
Students study current and historical examples of Theatre and Dance with emphasis on the distinguishing characteristics of each form of performance and on the principles of temporal composition common to all linear or abstract performing art. The course stresses the fundamentals of interpretation and analysis essential to advanced work in performance, design and criticism.

THD 07203: Costuming I 1.5 S.H.
This course will present techniques by which stage costumes are constructed. Students will also be given an outline of the development of fitted clothing. A series of costuming projects will give students a basic understanding of costume design for the theatre.

THD 07205: Costuming II 1.5 S.H.
Prerequisites: THD 07203
This is a continuation of the study begun in Costuming I.

THD 07215: Experiencing Acting 3 S.H.
This course is for non-major students interested in exploring their talents. Through the use of improvisation, theatre games and scene projects, students examine how actors strengthen and use imagination, awareness and creativity, and how they analyze, prepare and perform a role.

THD 07230: Stagecraft I 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. (Fall Semester)

THD 07231: Stagecraft II 1.5 S.H.
Stagecraft II is a continuation of the study begun in Stagecraft I. (Spring semester)

THD 07232: Stagecraft III 1.5 S.H.
Prerequisites: THD 07230 and THD 07231
These courses concentrate on developing advanced skills in the various stagecrafts including carpentry, property construction and the development of electrics, sound and elevational drawings. Students fulfill assigned responsibilities for actual theatrical productions. (Fall Semester)

THD 07233: Stagecraft IV 1.5 S.H.
Prerequisites: THD 07230 and THD 07231
This course is a continuation of the study begun in Stagecraft III. (Spring semester)

THD 07235: 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.

THD 07236: 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 07240: Practicum - Performance Ensemble 0 to .5 S.H.
Under the supervision of Theatre/Dance performance faculty students participate as performers or directorial/choreographic assistants in department productions. The learning experience and work of the learning community is credited through this course. May be repeated for credit up to an accumulation of 3 s.h. This course is graded as Pass/No Credit.

THD 07241: Practicum - Production Ensemble 0 to .5 S.H.
Under the supervision of Theatre/Dance technical and design faculty students participate in department productions in technical and design capacities. The learning experience and work of the learning community is credited through this course. May be repeated for credit up to an accumulation of 3 s.h. This course is graded as Pass/No Credit.

THD 07245: Stage Makeup 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 07250: Children's Theatre 3 S.H.
In this course, students study the techniques of producing plays with children and adult-produced plays for child audiences. It considers such topics as play and audience analysis, directing methods, technical production and techniques of working with and for children.

THD 07270: Theatre Study Off-Campus 1 to 6 S.H.
This course studies drama at important theatrical centers in the United States or abroad, supervised by faculty. It includes attendance at productions, discussions with practitioners, tours and specialized workshops, investigation of historical and cultural sites. Costs vary according to the center being studied and are borne by the student. May be repeated under a different subtitle.

THD 07275: Children's Theatre Workshop 3 S.H.
This course concentrates on the presentation of a children's show to be mounted and acted by Rowan students for South Jersey elementary school children. The college students will be involved in all phases of the production, including a "mini-tour" of the show following the production at RowanUniversity. This course may be repeated with consent of instructor. This course may not be offered annually.

THD 07300: 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 07301: African, African-American Theatre: Intercultural Definitions 3 S.H.
Explores the commonality, or difference of styles and visions, in African and African American Theatre, with works by contemporary African and African American playwrights, such as August Wilson, Wole Soyinks, Imamu Amiri Baraka, Susan Lori Parks, Efua Sutherland and Femi Osofisan. It will also examine the influences of play directors, actors and musicians (Hip-Hop, Jazz, Blues, etc.) who contribute to that aesthetic continuum. The practices, issues and achievements of these playwrights and their unique forms of theater shall be used to project a future for African American theatre in twenty-first century America. These works shall be used as signposts of stylistic and critical commentary. This is a lecture cum performance course in which students will be writing, making and performing their own Theatres of the future as final projects.

THD 07305: Drafting 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.

THD 07310: Foundations of Theatrical Design 3 S.H.
Prerequisites: THD 07232
In this course, students study the elements that lay the foundation for a successful design career in the theatre. Beginning with an examination of the place of design in the theatre process, students then study the principles of visual composition and elements of design, and study playscripts in order to formulate an appropriate design. Students will also be introduced to the study of historical periods and styles of decor and get exposure to basic sketching and drafting of theatrical designs.

THD 07315: Reader's Theatre Workshop 3 S.H.
Prerequisites: THD 07135
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 07335: Advanced Acting 3 S.H.
Prerequisites: THD 07236
This course makes an intensified study of characterization, while continuing developmental work in bodily and vocal control. It covers approaches to role study as well as the techniques of period acting styles. It combines theory and practice, including class and public performance. This course may not be offered annually.

THD 07338: Touring the Theatre Production 3 S.H.
Students study procedures in touring theatre or dance productions off campus. Students learn sets, properties, costume design and construction, lighting and sound, staging and performance consistency and ways of adapting to a variety of facilities and audiences. Students study promotion, organization and administration of tours. Open to students selected for the cast and crew of the production. May be repeated. This course may not be offered annually.

THD 07339: History of the Theatre to 1700 3 S.H.
This course studies the important works and writers for the stage, together with the development of theatrical modes of presentation and their influences upon the drama of each period, from the beginnings of theatre in ancient Greece to 1700. Relationships are drawn between the developing theatre and the political and social history of the times.

THD 07340: History of the Theatre 1700 to 1956 3 S.H.
This course is a continuation of THD07.339, bringing the study of theatre and drama from 1700 to the beginning of the modern period with Ibsen, Chekhov, Strindberg and Shaw, then following with German Expressionism, the emergence of American Theatre in the 1920's, the despair of the Great Depression, and the World War II era. (THD07.339 is not a prerequisite for this course.)

THD 07345: 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 07350: 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 07353: 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 07356: 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.

THD 07360: 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 07365: 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 07370: 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 07375: 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 07380: 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 07390: Technical Supervision I .5 S.H.
Prerequisites: THD 07230, THD 07231, THD 07232 and THD 07233
Students learn the artistic and administrative responsibilities of technical staff supervisors on a theatre production team. Positions studied include assistant technical director, stage manager, master carpenter, master electrician, sound engineer properties master, and wardrobe supervisor, with equal emphasis placed upon understanding a job's responsibilities and the techniques of supervising subordinate personnel. Students will be required to function successfully in one assigned supervisory capacity for a mainstage production.

THD 07391: Technical Supervision II .5 S.H.
Further training and experience in supervising technical production work. Students will be working on a different production and in a different capacity than in Technical Supervision I. These two courses may be taken in either order.

THD 07405: Seminar in Theatre 3 S.H.
Restricted to Theatre and Dance majors, this course offers students a choice of specialized study of a particular interest area in theatre or dance.

THD 07410: Internship in Theatre 3 to 15 S.H.
A semester's field experience offers the advanced student opportunities to develop theatre skills in supervised on-the-job situations. Students are placed in an appropriate theatre to obtain practical training. By department permission only. Students apply to the department the beginning of the semester prior to the internship. Fall/Spring internships are 15 s.h.; Summer internships, 12 s.h.

THD 07430: Directing I 3 S.H.
Prerequisites: THD 07231
This course studies theories and techniques of script analysis and its translation into dramatic action and dramatic sound on the stage, including such concepts as composition, movement, pacing and the development of basic acting ability. Practical directing experience will be utilized.

THD 07431: Directing II 3 S.H.
Prerequisites: THD 07430
This course is a continuation of Directing I in which the skills studied in that course are deepened and extended. In addition to studying techniques of script analysis and staging in greater detail, students investigate various production styles and methodologies. A major portion of time is devoted to a workshop situation in which students stage scenes and submit them to class critique. This course may not be offered annually.

THD 07435: Creative Dramatics 3 S.H.
This course covers the philosophy underlying speech and dramatic activities for children. Methods and materials for creative drama, story telling, role playing, word games, listening and pantomime are studied and analyzed. Students participate in demonstrations in the classroom.

THD 07440: Contemporary World Theatre - WI 3 S.H.
Prerequisites: COMP 01112 or ENGR 01201
Designed to examine significant developments in world theatre and drama since 1956, this course focuses on writers, actors and groups who have influenced theatre in the last half century. Starting with the angry young men and women of England in the 1950s, the course moves through the work of the 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 07460: 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 08126: Movement for the Actor 3 S.H.
Students study the fundamentals of movement as applied to stage movements, communication and characterization. The course covers physical discipline, relaxation, shaping, movement, exploring space, movement in ensemble, emotion and the body, gesture and communication, and physical characterization. Individual and group exercises assist students in developing a physical technique for the actor in action. This course may not be offered annually.

THD 08135: Elements of Dance 3 S.H.
This course provides training at the elementary level of technique in ballet, jazz and modern dance. It explores movement in time, space and energy relationships, emphasizing individual and group creative experiences through improvisations.

THD 08140: Dance Improvisation I 1.5 S.H.
The course explores the creation of spontaneous movement experiences with the purpose of increasing body awareness, movement invention and movement creativity. This course is offered once annually. Effective Fall 2003.

THD 08141: Dance Improvisation II 1.5 S.H.
Prerequisites: THD 08140
The course continues and further develops skills in the creation of spontaneous movement experiences with the purpose of incfeasing body awareness, movement invention and movement creativity. This course is offered once annually.

THD 08142: Contact Improvisation 3 S.H.
This course provides experiences in improvisational duet dancing involving weight sharing, touch, lifing, carrying, and active use of momentum. Activities develop sensitivity to partnering and spontaneous creativity.

THD 08146: World Dance Forms 3 S.H.
This is a movement course which introduces students to a broad spectrum of dances from Asia, Europe, the Middle East, Africa, and the Americas. Emphasis is placed upon learning and performing dances from various countries throughout the world. The socio-historical context within which each dance form evolved is also examined. No previous training in dance is required.

THD 08151: Ethnic and Character Dance 3 S.H.
This course studies dance, music, customs and other cultural manifestations of special ethnic regions. It emphasizes the application of the folk art forms for theatre use. Among the dance forms studied are Scandinavian, Central European, African, Latin American, Mediterranean. Each semester focuses on two or more of these dance forms.

THD 08190: Ballroom Dance 3 S.H.
This movement course introduces the student to Ballroom Dance and its various forms: foxtrot, waltz, swing, jitterbug, disco, club, samba, merengue, rumba, cha cha, and tango. Emphasis is placed upon basic steps, body placement, style, musicality, choreography, and the fundamentals of partnering. Observing, critiquing, and researching ballroom dance are also included within the course.

THD 08202: 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 08203: Advanced Tap Dance 3 S.H.
Prerequisites: THD 08202
This course continues the study of tap on an advanced level. May be repeated for credit up to an accumulation of 9 s.h.

THD 08222: Dance for the Musical Theatre 3 S.H.
This course is an intermediate level experience of technical training in stylized jazz dances used in Broadway musical shows. Students have the opportunity to mount excerpts of dance routines from various eras and to perform them for the university community.

THD 08225: Dance Composition I 3 S.H.
Prerequisites: THD 08237
This course provides a working knowledge and understanding of the fundamental elements involved in the craft of composing a dance. It emphasizes space, time and dynamics. Short solo and group pieces are presented in an informal setting. This course may not be offered annually.

THD 08236: Modern Dance I 3 S.H.
This course is designed for the student interested in beginning to master the discipline of modern dance technique. The course draws from the repertoires of recognized modern dance artists who have established a specific movement vocabulary. Students have an opportunity to analyze various techniques for personal development and the expansion of an articulate movement vocabulary.

THD 08237: Modern Dance 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 08246: Ballet I 3 S.H.
Students are introduced to the vocabulary and techniques of ballet movement with emphasis on body alignment and effective methods for gaining strength and flexibility necessary for proper ballet deportment. It includes barre (bar), centre floor and the basic elements of classical ballet vocabulary.

THD 08247: Advanced Ballet 3 S.H.
Prerequisites: THD 08246
An advanced level of technique in ballet, this course includes barre (bar) and centre floor and continues to build on the elements of classical ballet. May be repeated for credit up to an accumulation of 9 s.h.

THD 08256: Jazz Dance I 3 S.H.
An introduction to a cross-section of jazz techniques derived from pioneer jazz dancers, this course emphasizes movement styles and jazz rhythms.

THD 08257: Advanced Jazz Dance 3 S.H.
Prerequisites: THD 08256
This course is designed for students interested in mastering movement skill in jazz dance. It emphasizes theoretical and practical understanding of the jazz dance form. May be repeated for credit up to an accumulation of 9 s.h.

THD 08270: Lecture/Demonstration Production 3 S.H.
Prerequisites: THD 08237
This course offers students an opportunity to experiment with improvisation and a variety of choreographic approaches using the elements of dance. It provides students with the performing experiences necessary for choreographing and producing short dance pieces. Resultant productions are performed as lecture/demonstrations throughout public and private schools of South Jersey. This course may not be offered annually.

THD 08311: African Influences in American Dance 3 S.H.
This is a movement and theory course which surveys various dance forms indigenous to African and African-American cultures. Emphasis is placed upon the evolution and contribution of African-derived dance forms within America. The richness and complexity of African aesthetics as embodied within dance in America are highlighted. No previous dance training is required.

THD 08315: Creative Dance for Children 3 S.H.
Utilizing functional movement experiences, this course emphasizes creative expression and its relationship to the aesthetic development of the young child. Students examine and analyze pertinent research materials in addition to the laboratory experiences. This provides a basis for students to relate creative inventiveness to young children. This course may not be offered annually.

THD 08330: Dance Notation 3 S.H.
Prerequisites: THD 08236 and THD 08246
This course introduces students to a study and practice of reading and recording dance movements by means of symbols. It offers an opportunity to interpret dance notation scores of simple ballet, folk, and modern dance. This course may not be offered annually.

THD 08337: Choreography 3 S.H.
Prerequisites: THD 08225
This course provides application of the principles of dance composition to choreographic projects by exploring, analyzing and experimenting with problems in dance performance and production. It emphasizes individual and group improvisation and the use of different styles. This course acts as a foundation for field experience. This course may not be offered annually.

THD 08346: Ballet III 3 S.H.
Prerequisites: THD 08247
An advanced level of ballet techniques for the further development and expansion of the ballet movement vocabulary, this course includes adagio and allegro. Partnering may be included depending upon male enrollment. This course may not be offered annually.

THD 08355: Introduction to Dance Therapy 3 S.H.
An introductory course for students who are interested in the field of dance therapy, the course demonstrates dance as a therapeutic and educational growth process that integrates the areas of cognitive, social-emotional and physical development. Part of the course is presented in a clinical setting, offering students an opportunity to apply what has been learned. This course may not be offered annually.

THD 08360: 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 08377: 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.

THD 08378: Modern Dance IV 1.5 S.H.
Prerequisites: THD 08377
This course is designed or students interested in mastering the discipline of modern dance technique. This course emphasizes alignment, somatic release and the application of movement concepts as applied to advanced level dance technique. This course is offered annually.

THD 08436: Dance History 3 S.H.
This course studies the vital role dance has in cultural development from prehistoric times to the contemporary period and the relation of dance to music and other art forms throughout history. It stresses individuals and events whose influences shaped the development of dance. This course may not be offered annually.

THD 08465: Dynamics of Human Movement 3 S.H.
This course offers students a working knowledge of the body from the standpoint of dynamics, spatial orientation, kinesthetic awareness, and alignment principles. It focuses on systems of movement description and analysis and introduces corrective measures to deal with movement habits and patterns that interfere with body performance. This course may not be offered annually.

Writing Arts

COMP 01100: Improving Personal Writing Skills 3 S.H.
This developmental writing course helps students eliminate major writing problems with essay organization, support, and mechanics. The course improves students' writing prior to enrollment in College Composition I. Students' progress is evaluated on the basis of a portfolio of their semester's work. A writing test determines student placement.

COMP 01101: 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 01105: Integrated College Composition 4 S.H.
Prerequisites: Appropriate placement score or fulfillment of developmental writing requirements
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 01111: College Composition I 3 S.H.
Prerequisites: Appropriate placement score or fulfillment of developmental writing requirements
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 01112: College Composition II 3 S.H.
Prerequisites: COMP 01111 or COMP 01105 or HONR 01111
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 07290: Creative Writing I **3 S.H.**

Prerequisites: COMP 01111 or COMP 01105

This course concentrates on developing students' skills in writing various kinds of poems and in developing fiction techniques. In addition to exploring different poetic forms, students learn how to create characters, establish conflict, and develop a plot while writing a short story. Students examine the work of professional poets and fiction writers.

CRWR 07291: 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 07309: Writing Children's Stories **3 S.H.**

Prerequisites: 30 credits required

This course focuses on fiction written for juveniles and young adults. Students examine the rich variety of literature published for young people. They do exercises, write complete stories, critique each other's writing in workshops and meet with the teacher for individual conferences on their work. They also learn how to submit manuscripts to magazine and book publishers.

CRWR 07391: Fiction Writing **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 07392: Fundamentals of Playwriting **3 S.H.**

Prerequisites: WA 07291 or Permission of Instructor

This course covers the methods of developing and writing a play. During the course, students analyze plays, and outline and work on the draft of a full-length play. This course may not be offered annually.

CRWR 07395: 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 08110: 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 08111: 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 08112: 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 08115: Basics of Academic English for Non-Native Speakers of 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 08120: 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 suceed 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.

WA 01301: Writing, Research & Technology 3 S.H.
Prerequisites: WA 07200, COMP 01112, and 60 credits required
This course presents the rhetorical, social, and practical dimensions of writing and researching in networked contexts. Students focus both on the roles an individual creates and maintains when writing for different cybermedia formats and the kinds of conventions that exist in systems like the World Wide Web, listservs, e-mail, and hypertext. A web-based research project in a concentrated area of writing for a particular electronic community demonstrates students' ability to communicate on line.

WA 01302: Introduction to Technical Writing 3 S.H.
This course introduces students to both the field of technical writing and the uses of technical writing within a variety of professions. Students will learn how technical writers use document design strategies based on rhetorical principles to respond to communication challenges. Through practice with a variety of genres, students will gain experience with audience analysis, communication ethics, research, collaboration, professional style, and editing. The course culminates in a writing project based on a professional, academic, or community issue of the student's choosing. Students are encouraged, and will be assisted, in designing projects that reflect their professional interests.

WA 01304: Writing with Style 3 S.H.
Prerequisites: COMP 01112 and 45 credits required
Emphasizing prose style, this course builds upon the skills of organization and development covered in College Composition I and II. It gives special attention to tone, diction, sentence structure, audience, and ultimately, to the evolution of a personal voice. Students write frequently, receive instructor and peer feedback, and learn to analyze and edit both professional and non-professional essays.

WA 01320: 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 01400: Writing for the Workplace-WI 3 S.H.
Prerequisites: 75 credits required
Writing for the Workplace gives students practice in the writing activities common to most careers. Assignments include resumes and cover letters, field and progress reports, abstracts of professional articles, and proposals. Students can also expect to deliver one or two brief oral presentations. The course is restricted to juniors and seniors.

WA 01401: The Writer's Mind 3 S.H.
Prerequisites: COMP 01112 and 45 credits required
The Writer's Mind 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 01405: Evaluating Writing 3 S.H.
Prerequisites: COMP 01112 and 75 credits required
This course examines issues and methods of assessing writing. Students will explore a wide variety of tools used to evaluate writing, such as portfolio and holistic assessment, and they will discuss the validity and reliability of many assessment models.

WA 01408: Writing as Managers 3 S.H.
Prerequisites: COMP 01112 and 45 credits required
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 01410: 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.

WA 07200: Introduction to Writing Arts 3 S.H.

Prerequisites: COMP 01111 and COMP 01112

Introduction to Writing Arts familiarizes students with the disciplinary underpinnings of Writing Arts, providing a background in the history of writing, current writing theories, writing as technology, and the writing professions. The course covers these issues within the context of the Writing Arts major, enabling students to situate themselves in a community of writers and language professionals and preparing them for upper-level cousework.

WA 07410: Tutoring Writing 3 S.H.

This course provides students theory and practice in turoring writing at all educational levels. It covers the writing process, the particulars of the tutorial relationship and issues of working with writers from a variety of backgrounds and abilities. It is recommended for students who are presently engaged in the tutoring of writing and those who may teach writing in one-on-one or small-group settings in the future

WA 07450: Writing Arts Portfolio Seminar 1 S.H.

Prerequisites: WA 01401 , WA 01301 and WA 01405

Seniors majoring in Writing Arts will have an opportunity to reflect on the work undertaken as part of the writing arts major. The course asks students to construct and submit a portfolio consisting of work products both from those courses included in the core and from a selection of courses in the required elective clusters. A written reflection on the intellectual and learning experience derived from these courses as evidenced by the items included comprises the written requirement for this course.

Faculty List

College of Liberal Arts and Sciences

Jam, Habib(1979) Associate Professor
B.A., M.A., Texas Tech University; Ph.D., Southern Illinois University

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B.A., South Carolina State University; M.A., Rider University; Psy.D., Florida Institute of Technology

BLOCK, LORI A. (1992) Academic Advisor for College of Education Student Services Center
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BLOW, DENNIS (1975) Director of Cashiering and Card Office
B.A., M.B.A., Glassboro State College

BRASTETER, CHRISTINE (2009) Senior Director for Procurement
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BREWER, GLENN (1978) Director of Facilities Operations and Maintenance
B.S., Rowan University

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BRUNER, RONALD (1999) Lab Coordinator for Physics and Astronomy
B.A., Rutgers College; M.A., Temple University

BRUSH, DENISE (2005) Librarian
B.S. in Civil & Environmental Engineering, Massachusetts Institute of Technology; M.S. in Software Engineering, Seattle University; M.S. in Library & Information Science, Drexel University

CARDONA, JOSE (1995) Director of the University Media and Public Relations
B.A., M.A., Ed. D., Rowan University

CART, JON ROBERT (2006) Dean of the College of Fine and 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, CAROL (1977) Librarian
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CLARK, ERIC (1970) Special Assistant to the President for Pre-College and Related Initiatives
B.S., Tufts University; M.A., King School of Social Change, Crozier Theological Seminary; M.A., Ph.D., University of Delaware

CUCINOTTA, MARTY (1986) Managing Administrative Assistant for the Provost

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B.A., M.A., Ed.D., Rowan University

DEEHAN, CHRISTINE (1999) Director of University Events
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DORLAND, DIANNE (2000) Dean of the College of Engineering
B.S., M.S., South Dakota School of Mines and Technology; Ph.D., West Virginia University

DePASQUALE, LAWRENCE (1983) Academic Advisor and Music Education Coordinator
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DiNOVA, KRISTEN (2009) Assistant Dean of the College of Liberal Arts and Sciences
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EIGENBROT, EDWIN (1993) Assistant Provost and Director of Institutional Research and Planning
B.S., M.Ed., Springfield College

FARISH, DONALD J. (1998) The President
B.Sc., University of British Columbia; M.S., North Carolina State University; Ph.D., Harvard University; J.D., University of Missouri

FARNEY, STEVEN C. (2004) Assistant Dean for College of Education
B.A., M.B.A., Rowan University

FISHER, BEN (1970) Public Services Librarian
B.J., University of Texas; M.A. in Communication, American University; M.A. in Library Science, Glassboro State College; Ph.D. in Communication and Information Science, Rutgers University

FISHER, JOANNE (1987) Associate Director in Financial Aid
B.A., Rutgers University

FOGLEIN, JOHATHAN (1996) Instrument Coordinator and Safety Officer, Chemistry and Biochemistry
B.S., University of New Brunswick; M.S., Queens University

FRIERSON, MURIEL (1990) The Registrar
B.A., Chestnut Hill College; M.S., Drexel University

GALLIA, DONNA (2004) Director of the Schaub Instructional Materials Center
B.A., M.A., Rowan University (Glassboro)

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B.A., M.A., M.A., Glassboro State College; Ed.D., Rutgers University

GAYMON, JAMES (1997) Vice President of Civic and Governmental Relations
B.A., Rowan University; M.A., Rutgers University-Newark

GILCHRIST, DORIE (1978) Coordinator of Exploratory Studies
B.A., Penn State University; M.Ed., Temple University

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HENDERSON, JAMES (1989) Director of Enterprise Information Services
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B.A., M.A., University of Essex, United Kingdom; M.S., Ph.D., University of Michigan

IMPERATORE, JOHN (2000) Director of Facilities Resource Management
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KLOSKEY, THOMAS (1977) Director in College of Communication
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B.S., J.D., Florida State University

KUHLEN, JOHN (1987) Director of Facilities Business Services
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LAYTON, REED (2006) Acting Senior Director of Public Safety/Director of Police
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LONG, MARY KATHERINE (2009) Associate Vice President for Development
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LOVEGROVE, JAMES (1982) Director of Accounts Payable/Cash Management
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MARGOLIS, JEFFREY (2002) Advisor for Elementary Education
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MORROW, EILEEN (1992) Director of Purchasing
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MULLIGAN, JOSEPH (2004) Assistant Dean of Students
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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

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PATI, NIRANJAN (2008) Dean of William G. Rohrer College of Business
B.Tech., Ranchi University, India; M.Tech., Indian Institute of Technology, India; M.S., Ph.D., Northwestern University

PERRY, JILL (2001) Associate Dean for College of Education
B.S., M.Ed., University of Florida; Ph.D., University of Central Florida

PETERSON, JULIE (1977) Director of Student Enrichment and Family Connections
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ROZANSKI, KATHY (1990) Director of Alumni Relations
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SAHM, GEORGETTE (1999) Courseware Development Specialist in Instructional Technology
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SCHMELZ, NICHOLAS (1974) Academic Advisor for the College of Education Student Services Center
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SCHOEN, MARGARET (2003) Director of Government Grants and Sponsored Research
B.S., Kingï¿¿s College; M.S., College of Misericordia

SCOTT, EILEEN (1977) Senior Director of Human Resources
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SCULLY, JOSEPH F., JR. (2000) Vice President and Chief Financial Officer
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SHARP, CAROL (1987) Dean of College of Education
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SILLS, MARVIN G. (1972) Director of Recruitment and Outreach for College of Professional and Continuing Education
B.A., M.A., Glassboro State College

SMITH, EDWARD III (1992) Director of the International Center
B.A., Rutgers University; M.Phil., Ph.D., New York University

SNYDER, RICHARD (1979) Director of Accounting Services
B.S., Glassboro State College (Rowan); M.B.A., Rowan University

SOLOMEN, JOY (1986) Director of Athletics
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SOSA, HORACIO (2006) Dean for the College of Professional and Continuing Education
B.S., UNLP, Argentina; M.S., Stanford University; Ph.D., Stanford University,

SPENCER, JEROME (1997) Lab Coordinator for Computer Science
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A.A., Philadelphia School of Office Training

STEVENSON, SHEILA (1985) Director of Sports Information
B.A., Rochester Institute of Technology

STOLL, PATRICIA ALEXY (1984) MIS/Certification Specialist for the College of Education
B.A., M.A., Glassboro State College (Rowan); Ed.D., Widener University

STRATTIS, ELLA (1993) Government Documents Librarian
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SULLIVAN-WILLIAMS, LIZZIEL (1976) Director of Career and Academic Planning Center
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TAYLOR, TYRONE (1978) Director of Campus Security and Student Programs
A.S., Pierce College; B.S., Glassboro State College; M.A., Rowan University

THOMPSON, EDWARD (2004) Director of Facilities Landscape
A.A., Keystone College; B.S.A.G., West Virginia University; M.L.A., University of Virginia

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B.S., Rutgers University; M.Ed., Ph.D., Temple University

TOPORSKI, NEIL (2003) Director of Instructional Technology
B.S., University of Wisconsin-Madison; M.S., Clarion University; Ed.D., Lehigh University

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B.A., Rowan University

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WADLEIGH, RICHARD (1988) Director of Campus Safety and EMS
B.S. University of Nebraska Omaha

WAGENER, MARK (1988) Director for Student Housing and Business Services
B.A., B.S., M.B.A., Glassboro State College (Rowan)

WAGNER, FRANK J. (1997) Laboratory Director for Biological Sciences
B.S., Kean College; M.S., Thomas Jefferson Medical College

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B.S.N., University of Hawaii; M.S.N., Widener University

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ZAZZALI, ROBERT (1973) Associate Provost for Faculty Affairs
B.A., M.A., Glassboro State College (Rowan); M.A., Rutgers University

ZIEGLER, EDWARD (1972) Director of University Marketing
B.A., Trenton State College; M.A., Glassboro State College (Rowan)

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B.S., James Madison Univ.; M.A. New York Univ.; Ed.D., Temple University

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AMBACHER, JR., RICHARD J. (1967-2000) Professor
Communication Studies
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Special Ed. Serv./Instuction
B.A., M.A., Glassboro State College

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AVRIL, EDWIN (1959-1982) Professor
Music
B.A., San Francisco State College; M.A., Ed.D., Teachers College, Columbia University

BARTELT, PEARL W. (1972-1999) Professor
Sociology and Dean
B.S., M.A., Ph.D., Ohio State University

BENDER, AARON (1964-1991) Professor
History
B.A., Brooklyn College; M.A., Ph.D., New York University

BENNETT, RENEE (1963-1983) Assistant Professor
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B.S., Rider College; M.A., Glassboro State College

BEVERLY, LEAH (1958-1984) Professor
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B.S., Southwestern Louisiana College; M.A., N.Y.U.; Ed.D., Univ. of So. Mississippi

BIANCHI, JOHN (1967-1990) Education and Coordinator of Research
B.S., Villanova Univ.; M.Ed., Rutgers Univ.; Ed.D., Temple University

BISAZZA, GAETANO R. (1966-2000) Assistant Professor
Biological Sciences
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BLANKEN, MAURICE (1957-1982) Associate Professor
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BLOUGH, ROBERT (1963-1995) Professor
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BOLAY, BRENDA (1968-1997) Associate Professor
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BORGEN, EVELYN (1965-1991) Professor
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B.S., Monmouth College; M.A., Glassboro State College; Ed.D., Fairleigh Dickinson Univ.

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Math/Computer Science
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BROWN, ESTELLE (1962-1992) Professor
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BUZASH, GABRIEL (1964-1981) Professor
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B.S., Slipper Rock State College; M.S., Westminster College; Ed.D. Penn State University

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Technology
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Education
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B.S., University of Wisconsin; M.A., San Jose University; Ph.D., Temple University

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Foreign Languages and Literatures
B.A., M.A., Ph.D., University of Pennsylvania

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B.A., Pennsylvania State University; M.A., Syracuse University

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B.S., Millersville State College; M.A., Ball State Univ.; Ed.D., Michigan State University

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B.S., L.H.D., Glassboro State College; M.S., Univ. of PA; M.S., Univ. of Wisconsin

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Educational Media
B.S., M.Ed., Temple University; M.A., Glassboro State College; Ed.D., Nova University

FRISONE, JOHN (1973-2002) — Associate Professor
Psychology
B.A., Queens College; Ph.D., City University of New York

GALLINELLI, JOHN 1969-2009 — Professor
Department of Art
B.Ed., Keene State College; Ph.D., University of Maryland

GARDINER, DICKINSON (1967-1991) — Professor
Secondary Ed/Educational Foundations
B.A., Western Maryland College; M.Ed., Ed.D., Temple University

GARRABRANT, WILLIAM (1973-2003) Head of Circulation
Interlibrary Loan & Science Librarian
B.A., Hamilton College; M.S.Ed.,M.S.L.S., Syracuse University

GARRAHAN, JOHN (1965-1982) Associate Professor
Special Education
B.A., City College of New York; M.S., Ed.D., University of Pennsylvania

GATES, RODNEY E. (1968-2000) Assistant Professor
Art
B.S., Univ. of Maryland; M.A., Glassboro State College

GAYNOR, WILLIAM (1965-1987) Assistant Professor/Librarian
B.A., Georgetown Univ.; M.A., Fairfield Univ.; M.S., Villanova University

GEPHARDT, DONALD L. 1990-2009 Professor
Department of Music
B.M.E., Drake University; B.S., M.S., The Juilliard School; Ed.D., Washington University

GERSHENOWITZ, HARRY (1965-1998) Professor
Biological Sciences
B.S., St. John's University; B.A., M.S., Long Island University; M.A., Columbia University; Ed.D., Columbia University

GILLESPIE, JOHN (1972-1992) Associate Professor
Communications
B.S., M.A., Glassboro State College

GLASSBERG, ROSE (1964-1991) Professor
Secondary Ed/Educational Foundations
B.S., West Chester State College; M.A., Middlebury College; Ph.D., Temple University

GOLDBERG, LEON (1968-1988) Associate Professor
Physical Science
B.S., City College of New York; M.S., New York University

GOODFELLOW, FRANK (1965-1999) Associate Professor
Secondary Education
B.A., College of Wooster; M.S.L.S., Drexel Institute of Technology

GRACE, JAMES H. (1969-2000) Professor
Philosophy/Religion
B.A., M.Th., Drew University; M.A., Ph.D., Temple University

GRAZIAN, FRANK (1968-1991) Associate Professor
Communications
B.A., Rutgers University; M.S., Columbia University

GREEN, CHARLES H. (1962-1993) Professor
Life Sciences
B.S., Penn State Univ.; M.S., University of Delaware; Ph.D., Purdue University

GRUPENHOFF, RICHARD 1981-2009 Professor
Department of Radio/Television/Film
B.A., Xavier University; M.A., Purdue University; Ph.D., Ohio State University

GUERARD, MICHAEL P. (1971-1995) Associate Professor
Technology
B.S., M.Ed., Ph.D., Texas A & M University

GUNDAKER, ISABELLE (1983-2003) Instructor
Composition & Rhetoric
B.A., Chestnut Hill College; M.A., Rutgers

GURST, LAWRENCE (1966-1993) Assistant Professor
Elementary Education
MA.A., M.Ed., Temple University

HABA, JAMES (1972-2003) Associate Professor
English
B.A., Reed College; Ph.D., Cornell University

HAYNES, ROBERT (1960-1991) Professor
Art
B.F.A., Colorado State College; M.A., Ed.D., Columbia University

HENDERYCKSEN, M. HUGUETTE (1969-1991) Professor
Foreign Languages & Literatures
Licence, Aix en Provence Univ.; B.S., Shippensburg State College; M.Ed., Temple Univ.; M.A., University of Pennsylvania; Ph.D., Rutgers University

HEWSEN, ROBERT H. (1967-1999) Professor
History
B.A., University of Maryland; M.S., Catholic University; Ph.D., Georgetown University

HILTS, RICHARD (1962-1981) Professor
Music
B.M., Eastman School of Music; M.M., University of Oklahoma

HITCHNER, BENJAMIN G. (1964-1998) Assistant Professor
Economics
B.S., Temple University; M.S., University of Pennsylvania

HUMBERT, JOHN J. (1969-1995) Professor
Technology
B.S., University of Maryland; M.Ed., Pennsylvania State University; Ed.D. Texas A&M University

HUSAIN, SYED (1960-1994) Professor
Biological Sciences
I.Sc., City Science College, Hyderabad; B.Sc., College of Agriculture, Osmania University,Hyderabad, India; M.S., Oklahoma State University; Ph.D., Cornell University

JAEGER, PETER (1966-1981) Associate Professor
Communications
B.A., Mexico City College; M.Ed., University of Houston

JAMES, HERMAN (1982-2007) President Emeritis
B.S., Tuskegee Institute; M.A., St. John¿s University; Ph.D., University of Pittsburgh

JENSEN, IVAR I. (1959-1981) Professor
Foundations of Education
B.Ed., Univ. of Connecticut; M.A., Middlebury College; Ed.D., Columbia University

JOHNSON, RICHARD J. (1971-2000) Associate Professor
Political Science
B.A., M.A., Cert. of Russian Institute; Ph.D., Columbia University

JOHNSON, THEODORE B. (1990-1999) Associate Professor
Educational Leadership
B.S., M.A., Temple University; Ed.D., Rutgers University

JONES, JOHN (1968-1990) Assistant Professor
Foreign Languages and Literatures
B.A., M.A., University of Alabama; Diplome, Institut de Touraine, Tours, France

KAPEL, DAVID (1988-2002) Professor
Secondary Ed/Foundations
B.S., M.Ed., Ed.D., Temple University

KARDAS, WILLIAM (1968-2000) Head Reference Librarian
B.S., M.L.S., Villanova University

KELLER, HORACE (1960-1986) Professor
Psychology
B.S., West Chester University; M.Ed., Ed.D., Temple University

KELLY, MICHAEL F. (1961-1998) Professor
Theatre and Dance
B.A., Elmhurst College; M.A., Ph.D., State University of Iowa

KERSHNER, E. THEODORE (1968-1998) Assistant Professor
Health and Exercise Science
B.S., Ursinus College, M.Ed., Temple University

KIRNER, CLARA (1971-1994) Librarian
B.A., Rutgers University; M.A., Drexel University

KLANDERMAN, JOHN (1986-2005) Professor
Special Education
B.A., Calvin College; M.A., Ph.D., Michigan State University

KUSHNER, WILLIAM (1970-1999) Professor
Communication Studies
B.A., Montclair State College; M.A., Temple University; Ph.D., Indiana University

LESHAY, STEVEN V. (1978-1999) Associate Professor
Marketing
B.A., Lenoir Rhyne College; M.A., Glassboro State College; Ph.D., Temple University

LIBRO, ANTOINETTE (1968-2002) Dean/Professor
Communication
B.A., Glassboro State College; Ph.D., New York University

LINT, JERRY N. (1964-1998) Assistant Professor
Geography/Anthropology
B.S., Clarion State College; M.Ed., Pennsylvania State University

LOIGMAN, BARRY M. (1970-1999) Associate Professor
Psychology
B.A., M.A.,Temple University; Ph.D., Rutgers University

LONGACRE, DAVID (1961-1989) Education and Assistant Registrar
B.A., Gettysburg College; M.S., University of Pennsylvania

LYNCH, ROBERT D. (1973-1999) Professor
Management/MIS
B.S., M.S., Ph.D., Carnegie-Mellon University; SPHR

MARTIN, DORIS (1976-1987) Assistant Professor
Home Economics
B.S., Penn State University; M.S., Cornell University; Ed.D., Temple University

MARTIN, MARILYN (1995-2004) Dean
Library Services
B.A., M.L.S., Univ. of Washington; M.A., Univ. of Arkansas; Ph.D., Texas Woman¿s Univ.

MARTINEZ-YANES, FRANCISCO (1966-2008) Professor
Foreign Languages and Literatures
M.A., University of Rome, Italy; DiplF4me, Alliance FranE7aise, Paris, France; Ph.D., University of Pennsylvania

MASAT, FRANCIS E. (1972-1998) Professor
Mathematics
B.A., Blackburn College; M.S., Kansas State University; Ph.D., University of Nebraska

MERCIER, J. DENIS (1967-2002) Professor
Communication
B.A., Marian College; M.A., Niagara University; Ph.D., University of Pennsylvania

MEYERS, DOROTHY (1967-1985) Assistant Professor/Librarian
B.A., State University of Iowa; M.L.S., Rutgers University

MICAL, AGNES (1968-1996) Assistant Professor
Health & Exercise Science
B.S., M.S., West Chester University

MICHAELSON, JAMES (1967-1991) Assistant Professor
Secondary Ed/Ed. Foundations
B.S., M.A., Temple University

MICKLUS, SAMUEL C. (1968-1991) Professor
Technology
B.S., Philadelphia College of Art; M.A., Trenton State College; Ed.D., New York Univ.

MILLER, CLARENCE (1956-1992) Professor
Music
B.M.E., Mount Union College; M.M., Marshal University

MITCHELL, RICHARD (1964-1991) Professor
English
B.A., University of the South; M.A., Ph.D., Syracuse University

MITCHELL, ROBERT D. (1965-1997) Associate Professor
Mathematics
B.S., M.A., University of Texas

MONAHAN, THOMAS 1984-2009 Professor
Department of Educational Leadership
B.A., LeMoyne College; Ed.M., Ed.D., Rutgers University

MONROE, GERALD (1968-1986) Associate Professor
Art
B.S., M.A., Ed.D., New York University

MOORE, ELIZABETH (1972-2002) Professor
Biological Sciences
B.Sc., Rollins College; M.S., Ph.D., Cornell University

MOORE, OSCAR (1971-2003) Assistant Professor
Health & Exercise Science
B.S., M.S., Southern Illinois University

MORFORD, IDA B. (1956-1981) Professor
Psychology
B.S., Geneseo State College; M.A., Ph.D., Ohio State University

MORRIS, WILLIAM C. (1968-1999) Professor
Theatre and Dance
B.A., DePaul University; M.A., Northwestern University; Ph.D., University of Illinois

MOSTO, PATRICIA 1993-2009 Professor
Department of Biological Sciences
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

MOYER, MEL (1967-2000) Associate Professor
Psychology
B.A., Glassboro State College; M.Ed., Temple University; Ed.D., Rutgers University

MURASHIMA, KUMIKO (1971-2007) Associate Professor
Art
B.F.A., Women's College of Fine Arts, Japan; M.F.A., Indianna University

McCONNELL, HELEN (1965-1995) Professor
Home Economics
B.S., State Univ. College, Oneconta, 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

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

OGNIBENE, GERALD (1972-2008) — Professor
Special Education
B.A., Niagara University; M.S., Canisius College; Ph.D., Ohio State University

ORLANDO, FRANK J. (1972-2008) — Associate Professor
Foundations of Education
B.S., M.S., SUNY-Buffalo; Ed.D., West Virginia University

PALLADINO, MARY ANNE (1964-1994) — Professor
Communications
B.A., Immaculata College; M.A., Villanova University

PERRY, WILHELMINA E. (1968-1997) — Professor
Sociology
B.A., Tilotson College; M.A., Howard University; Ph.D., University of Texas

PICKETT, ETHEL (1968-1987) — Assistant Professor
Home Economics
B.S., University of Delaware; M.Ed., University of Maryland

PIKE, FRANK (1964-1987) — Assistant Professor
English
B.A., Suffolk University; M.A., Boston College; M.Ed., State College at Boston

PITTARD, NORMA (1968-1987) — Assistant Professor
Art
B.A., Adelphi University; M.A., Columbia University; Ph.D., University of Maryland

PORTERFIELD, RICHARD (1961-1998) — Associate Professor
History
B.A., Johns Hopkins University; M.A., University of Pennsylvania; Ph.D., Temple University

PRIETO, ANDREW (1971-2008) — Professor
Biological Sciences
B.A., Rutgers University; M.S., New Mexico State University; Ph.D., University of Missouri

PUJALS, ENRIQUE J. (1969-2000) Professor
Foreign Languages and Literatures
B.A., M.A., Indiana State University; Ph.D., Rutgers University

PUTMAN, MARY LEE (1971-2008) Associate Professor
Health & Exercise Science
B.S., SUNY College at Cortland; M.A., University of Maryland; Ph.D., Temple University

REEVES, EDWIN C. (1968-1996) Assistant Professor
Reading
B.A., M.A., Glassboro State College

REINFELD, GEORGE (1956-2002) Professor
Communication
B.A., M.A., Montclair State College

RESNIK, BENJAMIN (1965-1991) Assistant Professor
Communications
B.A., M.A., Glassboro State College

RICHARDSON, HERBERT A. (1966-1998) Assistant Professor
History
B.M., M.M., Yale University; M.A., Ph.D., University of Pennsylvania.

ROBINETTE, JOSEPH (1981-2005) Professor
Theatre/Dance
B.A., Carson-Newman College; M.A., Ph.D., Southern Illinois University

ROSENBERG, JEROME J. (1973-2008) Associate Professor
Special Education
B.A., Oswego State Teachers College; M.A., Columbia University; Ed.D., Temple University; Ph.D., Heed University, West

ROWAND, EDITH T. (1966-2000) Assistant Professor
Health and Exercise Science
B.S., The KingÕs College; M.S., West Chester State College

SAKIEY, ELIZABETH (1974-2000) Professor
Reading
B.S., Eastern Michigan University; M.Ed., Ed.D., Rutgers 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

SCHWARZ, CHARLES (1967-1999) Assistant Professor
Mathematics
B.A., St. JohnÕs University; M.S., Fordham University; M.S., Adelphi University; Ed.D., Rutgers University

SCOTT, JOANNE 1989-2009 Associate Professor
Department of Biological Sciences
B.S., Bucknell University; M.A., Lehigh University; M.S., Bucknell University; Ph.D., University of Texas, Medical Branch at Galveston

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.

SHONTZ, MARILYN L. 1999-2009 — Associate Professor
Department of Special Education Services and Instruction
A.B., Heidelberg College (Ohio); M.S. in L.S., Case Western Reserve University; Ph.D., Florida State University

SHRADER, EDITH (1959-1968) — Demonstration Teacher
Early Childhood Education
B.S., M.S., Glassboro State College

SIMPSON, EUGENE (1975-2000) — Professor
Music
B.M., Howard University; B.M., M.M., Yale University; Ed.D., Columbia University

SIZEMORE, WARNER (1966-1987) — Assistant Professor
Philiosophy/Religion
B.A., East Tennessee State; M.A., Bob Jones University; M.A., Temple University; B.D., Lincoln University Theological Seminary

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

SORRENTINO, CARMELA 1965-2009 — Assistant Professor
Department of Teacher Education (Early Childhood, Elementary Education, Subject Matter)
B.S., West Chester State College; M.Ed., Temple University

SPEAR, MIRIAM (1967-1983) — Assistant Professor
Secondary Education
B.A., M.S., Glassboro State College

STANLEY, DANIEL (1966-1991) — Professor
Health and Physical Education
B.Ed., Univ. of Buffalo; M.Ed., State Univ. of New York; Ed.D., Temple University

STEVENS, KATHLEEN (1972-1998) — Associate Professor
Communication
B.A., Georgian Court College; M.A., Glassboro State College (Rowan)

STONE, DON C. (1968-2000) — Associate Professor
Computer Science
E. Eng. Phys., Cornell University; M.S.E., Ph.D., University of Pennsylvania

SULLIVAN, JANE E. (1972-1999) — Professor
Reading
B.S., Seton Hall University; M.S., Ed.D., State University of New York, Albany

TANEY, MARY C. (1967-1991) — Professor
History
B.A., College of Saint Teresa; M.A., Ph.D., Catholic University; Litt.D., Universita Cattolica del Sacro Cuore, Milan, Italy

TANNENBAUM, MARGARET D. (1971-2000) — Professor
Secondary Education
B.A., Bryan College; M.Ed., Ed.D., Temple University

TANNENBAUM, THEODORE (1973-1998) — Professor
Sociology
B.A., M.A., Brooklyn College; Ph.D., Purdue University

TAYLOR, ALBERT (1964-1987) — Professor
Foundations of Education
B.S., Trenton State College; M.Ed., Ed.D., Rutgers University

TENER, MORTON (1968-2008) Professor
Secondary Education
B.S., Rider College; M.S., University of Pennsylvania; M.S., Ed.D., Temple University

THYHSEN, JOHN (1969-2000) Professor
Music
B.M., M.M., Eastman School of Music

TISHLER, JOSEPH (1964-2000) Professor
Art
Cresson Scholar, Pennsylvania Academy of Fine Arts; B.F.A., M.F.A., University of Pennsylvania; D.A., Carnegie-Mellon University

TOMEI, MARIO (1964-1995) Professor
Educational Administration
B.A., Montclair State College; M.S., University of Pennsylvania; Ed.D., Temple University

TRACEY, JAMES H. (1994-2000) Dean/Professor
College of Engineering
B.S.E.E., M.S., Ph.D., Iowa State University

TRAVIS, DAVID (1962-1991) Associate Professor
Mathematics
B.S., New Mexico State University; M.S., Oklahoma State University; Ed.D., University of Northern Colorado

TRAVIS, WILLIAM (1971-2007) Professor
Art
B.F.A., Philadelphia College of Art; M.F.A., Tyler School of Art

TSUJI, THOMAS (1969-1995) Professor
Technology
B.S., M.S., Stoudt State College; Ph.D., Michigan State University

VIVARELLI, THOMAS (1967-2004) Assistant Professor
Special Education
B.A., Trenton State College; M.A., Glassboro State College

VOGAL, HAL (1984-2005) Professor
Public Relations/Advertising
B.A., Temple University; M.A., William Paterson College; Ph.D., Antioch University; APR

WACKAR, RICHARD (1956-1988) Professor
Health and Physical Education
B.S., M.A., Rutgers University

WADE, THOMAS 1976-2009 Assistant Professor
Department of Music
B.M., Oberlin College; M.M., University of Connecticut

WARD, HUGH J. (1959-1976) Associate Professor
Foundations of Education
B.S., M.A., Glassboro State College

WARING, JOSEPH C. (1966-1991) Associate Professor
Physical Sciences
B.A., State Univ. of New York at Binghamton; M.S., State Univ. of New York at Oneonta; Ph.D., University of South Carolina

WASHINGTON, JUDY 1971-2009 Associate Professor
Department of Teacher Education (Early Childhood, Elementary Education, Subject Matter)
B.A., Brooklyn College; M.Ed., Ed.D., Temple University

WASSERMAN, BURTON (1960-2003) Professor
Art
B.A., Brooklyn College; M.A., Ed.D., Columbia University

WEAR, BARBARA (1973-1999) Assistant Professor
Elemenary/Early Childhood Education
B.A., Trenton State College; M.S.W., Rutgers University

WELSH, CHARLES (1973-1992) Professor
Marketing
B.S., Villanova University; M.B.A., Ph.D., University of Pennsylvania

WHITCRAFT, JOHN (1963-1987) Professor
Philosophy/Religion
B.A., Asbury College; M.A., Temple Univ.; B.D., Asbury Seminary; S.T.M., Boston Univ.

WHITE, EDWARD H. (1973-2000) Professor
Educational Leadership
B.A., Keene State College; M.S., Indiana State University; Ph.D., University of Maryland

WICKS, LAWRENCE (1962-1997) Associate Professor
Music
B.M., M.M., Ithaca College

WILLIAMS, LEONARD J. 1990-2009 Associate Professor
Department of Psychology
B.A., University of Delaware; M.A., McMaster University, Hamilton, Ont.; Ph.D., University of South Carolina

WINAND, LOIS (1971-1991) Assistant Professor
Home Economics
B.S., M.S., Drexel University; Ed.D., Pennsylvania State University

WOLFE, EDWARD (1959-1994) Professor
English
B.A., M.A., Ph.D., University of Pennsylvania

WOOD, A. TAGE (1968-1987) Associate Professor
Speech/Theatre/Dance
B.S., East Stroudsburg State College; M.Ed., University of South Dakota

WOODS, WELLINGTON (1967-1998) Associate Professor
Chemistry and Physics
B.S., Glassboro State College; M.Ed., Rutgers University; Ph.D., Walden University

WRIGGINS, THOMAS (1967-1992) Assistant Professor/Director of Support Services
Education
B.A., Glassboro State College; M.Ed., Temple University

YANNELLA, DONALD (1964-1991) Professor
English
B.S., M.A., Ph.D., Fordham University

YOUNG, FLORA (1968-1995) Professor
Sociology
B.A., M.A., Howard University; Ed.D., University of Pennsylvania

YOUNG, WALTER BYRON (1972-1997) Professor
Art
B.A., M.A., Glassboro State College; Ed.D., Pennsylvania State University

ZAHN, RICHARD (1960-1987) Professor
Foundations of Education
B.S., West Chester State College; M.Ed., Ed.D., Temple University

ZALUSKY, DONALD (1966-1991) Associate Professor
Physical Sciences
B.S., M.A., University of Missouri; Ph.D., University of Delaware

ZIMMERMAN, DONALD (1961-1992) Professor
Elementary/Early Childhood Education
B.S., M.A., State University of New York, Buffalo; Ed.D., Temple University

ZINK, THEODORE (1966-1987) Professor
Law/Justice
B.S., M.S., University of Delaware; Ed.D., Temple University

General Information

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.

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.

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.

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.

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
The Chamberlain Student Center opened in 1974 and serves as a campus focal point where students, faculty, staff and community members congregate for a wide range of events, services and functions. It houses offices for student organizations and publications as well as several offices, including Student Center Administration, and student offices such as Student Government Association, Student University Programmers and Student Publications. The following facilities and/or services are located in the three-level center; the information desk, the ID room, the mail room, an ATM machine, change machine, the game room, a laundry facility, the Eynon Ballroom, meeting and conference rooms and eating areas, including the Marketplace, a food court, Jazzman's CafE9 and the Owl's Nest.

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.

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.

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 Hall
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 Year 2009-2010

Fall Semester	**Fall 2009**
Convocation	Sunday, August 30
Semester Classes Begin	Tuesday, September 1
Labor Day (no classes)	Monday, September 7
1st Quarter Concludes	Tuesday, October 20
Election Day (no classes)	Tuesday, November 3
Thanksgiving Recess (no classes)	Thursday-Friday, November 26-27
2nd Quarter Concludes	Monday, December 14
Finals Week	Tuesday-Saturday, December 15-19
Fall Semester Concludes	Saturday, December 19
Spring Semester	**Spring 2010**
Spring Semester Begins	Tuesday, January 19
3rd Quarter Concludes	Monday, March 8
Spring Break (No Classes)	Monday-Friday, March 15-19
Good Friday (No Classes)	Friday, April 2
4th Quarter Concludes	Monday, May 3
Finals Week	Tuesday-Saturday, May 4-8
Semester Concludes	Saturday, May 8
Commencement - Graduate	Thursday, May 13
Commencement - Undergraduate	Friday, May 14
Summer Sessions	**Summer 2010**
Memorial Day (no Classes)	Monday, May 31
Fourth of July (no Classes)	Monday, July 5
Session 1 - First 3 weeks	May 17 - June 3*
Session 2 - 8 weeks	June 7 - July 29*
Session 3 - First 5 weeks	May 17 - June 17*
Session 4 - Second 5 weeks	June 21 - July 22*
Session 5 - Second 3 weeks	July 26 - August 12

*Includes either Memorial Day, Fourth of July, or both

Administrative Offices Telephone Numbers

Academic Affairs	256-4011
Academic Success Center	256-4259
Admissions	256-4200
Bursar	256-4150
Camden Campus	756-5400
Career and Academic Planning	256-4456
Conference and Event Services	256-5446
Counseling and Psychological Service Center	256-4222
Dean, Business	256-4025
Dean, Communication	256-4290
Dean, Education	256-4750
Dean, Engineering	256-5300
Dean, Fine and Performing Arts	256-4552
Dean, Liberal Arts and Sciences	256-4852
Dean, Professional and Continuing Education	256-4129
Dean of Students	256-4040
Development Office	256-4500
Disability Resources	256-4234
EOF/MAP	256-4080
Financial Aid	256-4250
Information Resources	256-4401
Judicial Affairs	256-4242
Library	256-4800
Main Switchboard	256-4000
Multicultural Affairs	256-4448
President	256-4100
Provost	256-4108
Public Safety	256-4922
Recreation Center	256-4900
Registrar	256-4350
Service Learning and Volunteerism	256-4595
Specialized Services	256-4233
Student Activities	256-4696
Student Center	256-4602
Student Health Center	256-4333
VP Administration and Finance	256-4140
VP Student Affairs	256-4283
VP University Advancement	256-4148
VP University Relations	256-4100

Directions to Campus

Directions to the Glassboro Campus

Rowan University is located in the southern New Jersey town of Glassboro, 18 miles southeast of Philadelphia. The campus is easily reached from the New Jersey Turnpike, the Atlantic City Expressway or any of the Delaware River Bridges. The Welcome Gate is located at **257 Mullica Hill Road, Glassboro, NJ 08028**. For a detailed campus map go to http://www.rowan.edu/campus_map

From the North

(Northern New Jersey, New York, etc.) Take the NJ Turnpike South to Exit 4 (73 North). In approximately 1 mile, take I-295 South. Follow I-295 to Route 42 South (Atlantic City). Exit Route 42 South onto Route 55 South. Follow Rte. 55 South to exit 50A (Glassboro-Mullica Hill). Take Route 322 East (2 miles) to the campus. After you cross the railroad tracks, make the second right into the Welcome Gate, 257 Mullica Hill Road. The guard will direct you to parking during normal business hours. If the guard is not present, call 856-256-4922 for assistance.

From Philadelphia

Take the Walt Whitman or Benjamin Franklin Bridge to I-676 South toward Atlantic City. Shortly after I676 becomes Route 42 South, exit right onto Route 55 South. Take Rte. 55 South to exit 50A (Glassboro-Mullica Hill). Take Route 322 East (2 miles) to the campus. After you cross the railroad tracks, make the second right into the Welcome Gate, 257 Mullica Hill Road. The guard will direct you to parking during normal business hours. If the guard is not present, call 856-256-4922 for assistance.

From the West

Take I95 to the Commodore Barry Bridge. Follow Route 322 East (15 miles) to the campus. After you cross the railroad tracks, make the second right into the Welcome Gate, 257 Mullica Hill Road. The guard will direct you to parking during normal business hours. If the guard is not present, call 856-256-4922 for assistance.

From Central New Jersey

Take Route 70 West to I-295 South. Follow I-295 to Route 42 South (Atlantic City). Exit Route 42 South onto Route 55 South. Follow Route 55 South to exit 50A (Glassboro-Mullica Hill). Take Route 322 East (2 miles) to the campus. After you cross the railroad tracks, make the second right into the Welcome Gate, 257 Mullica Hill Road. The guard will direct you to parking during normal business hours. If the guard is not present, call 856-256-4922 for assistance.

From the East

Take the Garden State Parkway to the Atlantic City Expressway. Take the Expressway West to Exit 38 (Williamstown). Turn left after exiting and follow Route 322 West (8 miles) to the campus. After you pass the large Rowan sign on your left, make the first left into the Welcome Gate, 257 Mullica Hill Road. The guard will direct you to parking during normal business hours. If the guard is not present, call 856-256-4922 for assistance.

From the South (Maryland, Delaware, etc.)

Take I-95 North to the Delaware Memorial Bridge. Take the New Jersey Turnpike North to Exit 2 and take Route 322 East. At the first traffic light (3 miles) turn right and then bear left (.4 miles) to stay on Rt. 322. Continue on Rt. 322 (7 miles) to the campus. After you cross the railroad tracks, make the second right into the Welcome Gate, 257 Mullica Hill Road. The guard will direct you to parking during normal business hours. If the guard is not present, call 856-256-4922 for assistance.

Directions to the Camden Campus

Rowan University at Camden is located in the University District of the City of Camden on the corner of Broadway and Cooper Streets. It can easily be reached from Route 295, the Atlantic City Expressway Route 42, I-676 or any of the Delaware River bridges.

From South Jersey

Follow Route 42 toward Walt Whitman Bridge. Take I-676 North to last exit before the Ben Franklin Bridge (exit 5B, Linden Street). At the light, turn left, at next light turn left and cross overpass. At next light (Cooper Street), turn right. Campus is at corner of Broadway and Cooper Street.

From Philadelphia

Take the Ben Franklin Bridge. Take exit for Broadway. Campus is located on the left on the corner of Broadway and Cooper Street.

From the North and South

Take the New Jersey Turnpike (North or South) to exit 4. Take 73 North to 38 West to 30 West. Route 30 becomes Admiral Wilson Blvd. As you approach Camden, remain in right lane proceeding to Ben Franklin Bridge. At the last light before the bridge, turn left and drive over the overpass. At next light (Cooper Street) turn right. Campus is at the corner of Broadway and Cooper Street.

From the West

(Routes 70 & 38)

Proceed West toward Philadelphia to 30 West. Route 30 becomes Admiral Wilson Blvd. As you approach Camden remain in right lane proceeding to Ben Franklin Bridge. At the last light before the bridge, turn left and cross the overpass. At next light (Cooper Street) turn right. The campus is on the corner of Broadway and Cooper Street.

Accreditations

Accredited by:
Middle States Association of Colleges and Schools*
Accreditation Board for Engineering and Technology
American Chemical Society
Association to Advance Collegiate Schools of Business
Commission on Accreditation of Allied Health Education Programs
National Association of School Psychologists
National Association of Schools of Art and Design
National Association of Schools of Music
National Association of Schools of Theatre
National Council for Accreditation of Teacher Education
National League of Nursing
Public Relations Society of America

*Commission on Higher Education

Middle States Association of Colleges and Schools
3624 Market Street
Philadelphia, PA 19104
267-284-5000

Member of:
American Association of Higher Education
American Council on Education
American Association of State Colleges and Universities
American Association for Adult Continuing Education
AACSB: The International Association for Management Education
Council of Graduate Schools
National Association of Schools
New Jersey College and University Coalition
New Jersey Council of Education
New Jersey Association of Colleges and Universities

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.