## Tulane University

## UNDERGRADUATE CATALOG 2003-2005

Tulane University is accredited by the Commission on Colleges of The Southern Association of Colleges and Schools (1866 Southern Lane, Decatur, Georgia 30033-4097: Telephone number 404-679-4501) to award bachelors, masters, doctoral and professional degrees.
Tulane University is an Affirmative Action/Equal Employment Opportunity institution, and consequently its policy of non-discrimination includes recruitment, employment, retention and promotion of the most qualified students, faculty, and staff regardless of an individual's race, sex, color, religion, marital/ethnic origin, citizenship, marital status, sexual orientation, handicap, or veteran status. Tulane University does not discriminate in its provision of services and benefits and in its treatment of students, patients, and employees. Inquiries regarding this policy may be referred to the Affirmative Action Officer in the Office of Equal Opportunity.

Tulane University is committed to a policy of compliance with Federal laws and regulations concerning non-discrimination on the basis of race, sex, color, national/ethnic origin, religion, age handicap, or veteran status in educational or institutional programs and activities. Title VI and Title VII of the Civil Rights Act of 1964, Title IX of the Educational Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, and the other similar legislation prohibit such discrimination. The non-discrimination requirements and to be a available to receive confidential inquiries of complaints.

Tulane University has implemented grievance procedures concerning cases of alleged discrimination, including those of alleged sexual harassment, for faculty, staff, and students. It is the policy of the University that harassment on the basis of sex among employees constitutes an impermissible employment practice, which is subject to disciplinary action and shall not be tolerated. Complaints or confidential inquires may be referred to the Personnel Director or the Affirmative Action Officer.

Sexual harassment involving students and University personnel or among students is equally impermissible and shall not be tolerated. The University is committed to providing an environment to study free of sexual harassment. Students may obtain confidential informal counseling and information concerning grievance procedures from the Chairperson of the University Senate Committee on Student Rights, Freedoms, and Responsibilities or the Vice President for Student Affairs/Dean of Student Services (University Center).

Tulane University complies with the provision of the Family Education Rights and Privacy Act of 1974, which was enacted to protect the privacy of education record, to establish the right of students to inspect and review their education records, and to provide guidelines for the correction of inaccurate or misleading data. Students have the right to file complaints with the Family Education Rights and Privacy act (FERPA) Office concerning alleged failures by the institution to comply with the Act. Information concerning the rights and protection under the Act, the types and locations of education records maintained, and the procedure to be used by the institution for compliance with the provisions of the Act can be obtained from the following offices: Vice President for Student Affairs/Dean of Student Services (University Center) and Registrar’s Office (Gibson Hall). Grievances or confidential inquires concerning the Act may be referred to the Affirmative Action Officer.

## Tulane University

## MISSION STATEMENT

Tulane's purpose is to create, communicate, and conserve knowledge in order to enrich the capacity of individuals, organizations and communities to think, to learn, and to act and lead with integrity and wisdom.

## HISTORY

Tulane University, one of the foremost independent national universities in the South, is ranked among the top quartile of the nation's most highly selective universities. With 11 schools and colleges that range from the liberal arts and sciences through a full spectrum of professional schools, Tulane gives its 11,000 students a breadth of choice equaled by only six other independent universities in the country.
Tulane University's 11 academic divisions enroll approximately 6,500 undergraduates and about 4,800 graduate and professional students. Tulane College and Newcomb College are Tulane's liberal arts and sciences colleges for men and women, respectively. Schools of Architecture, Business, and Engineering offer both undergraduate and graduate programs. Other divisions include the Graduate School, the Schools of Law, Medicine, Public Health and Tropical Medicine, Social Work, and University College. All divisions except the medical complex, which includes a teaching hospital and clinic, are located on Tulane's 110 -acre campus in uptown New Orleans.
The University's origins trace back to the founding of the Medical College of Louisiana, the Deep South's first medical school, in 1834. Classes started the next year when 11 students and 7 faculty members met in a rented hall; students paid for instruction by the lecture. Born of the desperate need for competent medical care in this region and of the founders' dedication to study and treat "the peculiar diseases which prevail in this part of the Union," the college quickly earned recognition.
Soon the medical college merged with the public University of Louisiana in New Orleans, adding a law department and a "collegiate" department (now Tulane College). The University continued building a national reputation. Professor of Chemistry J. L. Riddell built the first successful binocular microscope in 1852. The medical department faculty fought for improved public health and sanitation. And, in 1857, Christian Roselius, an early graduate of the collegiate and law departments, was appointed Chief Justice of the Louisiana Supreme Court.

The Civil War forced the University to close. After the war, the University reopened in financial trouble. Total assets, excluding buildings, totaled $\$ 4,570.39$ in 1866. In the early 1880s, Paul Tulane provided a permanent solution by donating more than $\$ 1$ million "for the promotion and encouragement of intellectual, moral, and industrial education." Tulane had made his fortune in New Orleans before returning to his native Princeton, New Jersey; his gift expressed his appreciation to the city.
The 17-member board authorized to administer the Tulane Educational Fund decided to revitalize the struggling University of Louisiana instead of founding a new institution. Paul Tulane concurred, and in 1884, the Louisiana legislature gave the University of Louisiana to the administrators of the Tulane Educational Fund. Tulane University of Louisiana, a private, nonsectarian institution, was born.
As a result of its new strength, the University was able to create the Department of Philosophy and Science, today the Graduate School, and initiate courses in architecture and engineering. In 1886, Josephine Louise Newcomb founded Newcomb College as a memorial to her daughter, Harriott Sophie. Newcomb was the first degree-granting women's college in the nation to be established as a coordinate division of a men's university. It became the model for other coordinate women's colleges, including Barnard and Radcliffe.
Newcomb's founding is linked with the World's Industrial and Cotton Exposition which opened in Audubon Park in 1884. Several artisans who came to the New Orleans Exposition to exhibit their own work and see the works of others stayed to establish the arts program, which was at the heart of Newcomb's early curriculum. By the early 1900s, Newcomb pottery had won a bronze medal at the Paris Exposition, its fame had spread across the nation, and young women were engaged in the unusual task of earning an independent living.
In 1894, Tulane moved to its present campus on St. Charles Avenue, five miles by streetcar from its former site in downtown New Orleans. About the same time, the Richardson Memorial Building was built on Canal Street to house the medical school. Some medical classes were moved to the uptown campus, but clinical teaching remained downtown. The medical school was split between campuses until a major reorganization in the 1960s.
For a quarter of a century, Newcomb College had been on Washington Avenue in the Garden District. In 1918 it, too, moved uptown to join other divisions of the University.

Around the turn of the century, Tulane's curriculum grew as several new professional schools were established, including the Deep South's first schools of architecture, business, and social work. City officials frequently consulted the College of Technology, now the School of Engineering, on construction techniques and soil conditions. Engineering alumnus A. Baldwin Wood designed the famous Wood screw pump that helps keep New Orleans dry. The first student yearbook, Jambalaya, and the first Tulanian were published. The Alumni Association was founded with 800 members, and significant contributions to the University financed new buildings, library holdings, and research facilities. The Middle American Research Institute, founded in 1924, became a pioneer in Central American archaeology and anthropology, excavating and restoring the Mayan village of Dzibilchaltun in the Yucatan.

Since then, research in many disciplines has flowered through the establishment of research centers, including: the Murphy Institute of Political Economy, the Newcomb College Center for Research on Women, the Roger Thayer Stone Center for Latin American Studies, the Center for Bioenvironmental Research, the Tulane Museum of Natural History, and the Amistad Research Center, curator of one of the largest collections in the world of primary source material on American ethnic groups, especially African-Americans.
As early as the 1890s, Tulane offered free lectures and classes to the New Orleans community. This commitment to community service was reaffirmed in 1942 with the founding of University College which offers adult education and sponsors the annual Summer School.
After World War II, Tulane's Graduate School and the professional programs continued to grow. The University was elected to the Association of American Universities, a select group of some 50 universities with "pre-eminent programs of graduate and professional education and scholarly research." The Tulane Medical Center was established in 1969 to include the School of Medicine, the School of Public Health and Tropical Medicine, and the Tulane University Medical Center Hospital and Clinic. The medical center also administers the Tulane National Primate Research Center in Covington, Louisiana; the F Edward Hebert Riverside Research Center in Belle Chasse, Louisiana; and the International Collaboration in Infectious Diseases Research (ICIDR) Program in Cali, Colombia.

Like all schools, however, Tulane is most distinguished by the accomplishments of its students and Tulane's students are routinely honored with the most prestigious fellowships and scholarships. No college in the United States has in the past decade received more Watson Fellowships than Newcomb College; during the 1980s and early 1990s, Tulane ranked ninth in the number of Rhodes Scholarships awarded and ninth in Marshall Scholarships. Intellect flourishes at Tulane. Its environment combines the excitement of multiple juxtaposed disciplines, the intimacy of a small college, and the academic resources of one of the nation's premier academic institutions.

Tulane is proud to offer the diversity of a large university, which allows students the opportunity to explore many fields of interest. On the other hand, the separate schools and colleges remain small enough to retain a sense of intimacy and identity.

## UNIVERSITY ADMINISTRATION

Scott S. Cowen

D.B.A., George Washington University President of the University
Lester A. Lefton
Ph.D., University of Rochester
Sr. Vice President for Academic Affairs and Provost
Ana Lopez
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Associate Provost
James MacLaren
Ph.D., Imperial College, University of London
Associate Provost
Kathleen B. Whiteside
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## School of Architecture

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Associate Dean

## A.B. Freeman School of Business

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Mary A. Konovsky
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## School of Engineering

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## Liberal Arts and Sciences

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## Tulane College

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Ph.D., Yale University
Associate Dean, Tulane College
Newcomb College
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## University College

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Terrence W. Fitzmorris
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Associate Dean for Academic Affairs
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Assistant Dean

## Libraries \& Academic Information Resources

Lance Query
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## Student Affairs

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Associate Vice President for Student Affairs and Director of Judicial Affairs
Margaret King
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Denise J. Taylor
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Assistant Vice President for Student Affairs

## Enrollment Management and Institutional Research

## Richard Whiteside

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Vice President for Enrollment Management and Institutional Research
Jane E. Armstrong
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Associate Vice President for Enrollment Management
Laurie Lagonegro
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Assistant Vice President for Enrollment - Operations
Earl D. Retif
J.D., Loyola University of New Orleans

University Registrar
Elaine L. Rivera
B.S., Louisiana State University

Assistant Vice President, Financial Aid

## Technology

John Lawson
Ph.D., University of Oregon
Vice President for Information Technology and Chief Information Officer

## NEW ORLEANS

Tulane students find that the City of New Orleans is a source of learning and intellectual challenge. "The test of a first-rate intelligence," wrote F. Scott Fitzgerald, "is the ability to hold two opposed ideas in mind at the same time, and still retain the ability to function." New Orleans can offer such a test, for in few American cities today do the past and the future unite so intensely.
New Orleans was founded because of its location near the mouth of the Mississippi River. As a port and strategic outpost, the area has played an important role in American history and the economy. Today the port is the second busiest in the world. With 1.4 million people, the metropolitan area has a third of Louisiana's population and is the state's business, banking, judicial, and cultural center. It is the regional headquarters for Louisiana's petroleum industry, and a booming convention and tourist center.
Governed in the past by the French and the Spanish, the city still expresses this European influence in its architecture, food, and way of life. Mixed with these cultural elements and the strong African, Caribbean, Creole and Cajun traditions are newer influences to the community: Italian, Spanish, Irish, Greek, German and Vietnamese peoples who have brought new diversity to the city. These added components increase the diversity of the city's rich historical and cultural heritage, combining the best of the Old World with the New.
New Orleans is a city of local delights. New Orleanians are fascinated by their food, a cuisine enriched by the French, Spanish, African, and Indian cultures. The wonder of the food is that it can be excellent not only in the well-known restaurants of the French Quarter but in dozens of lesser-known neighborhood restaurants as well. New Orleans' music is as distinctive as its food. It is the hometown of not just Jelly Roll Morton and Louis Armstrong, but Fats Domino, Irma Thomas, the Marsalis family, the Neville Brothers, and Lee Dorsey. Both of these local delights are known and loved all over the world but are at their best at home.

This rich mixture of history is celebrated often and heartily, most notably in the great street festival and social pageant known as Mardi Gras. Carnival lasts two weeks, but its spirit lingers through the year. Mardi Gras beads hang from car mirrors, balconies, and every other conceivable location. The city also takes pride in its symphony orchestra, opera, art museums, theaters, professional sports, zoo, aquarium, and attractions uniquely its own, such as Jazz Fest, sailing on Lake Pontchartrain, riverboats on the Mississippi, and late night cups of cafe au lait.

New Orleanians cultivate their capacity to enjoy their own physical and cultural environment. If it is possible to learn that kind of appreciation, New Orleans is the place to do it.

## Admission

Tulane University welcomes applications from students of good character, intelligence, motivation, and achievement. Students may apply for admission to the fall or spring semester. Through its Committee on Admission, Tulane selects students who are considered best able to participate profitably and successfully in the academic program to which they are seeking admission and who are most apt to enrich the educational experience of their fellow students. An ability to contribute constructively to campus life outside the classroom is valued as well, and Tulane is strongly committed to the notion that diversity among its students is an educational enhancement.

## APPLICATION PROCEDURES

All full-time applicants must submit a completed application form, an essay, a secondary school transcript, a letter of recommendation, a non-refundable application fee, and official results of either the SAT or ACT examination.
Transfer students also must submit official college transcripts from all colleges they have attended and a statement of good standing from the last college attended. Individuals may apply for admission under the provisions of either Early Action, Early Decision, or Regular Decision.
Completed applications should be on file as early in the senior year as possible and no later than January 15.
Students applying for a Deans' Honor Scholarship are required to submit their admission and scholarship applications by December 15. Applicants are informed of the admission decision no later than April 1. Students applying for mid-year admission follow the same procedure as fall applicants, but all materials must be on file in the admission office no later than November 1. Notification of the decision is sent as soon as possible after the file is complete. (See divisional sections for further information.)
Individuals interested in applying for admission may do so by completing the Application for Undergraduate Admission published by the Office of Undergraduate Admission, the Common Application (www.communapp.org and available in secondary school guidance offices), the Tulane University On-Line Application For Admission that can be obtained from the Tulane University Website, www.tulane.edu/~admiss, or any one of several commercially sponsored websites that allow students to complete college admission applications on-line.
The deadlines for applying for admission as an undergraduate student vary by the semester for which the applicant seeks admission, the admission option selected, and the type of admission sought (e.g. as a freshman or as a transfer student.) The table following summarizes the deadline dates.

Early Action

| Fall | Freshman <br> November 1 | Transfer <br> Not Applicable |
| :--- | :--- | :--- |
| Spring | Freshman | Transfer |
|  | Not Applicable | Not Applicable |

Early Decision

| Fall | Freshman <br> November 1 | Transfer <br> Not Applicable |
| :--- | :--- | :--- |
| Spring | Freshman | Transfer |
|  | Not Applicable | Not Applicable |

Regular Decision

| Fall | Freshman | Transfer |
| :--- | :--- | :--- |
|  | January 15 | June 1 |
| Spring | Freshman | Transfer |
|  | November 1 | November 1 |

## EARLY ACTION ADMISSION OPTION

Students who wish to complete the admission process early in their senior year may apply through the Early

Action Plan. Applicants must submit all application material and supporting credentials by November 1, and will be informed of the admission decision by December 15. Students who are offered admission under the Early Action Plan will have until May 1 to respond.

## EARLY DECISION ADMISSION OPTION

Students who have decided that Tulane University is their first choice and wish to complete the admission process early in their senior year may apply through the Early Decision Plan. Early Decision is binding. Applicants must submit all application material and supporting credentials by November 1, and will be informed of the admission decision by December 15. Students who are offered admission under the Early Decision Plan agree to attend Tulane if offered admission, withdraw all other college applications, and submit a deposit by January 15.

## CRITERIA FOR ADMISSION

## For Those Seeking Admission Directly From Secondary School

The Committee on Admission seeks students who have had strong high secondary school preparation. The committee carefully reviews each applicant's secondary school record examining grades earned, the type of courses completed (i.e. Honors, Advanced Placement, etc.), and class rank class rank. The committee is interested in evidence of a student's intellectual ability as demonstrated by a strong performance in a rigorous curriculum of traditional college preparatory subjects. The committee supplements its evaluation of the secondary school record with recommendations from the secondary school principal, headmaster, or guidance counselor.

The recommended secondary school program for those seeking admission to Tulane University is shown following.
Subject: English
Years of Study: 4 years
Comment: Extensive focus on reading and writing
Subject: Mathematics
Years of Study: 4 years
Comment: College preparatory mathematics. For students majoring in the sciences, engineering, and business pre calculus and calculus are recommended

Subject: Foreign Language
Years of Study: 2-3 Years
Comment: Classical or modern foreign language
Subject: Laboratory Science
Years of Study: 3-4 Years
Comment: For students majoring in the sciences or engineering chemistry and physics are recommended
Subject: Social Studies
Years of Study: 3 Years
Comment: With an emphasis on history
Subject: Electives Years of Study: 2-3 Years/Courses
Comment: Focus on academic electives
While a student's academic record is the most important criterion for admission, the committee can make a more thorough evaluation of a prospective student by also considering scores on standardized tests. Applicants for admission must present either the Scholastic Assessment Test (SAT I) of the College Entrance Examination Board or the assessment of the American College Testing Program (ACT). Although not required for admission, applicants are encouraged to take three of the College Board SAT II Subject Tests, including English composition and foreign language. The results are sometimes used to determine a student's placement level in a particular subject area.

## Home Schooled Students

Home Schooled students seeking admissions to Tulane University should submit the following: 1.) a completed application for admissions, 2.) Four SAT II test (English, science, math, foreign language), and 3.) a comprehensive explanation of their curriculum. This explanation must include citations of books used in coursework, accreditation of the home school program, and through descriptions of classes taken.

## For Those From Other Countries

Students from other countries who possess sufficient command of written and oral English to profit from college instruction conducted in English are welcome at Tulane University. Complete information and applications for international students may be obtained on request from the Office of Undergraduate Admission.
In addition to submitting complete, translated, notarized credentials of all secondary school and university work completed by the applicant, international students applying as freshmen are required to take the SAT I or ACT examination. These tests should be taken in time to allow the results to be sent to the admission office no later than February 15. Applicants whose native language is not English also must take the Test of English as a Foreign Language (TOEFL). An application to take the test should be requested at an early date from the Educational Testing Service, Princeton, New Jersey 08540 USA.
International students also must submit a certified financial statement indicating that sufficient funds are available for all of their college expenses. Applicants are advised to apply before February in order to have all materials in their application file by February 15.
Like other students, international students are required to maintain acceptable standards of English in all their work. Academic, governmental, and personal counseling is available to students from other countries through the Director of the Center for International Students and Scholars.

## For Those Transferring From Other Institutions

A student who has satisfactorily completed some work at another accredited college or university may be admitted to Tulane University as a transfer student, with credit toward degree awarded for relevant college-level work done elsewhere. Tulane University recommends that transfer applicants present a cumulative grade point average of approximately 3.0 (B average) in all college level coursework with greater strength in coursework closely related to the intended field of study. While coursework in technical areas is considered, the Committee on Admission looks for A's and B's in coursework that is challenging and academic in nature, including English composition, mathematics, and liberal arts and sciences. Students applying for transfer to Tulane must meet the same standards for admission required of freshmen, which includes satisfactory scores on either the SAT I or ACT. All parts of the application, including transcripts from high school and each college attended, and a statement of good standing from the last college attended, should be received by the following deadlines: June 1 for the fall semester; November 1 for the spring semester. All transfer applicants must be in good standing at the colleges attended and eligible to continue or reenter these colleges at any time. Transfer applicants are requested to send a course catalog or photocopies of course descriptions for all college courses they have taken.
The divisions grant transfer credit only for courses completed at regionally accredited institutions and which are applicable toward the degree sought in the division. (See divisional sections for further information.) A candidate for a degree must complete a minimum of 60 credits at Tulane University.
The maximum value or amount of acceptable credit shown on the official transcript from the institution(s) previously attended is the maximum transferable amount. Tulane University utilizes a semester-hour system and all transferable credits will be evaluated on a semester-hour basis. For example, a transferable three semester-hour course will be accepted as three credits, a transferable four quarter-hour course will be accepted as 2.70 credits. (See divisional sections for further information.)
If, at the time of application the student is enrolled in another institution and is acceptable for admission, acceptance is tentative until an official transcript is presented showing successful completion of courses the student was taking at the time of application as well as all courses attempted and completed previously. Graduates in liberal arts curricula of accredited junior colleges who wish to transfer to Tulane University to complete a bachelor's degree are encouraged to apply.

Correspondence and CLEP (College Level Examination Program) credits are not accepted as credit toward degree. Credits and advanced placement granted by other institutions are not acceptable unless the official College Board AP or Foreign Language SAT II Test scores are validated. Credit and placement will be awarded as recommended by the appropriate Tulane academic departments.

Transfer credits are not included in the computation of Tulane University grade point averages. Tulane-sponsored programs such as Junior Year Abroad, Washington Semester, and geology field camps award Tulane credit, not transfer credit.
Transfer students should arrange for the Office of Undergraduate Admission to receive transcripts and course descriptions for courses in progress at the time of application well in advance of the beginning of classes to allow a timely evaluation of credits. Transcripts that arrive late may result in students repeating courses for which they already have earned acceptable credits. In such cases, the Tulane credit is disallowed when the transcript shows completion of the equivalent transferable course.
Housing is generally available for transfer applicants. Interested candidates should contact the Office of Housing and Residence Life.

## For Those From Other Divisions of Tulane

Students enrolled in other divisions of the University may be admitted to another division of the university as interdivisional transfer students on recommendation and approval by their dean and the dean of the division to which they are applying.
Students who have been denied further registration in one division ordinarily are not admissible to another division of Tulane University. Applicants for interdivisional transfer must have been admitted to a full-time program of the University by the Office of Undergraduate Admission, should have taken courses applicable to a degree program, and should be prepared to take the last 27 of the credits required for graduation in the division to which they are applying. The A. B. Freeman School of Business requires that at least 30 hours be earned at the Freeman School and that the last 24 credits be earned in residence at Tulane University.
Interdivisional transfers apply for admission at their current dean's office. Applicants who are in or beyond their fourth semester of college attendance are required to indicate the proposed major when they apply for interdivisional transfer. Work completed in the previous college will be interpreted to reflect the policies and degree requirements of the new division. These changes may affect grade point average and number of credits counting toward the degree.
For students transferring from other divisions of Tulane, all work attempted at the University is counted in the cumulative grade point average. A grade point average of at least 2.000 at Tulane is required for graduation.

## ADVANCED STANDING FOR FRESHMAN APPLICANTS

## Advanced Placement

The University offers advanced placement or credit toward degree to entering freshmen demonstrating superior training and ability by earning high scores on the College Board Advanced Placement (AP) Tests. The individual academic departments determine the placement or credit in each subject area. Departments usually award a minimum of three credits for scores of " 4 " or better and may award advanced standing in the subject area for a score of " 3 ." A list of approved credit and placement for AP subject areas can be obtained from the Office of Undergraduate Admission.

## International Baccalaureate

Tulane will award credit toward degree or advanced placement for IB scores of 5 or greater on a higher-level test. No credit or placement will be awarded for the subsidiary tests. Academic departments make the final decisions regarding credit awarded toward degree requirements.

## FINANCIAL ASSISTANCE FOR NEW STUDENTS

## Need-Based Financial Aid

Tulane University administers a need-based financial aid program to assist the families of qualified applicants who, because of resource limitations, would not be able to attend Tulane University. To be considered for need based financial aid, students must file the Free Application for Federal Student Aid (FAFSA) with the federal processor and the Profile with the College Scholarship Service. (Please refer to the Financial Aid section for details regard policies regarding applying for need-based financial aid.)

## Merit Scholarships

Each year Tulane University recognizes a number of applicants for freshman admission as outstanding scholars and awards a variety of merit-based scholarships to these individuals. All scholarships are awarded on a competitive basis.

## Deans' Honor Scholarships (DHS)

Approximately 100 outstanding freshmen annually are offered a Deans’ Honor Scholarship. The amount the DHS award is the cost of tuition. The award is renewable for four years (five years if the student is in the Architecture School.) The award is adjusted annually to reflect any increases in the amount of tuition. Continuation as a Deans Honor Scholar requires that the student maintain the specified level of academic achievement as stipulated in the award notification. These awards are granted without regard to financial need. To be considered, applicants must submit the Deans’ Honor Scholarship Application, included with their application for admission, by December 15 .

## Distinguished Scholars Awards (DSA)

Tulane offers the Distinguished Scholars Awards to entering freshmen who have outstanding academic qualifications. The scholarship provides a $\$ 16,000$ tuition waiver and a $\$ 2,000$ waiver of campus housing costs. The award is renewable for four years (five years if the student is in the Architecture School.) Continuation as a Distinguished Scholar requires that the student maintain the specified level of academic achievement as stipulated in the award notification. All applicants for admission are automatically considered for this award.

## Founders Scholarships

Tulane offers the Founders Scholarship to entering freshmen who have outstanding academic qualifications and whose families would not qualify for traditional need-based financial aid. The scholarship provides an $\$ 8,000$ tuition waiver and a $\$ 2,000$ waiver of campus housing costs. The award is renewable for four years (five years if the student is in the Architecture School.) Continuation as a Founders Scholar requires that the student maintain the specified level of academic achievement as stipulated in the award notification. All applicants for admission are automatically considered for this award.

## SPECIAL ADMISSION CATEGORIES

## Admission as a Special Student

Students who must pursue college work part-time and those students interested in non-degree status are encouraged to seek admission to University College. (See the University College section for details.)

Students who did not complete the requirements for a degree, but who have completed two or more full-time semesters, are 25 years of age or older, and who have been away from the University for at least three years, may apply for readmission to a full-time division as part-time students for the purpose of completing a degree.

These students are governed by the curricular regulations in effect at the time of their readmission.

Those already holding a baccalaureate degree may be admitted as special students on a part-time basis for the purpose of pursuing an additional degree and are governed by curricular regulations in effect at the time of their readmission. Graduates who want only additional course work (i.e. not seeking a second degree) should apply to University College.

## Admission as a Guest Student

Sophomores and juniors in good standing at other accredited institutions may enroll full-time for one or two semesters in the undergraduate divisions of Tulane University as guest students. These students must have the approval of their dean at their home school and are subject to the regulations for special students. Guest students wishing to change their status to degree-seeking must have their academic records re-evaluated prior to admission to the University.

## READMISSION TO TULANE UNIVERSITY

## For Those Returning to Tulane After a Break in Attendance

A student whose studies have been interrupted without the benefit of an authorized leave of absence must file a readmission application with the dean's office at least four weeks prior to the date of the desired reenrollment.

If the student has attended another institution while away from Tulane, a statement of good standing and an official transcript showing all college or university course work attempted or in progress during the absence must accompany the application for readmission. Transfer credit for such course work is subject to approval by the appropriate Tulane departments. Students who voluntarily left Tulane and are readmitted within one year will return under the degree requirements in effect for them at the time of their departure. Readmitted students who involuntarily left the university or are readmitted after having been away more than one year are
subject to the curricular requirements in effect at the time of readmission. All readmitted students must complete the last 27 credits for the degree while in residence in the division. They may not participate in priority registration and will not receive registration materials until after their readmission has been processed.

## For Those Returning to Tulane After a Break in Attendance Caused by a Medical Condition

Students whose enrollment is interrupted by a medical withdrawal may be required to receive medical clearance from a physician at the Student Health Center before they can register for a subsequent semester. The university also may require a medical clearance before a student can continue studies in a semester that begins subsequent to administrative action (leave of absence, voluntary withdrawal, extension of I grades, course-load reduction) that has been taken on behalf of the student for medical reasons.

## Registration

## REGISTRATION POLICIES AND PROCEDURES

All students must register by the beginning of classes for each semester. Students may register by phone or on the web. Information regarding dates, times and procedures for using either the phone or web systems may be found in the Schedule of Classes published by the University Registrar's office or on the web at www.registrar.tulane.edu. Preliminary schedules are published in March for the Summer and Fall semesters and in November for the Spring. The schedule is also available on the web; it is updated twice daily.

Currently enrolled students are given first opportunity to register for upcoming semesters during a priority registration period. After the priority period closes, any student (new or continuing) admitted for the term may register.
The convenience of registration by phone or on the web coupled with the mailing of tuition bills to a student's home greatly reduces the time each student must spend on campus dealing with administrative details. However, students must know that by registering they assume full financial responsibility for keeping the University informed of any address changes so that bills and priority registration materials may be delivered promptly.
Students should also be aware of the requirements set out in the Schedule of Classes for confirming their selected courses. In addition, they must consult the academic calendar in the Schedule of Classes when adding or dropping courses once the term has begun. Failure to heed the dates set forth in the official calendar could result in academic or financial penalty.

## NEWLY ADMITTED STUDENTS

Newly admitted students will receive by mail a packet which includes all the information materials needed to register for courses. In certain cases the Schedule of Classes included in these mailings may be abbreviated; the one for new freshmen registering during the summer will only contain courses appropriate for the first year. The new student packet will indicate when the student may select classes, and it usually includes information on any kind of placement decision that is needed.
Students registering at Tulane for the first time are required to see their academic advisor before classes begin to make needed adjustments in the courses previously selected as well as to discuss academic options in general. This is not required for students in the School of Engineering.

## ADDRESS CHANGES

It is the responsibility of the student to keep the university notified of any change in address. Many of the important documents that students need are now sent to them using the addresses they provide. These include: priority registration material, grade reports, bills, and notices concerning academic action. Therefore it is essential that any change in address be reported to the University Registrar's office as soon as possible. (Note: Billing address changes should be made in Accounts Receivable.)

## WITHDRAWAL

## Voluntary

A student who has registered for a semester and plans to withdraw from the division must inform the associate dean. After appropriate action has been completed with the dean, confirmation of withdrawal will be sent to the student and to his or her parent or guardian. The official date of the withdrawal from the division must be approved by the associate dean and usually is the date of formal notification. The withdrawal date is important for determining possible refunds. Students who officially have withdrawn from the division cannot reside on campus and must surrender their student identification cards at the time of withdrawal. (See divisional sections for further information.)
After the last day to drop courses, a student withdrawing from the division without adequate reason, as determined by the associate dean, will receive WF grades. A W grade will be recorded if withdrawal has been approved for medical reasons.

## Medical

A withdrawal from courses for medical reasons requires an official letter of recommendation from a physician in the Student Health Center and the approval of the dean. Students needing a medical withdrawal should, if possible, report to the associate dean before going to the health service for an evaluation. Medical withdrawal letters issued by the Student Health Center should be delivered to the Associate Dean's Office within 48 hours after they are issued. W grades are assigned when a student withdraws from one or more courses for medical reasons after the last day to drop without record.

A partial medical withdrawal (from some but not all courses) or incomplete grades in one or more courses may be permitted upon the recommendation of the Student Health Center. Students requesting a partial medical withdrawal must confer with the associate dean (or designate) of their college, who makes the final decision on this matter.
Withdrawals from individual courses for medical reasons are not given during the last two weeks of classes. The deadline for medical withdrawals from all courses is the last day of classes each term. Requests for retroactive medical withdrawals normally are not approved.

## Required

A student may be required to withdraw from any course or from the university, temporarily or permanently, for any of the following reasons: possibility of danger to the health of the student or to that of other students if enrollment is continued; refusal to obey regulations; violation of the Honor Code or other serious misconduct; unsatisfactory class attendance; or work below the required scholastic standards.

## Refunds

The deadlines for the refund of full, three-quarter, one-half, or one-quarter tuition in any semester are given in the academic calendar. Refunds are recommended by the deans in strict accord with the calendar deadlines and only when withdrawals are official. No refunds will be granted after the one-quarter refund deadline.
The established deadlines are applicable under all conditions for withdrawal. University fees, including the student activity fee, are refundable only through the last day to register or add classes.

## Student Resources

## STUDENT HEALTH CENTER

The Student Health Center is located on the campus and is a component of the Tulane University Medical Center. Its staff provide medical, gynecologic, psychiatric, and health education services for all full-time students on the uptown campus at no charge. Part-time students may pay a modest service fee for each semester to be eligible as well.
In addition to Primary Care, Psychiatry and Stress Management Clinic, and Gynecology Clinics, there is a Men's Clinic, a Travel Clinic for advice and preventive treatment for foreign travel, and an Allergy Clinic for administration of "allergy shots". The SHC is open 8:30 a.m. - 4:30 p.m., Monday through Friday and until 6 p.m. Tuesdays, and there is a Walk-in Clinic for acute illnesses and injuries on Saturdays, 9 a.m. - 12 noon. The Laboratory and Pharmacy are open weekdays. A physician is on "beeper-call" when the clinics are closed.
Emergencies that occur on campus during the academic year are responded to by the Tulane Emergency Medical Service "TEMS", whose student volunteers are trained as emergency medical technicians that provide 24 -hour a day ambulance service for the campus community.
Services at the Student Health Center are provided to students regardless of their insurance program. However, all full time students are required to have some form of medical insurance in case of hospitalization. Many students are no longer covered by their parents policies, and for them Tulane has developed the option of a reasonably priced Tulane student health insurance program. Call 865-5255, day or night. Call 862-8121, daytime Nurse Triage Express.

## EDUCATIONAL RESOURCES AND COUNSELING

Educational Resources and Counseling offers psychotherapy, career testing, tutoring and disability services to help students thrive personally and academically. ERC services are confidential to the full extent allowed by law, and most are free of charge to currently-enrolled Tulane students.

Short-term psychotherapy or counseling is available for almost any kind of personal concern (e.g., adjusting to college, relationship concerns, stress, anxiety, depression, sexuality, career direction, choosing a major, family problems, grief/loss, traumatic events, crises). ERC professionals include psychologists, social workers, counselors, and graduate students in professional training.
Numerous workshops, as well as therapy and support groups, are offered each semester. Counselors can help students improve time management, note-taking, test-taking, and other study strategies. Students can take career tests that may help in selecting a particular major or career. Drop-in tutoring is offered in about 20 subjects (primarily math, science, and foreign-language courses). The Writing Workshop provides help for papers written in the English language.
Students with disabilities may request and receive appropriate services and accommodations through the Office of Disability Services (ODS). Before accommodation decisions are made, students must register with ODS by filling out an Accommodation Packet and submitting all necessary documentation for review. Since this process can take a while, students are strongly encouraged to register as soon as possible, rather than wait until a need arises.
ERC staff also advise the student organization REACH, the Rape Emergency Awareness and Coping Hotline. Trained REACH volunteers provide support to victims of sexual assault and sexual harassment.
For further information about ERC services, visit our office on the first floor of the Mechanical Engineering building. A great deal of additional information and related links are available on our website: www.tulane.edu/~erc. Relevant phone numbers include: 865-5113 (Counseling Services, Career Testing, Disability Services) and 865-5103 (Tutoring Center, Writing Workshop)

## CAREER SERVICES CENTER

Six professionals with training and experience in career counseling and placement-related activities staff the Tulane University Career Services Center (CSC). The CSC offers a variety of career related programs designed to help all students, beginning in their freshman year, with the selection of majors and careers, finding career experiences to augment their academic programs, and making post-graduate plans such as selecting graduate programs or finding full-time employment.

The CSC provides many services to students, alumni, employers, faculty and staff. For students those services include: career counseling, a career library with information on careers, employers, and graduate programs, an externship program, on-campus recruiting, five yearly career and job fairs, an internship program containing over 15,000 internships worldwide, and workshops and seminars on a variety of topics including resumé writing, interviewing, working abroad, selecting graduate programs, and conducting an effective job search. Presentations on other topics are also available upon request. Students can also utilize CareerWay, a web-based career guidance program that is designed to help students identify interests, values, and skills, important steps when deciding on a major or career path.

Through on-campus recruiting and the various career and job fairs, the CSC interacts with approximately 250 recruiters annually. In addition, many other employers request that the CSC forward to them resumés of students interested in full-time and/or internship positions. More than 1000 Tulane alumni participate in WAVE-Link. These alumni host students for externships during semester breaks, provide career information to students, and meet with current students at one of the annual receptions held in Houston, Washington, DC, New York City, Los Angeles, and San Fransico.
The CSC has several computers and typewriters for student use in their search for internships, graduate schools and full-time positions. All computers contain internet connections. To find out more about the CSC you can visit our website at careers.tulane.edu. To schedule an appointment, call 504-865-5107.

## TECHNOLOGY SERVICES

Tulane's Technology Services supports the mission of the University by providing enabling technologies for teaching, learning, research, and institutional management to the faculty, staff and students of Tulane University. Technology Services provides this support by maintaining and expanding the wired and wireless data and telecommunications networks, supporting and enhancing central administrative software systems, developing new Web-enabled applications, helping and instructing members of the community in using their desktop computers, and assisting faculty with instructional content development. Detailed descriptions of the services provided are available at the Technology Services Web site: http://tis.tulane.edu. Services specific of interest to students are:

## Technology Accounts

All current students are eligible for Tulane technology accounts. This account provides access to e-mail services and central UNIX servers. Students must have a Tulane technology account to access online course materials in Blackboard.

## Web Pages for Students

Students can create and maintain their own Web sites on a server called StudentWeb. StudentWeb is maintained and administered by students. A Tulane technology account is required to obtain access to StudentWeb.

## Network Access

Students can access the Tulane University network in several ways. Each residential student has access to the wired Ethernet network in their residence hall rooms; there is one Ethernet port per student in each room. All faculty, staff, and students have access to the Tulane Wireless network. Additionally, a dial-up network is available for students who live off campus. More information is available at the Technology Services Web site.

## Support Services

Support for any technology issue is available to students at the Tulane Help Desk (862-8888 or info@tulane.edu) Support is available Monday through Thursday from 7:00 a.m. to 7:00 p.m. and Friday from 7:00 a.m. to 5:00 p.m.

## Computer Labs and Kiosks

Technology Services maintains computer labs and kiosks for student use in the Richardson Building, the University Center, and several residence halls. Information on the hours of operation and software available can be found on the Technology Services Web site.

## Policies and Procedures

The use of Tulane University network and computing facilities is a privilege that comes with responsibilities. Students are required to read, understand, and abide by the policy on use of networks and computers at http://tis.tulane.edu/Policies/General.cfm.

## LIBRARIES

The University's ten libraries together house approximately 2,200,000 volumes and nearly 14,000 currently received serial titles.
The Howard-Tilton Memorial Library, the general library of the University, is housed in a modern building centrally located on campus. Most areas of the general book stacks are open to readers. The library provides seating for 800 readers, including 94 faculty study rooms, 186 separate study areas for graduate students, and 600 carrels for general use.
Howard-Tilton's holdings include a total book stock of about 1,750,000 volumes, organized into a general reference/bibliographic services area and a number of special areas: government documents, newspapers and microforms, the Latin American Library, and the Maxwell Music Library. Other special areas located in Jones Hall, include rare books, manuscripts, the University Archives, the Southeastern Architectural Archive and the William Ransom Hogan Jazz Archive. The library is also a depository of federal documents.
The Latin American Library, in the Howard-Tilton Memorial Library, contains 220,000 volumes and collections of newspapers, periodicals, and photographs. The library, which has extensive rare book and manuscript holdings, specializes in Mexican, Brazilian, and Central American materials.

The Maxwell Music Library, in the Howard-Tilton Memorial Library, contains about 45,514 volumes of books, periodicals, and music scores. The library also features more than 21,672 titles of non-book materials (records, compact disks, video disks, magnetic tapes, microfilms) including the collected works and scholarly editions of composers and important collections such as various "Denkmaeler" editions and the "Monuments of Music" series. There is an unusually broad collection of early music manuscripts on microfilm or in facsimile editions, partly with critical text. The William Ransom Hogan Jazz Archive, in Jones Hall, houses a collection of interview and music tapes, phonograph records, sheet music, and thousands of other items on traditional and contemporary New Orleans music.

The Southeastern Architectural Archive, in Jones Hall, has more than three million items, including 500,000 architectural drawings and 25,000 photographs. It also has a gallery with permanent and temporary exhibits.
The Architecture Library, a branch of the Howard-Tilton Memorial Library, is located in the School of Architecture in the Stoll Reading Room, Room 202, Richardson Memorial Building. The library is open to all members of the Tulane Community as well as to the general public. Its main focus is to afford the Architecture School faculty and students a place where they may readily access the standard as well as the most current print/electronic information necessary for their course and research work. Presently the library contains 14,500 volumes and maintains subscriptions to 235 serials, including the Avery Index to Architectural Periodicals on the worldwide web.

The Lillian A. and Robert L. Turchin Library of the A.B. Freeman School of Business, in Goldring/Woldenberg Hall, supports the teaching and research needs of the students and faculty within the Freeman School of Business. The library contains 30,000 volumes, as well as 250 active serial publications.

## The Library of Tulane Law School, in John Giffen Weinmann Hall, contains more than $\mathbf{5 0 0 , 0 0 0}$ volumes in hard copy and microform, including court reports, federal statutes and codes, state statutes, the principal digests, and the National Reporter System. The library also maintains extensive collections of Admiralty and Comparative Law.

The Amistad Research Center, in Tilton Hall, contains more than ten million manuscripts, other primary documents, 23,000 books, 260,000 photographs, and works of art concerning the history of America's ethnic minorities, race relations, and civil rights since the 18th century. It also has a gallery with temporary exhibits.

The A. H. Clifford Mathematics Research Library, in Gibson Hall, is a specialized research library containing approximately 15,000 books and bound journals.
The Rudolph Matas Medical Library, in the School of Medicine on Tulane Avenue, contains over 160,000 volumes and subscriptions to over 1,000 medical journals.
The Tulane Regional Primate Research Center Library, near Covington, Louisiana, contains approximately 11,000 volumes, 23,000 scientific reprints, and 250 microforms.
The Meade Natural History Library, in the Riverside Research Laboratories, is located at the F. Edward Hebert Center near Belle Chasse, Louisiana. The library houses more than 1,150 periodicals from 70 foreign countries and 280 journals from the United States.
The Nadine Robbert Vorhoff Library, in the Newcomb College Center for Research on Women, is a specialized research library containing approximately 9,000 volumes, about 100 current serial subscriptions, 1,200 linear feet of manuscripts and records concerned with women's education and a special collection devoted to culinary history.
Other libraries in New Orleans whose resources are available to students and scholars are: the New Orleans Public Library System (including the Archives of the City of New Orleans); the Louisiana Historical Center; the Law Library of Louisiana; the Library of the Agricultural

Research Service, Southern Research Center, United States Department of Agriculture; and the libraries of other academic institutions in the city.

## Student Life

## RESIDENCE HALLS

Residence hall living at Tulane offers opportunities for growth and development outside the classroom environment. The University strives to provide an atmosphere in which each student may realize his or her potential intellectually, socially, and culturally. Each residence hall is supervised by an Area Director, an Assistant Resident Director, and a staff of resident advisors. Residents are encouraged to participate in a variety of hall activities including the Residence Hall Association, educational programs, intramural sports, and many social activities.
Freshmen under 21 not residing locally with their parents are required to live on campus. All freshman students living in the residence halls are required to take a meal plan. Resident freshmen are not permitted to have automobiles on campus. Returning students apply for residence through the annual room selection process each spring for the subsequent fall. Though a small number of returning sophomore students do not receive an official assignment until the summer, most residents who apply for housing are accommodated. Transfer students may apply for housing with the application included in their acceptance packet, but are housed on a space available basis.
Students must bring their own linens. Coin-operated laundry facilities are available on campus. Local telephone service is provided in each room, though students must provide their own telephones, which may be purchased on campus. Long-distance services may be established with the telecommunications department. Daily mail service is provided to all resident students. All halls are air-conditioned.

Juniors and seniors may apply for residence in on-campus apartments, the Aron Residences. This complex of residences for juniors, seniors, and graduate students combines the convenience of oncampus living with the comfort and privacy of apartment life. Sophomores, juniors, and seniors may live off campus. Married and graduate students may apply for apartments at the Charles Rosen House.
Student residents may use the residence halls during regular academic semesters. The University reserves the right to use the rooms at other times. Items may not be left in the rooms during the summer break nor is storage available on campus.
Residence hall rentals are nine-month contractual obligations and ordinarily are not refunded. Correspondence should be addressed to the Department of Housing and Residence Life.

## CO-CURRICULAR ACTIVITIES

The University sponsors many co-curricular activities and student organizations under the supervision of The Division of Student Affairs, which is directed by the Vice President for Student Affairs. Students have the opportunity to participate in more than 200 campus organizations and clubs. These include radio station WTUL-FM and Tulane Student Television (TSTV). Tulane students publish a newspaper and literary magazine, and may take part in a variety of intramural and club sports. Students are invited to participate in a wide range of performing arts including instrumental, vocal, dance, and dramatic groups. Service organizations run by students include the Community Action Council of Tulane University Students (CACTUS), Circle K, Tulane University Legal Assistance Program (TULAP), and the Tulane Emergency Medial Service (Tulane EMS). Tulane also has pre-professional and multicultural organizations including, but not limited to African-American Congress of Tulane (ACT), Asian American Students United (AASU), India Association of Tulane University (IATU), Latin and American Student Association (LASA) and Tulane Chinese Student Association (TCSA).

Students serve in various elected bodies, such as Student Senate groups, the governing bodies of students in the undergraduate divisions. The senate groups represent students to the undergraduate divisions and the University, facilitate interaction between students and faculty, and conduct various student activities. Students also serve in the undergraduate Student Government (USG) of Tulane University, the undergraduate student governance organization for the University.
To be eligible for participation in co-curricular actives, including candidacy for office in student elections, a student must be regularly enrolled in the University. Students who wish to run for college, school, or university offices or major appointive positions must secure the approval of one of the deans before announcing their candidacy. To qualify for such positions, including class offices, a student must be a full-time student in good standing. A student not in good standing is not eligible to run for or take office.
The dean may take disciplinary action in declaring any student ineligible for participation in cocurricular activities. The dean determines sanctions for nonobservance of these regulations by students who have been duly informed of their ineligibility.

## Academic Policies

The University reserves the right to change any of its rules, courses, regulations, and charges without notice and to make such changes applicable to students already registered as well as to new students. Although all possible aid and direction should be sought from and given by faculty advisors, academic advisors, and deans, each student must accept full responsibility for compliance with the policies of Tulane University for the fulfillment of requirements for the course of study selected.

## CLASS ATTENDANCE

Students are expected to attend all classes unless they are ill or prevented from attending by exceptional circumstances. Instructors may establish policies for attendance and making up missed work in their classes, which are announced at the beginning of the semester. Students who find it necessary to miss class are responsible for obtaining notes on material covered in lectures or other class sessions.

Students are responsible for notifying professors about absences that result from serious illnesses, injuries, or critical personal problems. Medical excuses are not issued by the Student Health Center, except in instances of the following: illnesses or injuries that involve hospitalization, a partial or complete withdrawal due to medical reasons, or a missed final examination for a medical condition being treated by the Student Health Center. In all of these instances medical information will be released only with the student's written permission.
Instructors are authorized to lower the grades of students who are absent excessively without a satisfactory excuse or do not make up work missed because of absences. (See divisional sections for further information.)

## COMMENCEMENT POLICIES AND PROCEDURES

A student expecting to receive a degree from Tulane must formally apply for that degree with the appropriate dean's office in a timely fashion. It is best to check with your dean at the start of what you expect to be your last year in residence to determine the proper time to file your application. All May graduates are expected to participate in both the university ceremony as well as the ceremony scheduled by their college unless the awarding of the degree in absentia has been approved by their division. Students who complete their requirements in August or December may have the degree awarded then and participate in the next May ceremony.
To receive any degree, a candidate must have met all requirements regarding enrollment, courses, credits, and grade-point average as stated in the appropriate divisional section of this catalog. The degree candidate is responsible for resolving any incomplete grades. In addition, all financial obligations to the University must be cleared before the Registrar will release a diploma or a transcript.
Letters are sent to each degree candidate announcing commencement exercises well in advance of the event. The instructions set forth in this announcement should be followed carefully; adherence to times and dates outlined in this announcement is crucial.

## CONDUCT

Tulane University expects and requires all of its students, behavior compatible with it high standards of scholarship and conduct. By accepting admission to Tulane University, a student accepts its regulations and acknowledges the right of the University to take disciplinary action, including suspension or expulsion, for conduct judged unsatisfactory or disruptive.

## DISCIPLINE

For all academic activities, the authority for control rests with the Dean of the faculty of the college or school. Classroom examinations, tests, and written assignments, for example, are conducted under a college or school honor code.
In all other areas, the Vice President for Student Affairs is responsible for formulating appropriate procedures and regulations concerning student behavior and for the judicial consideration of violations. Students should refer to the Code of Student Conduct for a full description.

## HONOR CODE

In all work submitted for academic credit, students are expected to represent themselves honestly. The presence of a student's name on any work submitted in completion of an academic assignment is considered to be an assurance that the work and ideas are the result of the student's own intellectual effort, stated in her or his own words, and produced independently, unless clear and explicit acknowledgement of the sources for the work and ideas is included. This principle applies to papers, tests, homework assignments, artistic productions, laboratory reports, computer programs, and other assignments. Students are expected to report to the instructor or associate dean any observed violations of the Honor Code. A copy of the complete Honor Code may be obtained from the student's dean's office.

## EXAMINATIONS

Final examinations are given according to a published schedule available at the beginning of each semester. Students and instructors are expected to follow this schedule. Final examinations must be given within the hours set aside in the examination schedule; the instructor will determine the length and time of the examination within the schedule.
Misreading or ignorance of the schedule is not sufficient reason for a student's being absent from or late to a final examination. Students are advised to check the schedule before making travel arrangements, because such plans are not grounds for excusing a student from a final examination.

Students may be excused from final examinations by a dean only when there is a serious, incapacitating medical problem or when there is a death in the immediate family. Students who must be absent from the final examination for one of these reasons must present an explanation and appropriate documentation to the associate dean of the division before or within 24 hours after the examination. A student whose absence from an examination is excused will be given a grade of I and a make-up examination; a student whose absence is not excused will be given a grade of F in the course. (See divisional sections for further information.)

## GRADES

Federal law prohibits the release of grades or other confidential information to third parties, including parents and guardians, unless the student provides the associate dean with written authorization for release of such information. Such a request may be made by the student at any time.
A student's progress toward graduation is measured not only by credit earned, but also by the grade-point average. The grade-point average is determined by dividing the student's total number of quality points by the total number of quality hours. Graduation requires a 2.000 gradepoint average, equivalent to an average grade of C , in all courses as well as in the major.

| Quality | Grade | Quality Points |
| :--- | :--- | :--- |
| Excellent | A | 4.000 |
|  | A- | 3.667 |
|  | B+ | 3.333 |
| Good | B | 3.000 |

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|  | B- | 2.667 |
| :--- | :--- | :--- |
| Average | $\mathrm{C}+$ | 2.333 |
|  | C | 2.000 |
|  | C- | 1.667 |
|  | Dailing | D |
|  | D- | 1.333 |
|  | F | 1.000 |
|  | I | 0.667 |
|  |  | 0.000 |
|  |  | Incomplete; |
|  |  | not counted in |
|  |  | grade-point average |
|  | In progress; |  |
|  |  | not counted in |
| grade-point average |  |  |
|  |  | Withdrawn; not <br> counted in <br> grade-point average |
|  |  |  |

An incomplete grade, I, is given at the discretion of instructors when, in their view, special circumstances prevent a student from completing work assigned during the semester and with the understanding that the remaining work can be completed within 30 days. Incomplete grades also are given when a student's absence from a final examination has been excused by the dean prior to or within one day following the final examination. Incomplete grades must be resolved within 30 days of the end of the semester or they are changed to F's. The I will remain on the student's transcript, accompanied by the final course grade. Extensions of the 30-day deadline must be requested by the student in writing and must be approved by the instructor and the student's dean.
Extensions are approved only when a student has made an attempt to complete the missing work within the original 30 -day period but, in the view of the instructor and the student's dean, has been prevented from completing the work by some special circumstance beyond his or her control. Extensions must be approved before the 30-day deadline expires; they are not approved retroactively.

An in-progress grade, IP, is used to show progress during the first semester of a year-long honors course. When the final semester's grade for the course is awarded, the IP is changed to reflect that grade and grade points are awarded accordingly. (See divisional sections for further information.)

## GRADE REPORTS/TRANSCRIPTS/DEGREE AUDITS

Tulane attempts to keep its students well informed of their academic progress throughout their attendance. All official grades as well as temporary midterm grades are available to the student both in written report form as well as via telephone and the web. Instructions for obtaining grades via TUTOR or the web are outlined in the Schedule of Classes published by the University Registrar. That same information is available at www.registrar.tulane.edu
Temporary grades are assigned by faculty to freshman students at mid-term. For classifications above the freshman level, instructors report unsatisfactory grades ( $\mathrm{D}, \mathrm{F}$, and U ) to both the student and academic dean. Mid-term grades are not reported in the A.B. Freeman School of Business.

Final grades are assigned in all subjects for all students and become a part of the student's permanent academic record. Final grades are based on the complete body of a student's work throughout the semester including the final examination.
An official transcript of a student's record may be sent to any person or institution upon the student's written instruction. Requests for official transcripts must be sent to the University Registrar's office and should be accompanied by the appropriate nominal fee. Recorded instructions on what information to include with transcript request as well as the current cost of the service are available 24 hours a day by calling the University Registrar. Transcripts are usually mailed to the receiving party within two days after the request is received by the University Registrar. However, transcripts may be withheld if the requesting party has unpaid financial accounts with the University.

Advising transcripts and degree audit reports are routinely distributed to currently enrolled students once each semester; they are included with the registration packet mailed to students for accessing the registration systems. Both services are also available at other times on an overnight basis by student request. The computerized degree audit matches the courses a student has taken against the division's general degree requirements as well as the major requirements and indicates which of the requirements are left to be taken. While faculty advisors are available to discuss degree audits with students, it remains the student's responsibility to know the exact requirements for the desired degree as stated in this document and to enroll in the appropriate courses to satisfy those requirements.

## LEAVE OF ABSENCE

Students who voluntarily leave a division of the University and return to that particular division within one calendar year will be allowed to continue study under the degree requirements in effect for them at the time they left. Any student returning to the University after more than one year or after having been dismissed will be required to complete the degree requirements in effect at the time of readmission.

Students taking a leave who wish to receive registration materials and to pre-register for classes during the priority period may formally file for a leave of absence of up to one year. Students who are allowed a one-year leave of absence are not required to complete a readmission application; however, they should submit a letter-of-intent to resume study at least eight weeks prior to the semester in which they wish to return. Students who leave a division without formal approval for a leave of absence must file an application for readmission and will not receive registration materials until after their readmission has been processed. The deadline for applying for a leave of absence is the last day to register or add courses in the semester after the last regular semester of a student's enrollment. Students who do not return to Tulane University for a particular term and do not request a leave of absence by the deadline for doing so are not eligible to return without applying for readmission.
Before registering for study at other institutions, students should get approval for all courses they wish to transfer for Tulane credit. Following such study elsewhere, they must submit a transcript from the other institution showing all courses attempted. Students must have satisfactorily completed their academic programs and must obtain statements of continued good standing from the other institution before being allowed to return. Students who take a leave for health reasons may be required to obtain a clearance from the Student Health Center before they are allowed to resume study.

## Financial Information

## TUITION AND FEES

Tuition and fees paid by students cover only a portion of the cost of a Tulane education. The difference is covered by endowments and gifts. In the 2000-01 academic year, total tuition and fees for a full-time student are $\$ 12,695$ per semester. Tuition is $\$ 11,750$, the academic service support fee is $\$ 625$, the Health Service fee is $\$ 160$, and the student activity fee is $\$ 160$. Payment of the fees entitles a student to use facilities such as libraries and laboratories, mainframe and microcomputers, the Reily Student Recreation Center, to participate in extracurricular activities, to receive the student newspaper, and to attend campus events including athletic contests, movies and lectures. Tuition and fees must be paid by the due date listed on the bill; any balance unpaid by the stated due date is subject to interest charges.
Students who have obtained permission to register part-time (less than 12 hours) are assessed according to the number of credits carried and the division in which they are taken.
Course fees may be charged in addition to the tuition and fees stated above. If a course has an additional charge, it will be so noted on that course in the Schedule of Classes. An example of a course that requires an additional fee would be an applied music course.
Books and scholastic supplies average about $\$ 800$ per year, depending largely upon the types of courses the student selects and the availability of used books. Expenses for items such as clothing, membership dues and off-campus interests will, of course, vary widely among individuals.
A $\$ 55$ application fee must be included with each application for admission. At the time of acceptance into the University students are asked to submit a non-refundable $\$ 300$ commitment deposit; the first $\$ 150$ is applied to University fees and tuition, the second $\$ 150$ is held as a security deposit on a residence hall room.
Changes in the cost of tuition, fees, housing, and meals may occur. Whenever increases become necessary, the University will make every effort to keep them to a minimum.

## SPECIAL FEES

A $\$ 10$ diploma registration fee is charged to graduating seniors who are not otherwise enrolled in the semester or summer term in which they are awarded their degrees. A student who completes the degree requirements in the fall semester, however, is not charged this fee if a degree is awarded at the spring commencement.
Students are responsible for equipment and materials assigned to them in laboratory courses. In the case of breakage or damage to equipment, individual fees are assessed.

## RESIDENCE HALLS AND MEALS

Residence hall room rates are subject to change annually. All freshman students who live in the residence halls are required to subscribe to a meal plan. Contract prices for meal plans are subject to change annually.

## FINANCIAL OBLIGATIONS

Students are expected to meet their financial obligations to the University when they are due. No transcript of the record of a student indebted to the University will be issued, no registration materials will be released, and no diploma will be presented so long as an obligation remains unpaid.

## FINANCIAL AID

Tulane University seeks to offer educational opportunities to qualified students regardless of their current ability to meet their expenses. Toward this end, the University extends financial aid, based on need and merit, through scholarships, grants, loans, and campus employment.
Students who believe that they need financial assistance are encouraged to apply for need-based financial aid through the Financial Aid Office. The CSS Profile form is used to apply for Tulane need-based scholarship. In addition to Tulane need-based scholarship assistance, students may apply for federal and state programs including the Federal Pell Grant Program, Federal Supplemental Educational Opportunity Grant, the Federal Perkins Loan Program, the Federal Stafford Loan Program, and the Federal Work Study Program by completing the FAFSA (Free Application for Federal Student Aid).

To be eligible for renewal of need-based financial aid, students must continue to demonstrate need and must achieve certain minimum scholastic standards. To be considered for renewal of aid from federal programs, students must demonstrate need, be making satisfactory academic progress as determined by their divisions and the Financial Aid Office, and meet any additional standards set by the Department of Education.
Assistance is available for students who do not have financial need. Merit-based scholarships are offered to incoming freshmen. Students also are urged to apply for scholarships offered by corporations and outside organizations. On- and off-campus employment assistance is available through the Student Employment Office. Federal and private parent and student loan programs are available.

Short-term loans are available for emergencies during the academic year. These loans are restricted to one per academic year and may not exceed $\$ 175$. Repayment is expected by the end of the semester. For more information contact the Student Loan Office.
More detailed information on programs available, eligibility requirements, and the application process is available from the Financial Aid Office.

## ACADEMIC MANAGEMENT SERVICES

Academic Management Services is a nationally organized service for families who prefer to pay tuition and other approved college expenses in monthly installments. For more information contact the Accounts Receivable Office.

## SHORT-TERM CHARITABLE REMAINDER TRUST

The short-term charitable remainder trust offers parents and grandparents the opportunity to establish a trust fund that will help defray college expenses and also make a substantial gift to Tulane. A short-term charitable remainder trust is created and funded with a donation of cash or appreciated stock. The student is named beneficiary of the trust, and Tulane receives the principal
at the end of the term. Income tax savings to the donor can make this an attractive plan. Further information may be obtained from the Office of Planned Gifts at 1-800/999-0181.

## VETERANS' BENEFITS

The Office of the University Registrar fulfills the University's obligations to students receiving benefits from the Veterans Administration. To apply for benefits, students should contact the Veterans Administration office in their hometown for information regarding benefits, preferably before their first registration at the University.
The Veterans Administration sends either a Certificate of Eligibility or a Form DD214 directly to students, who must then bring it to the Office of the University Registrar. Students transferring from other colleges or universities should supply a transcript from their previous school and initiate Change-of-Training-Place applications at their hometown Veterans Administration Office. Student enrollments will be certified by the University for the Veterans Administration after registration for the semester.
Dependents may qualify for assistance under the Dependent Educational Assistance (DEA) Program, if either parent has died as a result of active wartime service in the armed forces. Eligible students should apply to their hometown Veterans Administration Office. Certification procedures are similar to the process for veterans. Students should direct questions to the Office of the University Registrar.

## RETURN OF FINANCIAL AID WHEN A STUDENT WITHDRAWS

The University's policy on refunds applies to all withdrawals, regardless of the reason for withdrawal.

When a recipient of federal financial aid funds withdraws from the university during a period of enrollment (i.e. semester) in which the recipient began attendance, the institution must determine the amount of federal loan or grant assistance that the student earned as of the student's withdrawal date.

The percentage of aid that has been earned by the student is equal to the percentage of the semester that the student completed as of the student's withdrawal date. If this date occurs after the completion of $60 \%$ of the semester, the student is considered to have earned $100 \%$ of the federal grant and/or loan assistance for the semester. Please note that in cases where a student ceases attendance without providing official notification to the university of his or her withdrawal from the university, the institution must consider the midpoint of the semester as the official date of withdrawal. The student must contact his or her academic Dean's Office to provide official notification of intent to withdraw.

If the total amount of federal grant or loan assistance, or both, that the student earned is less than the amount of federal grant or loan assistance that was disbursed to the student or on behalf of the student in the case of a PLUS loan, the difference between these amounts must be returned to the federal aid programs. The amounts of unearned federal aid must be returned regardless of whether the student is eligible to receive a refund of a portion of university fees, such as tuition, fees, or room and board fees. The amount to be returned to the federal student financial aid accounts will be returned to the programs from which the student received aid up to the amount of aid disbursed in the following priority order: Unsubsidized Federal Stafford loans, Subsidized Federal Stafford loans, Federal Perkins Loan, Federal PLUS loans received on behalf of the student, Federal Pell Grants, Federal SEOG grants, and LEAP grants.

If the total amount of federal grant or loan assistance, or both, that the student earned is greater than the total amount of federal grant and/or loan assistance that was disbursed to the student or on behalf of the student, as of the date of the institution's determination that the student withdrew, the difference between these amounts must be treated as a post-withdrawal disbursement. If federal loan funds are used to credit a post withdrawal disbursement, the university must provide the student, or parent in the case of a PLUS loan, the opportunity to cancel all or a portion of the post-withdrawal disbursement. The university has 30 days to provide this notice to the student or parent. The student or parent must respond to the notice within 14 days of the date the institution sent the notification. If the student or parent does not respond, the university cannot make a post withdrawal disbursement of federal loan funds.

After determining the return of funds to federal student financial aid, any amounts of institutional tuition and fee or room and board refunds in excess of the amount of aid returned to the federal aid accounts will be returned to the Tulane aid accounts up to the amount of aid disbursed. Any remaining amounts of institutional refund left over are then returned to the student and his/her family.

# Opportunities for Superior Students 

THE TULANE HONORS PROGRAM

Jean Danielson, Director

Chris M. M. Brady, Associate Director
The Tulane Honors Program offers superior students the opportunity to broaden and enrich their undergraduate education and to intensify their preparation for graduate work. Members of the program benefit from small, accelerated classes, special academic and social programming, and individual advising. Outstanding incoming freshmen are admitted to the program based on their high school records and test scores. Students not admitted as incoming freshmen may apply after completing one or more semesters at Tulane. After the first semester of residence, the criterion for admission and retention is a cumulative grade-point average of 3.30 for freshmen, 3.45 for sophomores and 3.60 for juniors and seniors.
Members of the Tulane Honors Program usually enroll in at least one honors course each semester during their freshman, sophomore, and junior years; full participation in Tulane’s Junior Year Abroad Program fulfills the honors course requirement for the junior year. Honors courses, which are taught only by full-time faculty members or distinguished visitors, have a maximum enrollment of 20 students. The emphasis in these courses is on class discussion, and, in most cases, course material is studied in greater depth than might be possible in a regular course. In the senior year the scholar writes an honors thesis or completes an equivalent honors project. As the culminating achievement of the scholar's undergraduate career, this thesis or project involves substantial independent research and study under the direction of a professor in the scholar's major department. (See divisional sections for further information.)
The Honors Program sponsors a number of intellectual and cultural programs during the school year featuring Tulane faculty members and visiting dignitaries as participants. The program also sponsors social events to bring scholars and the honors faculty together informally. Scholars may receive individual academic advising and career planning from the director of the program and from members of the honors faculty. The coordinator of fellowships works under the auspices of the Honors Program to help identify promising candidates for fellowships and scholarships such as the Rhodes, Marshall, Churchill, Truman, and Goldwater, and to assist them in preparing their applications, supporting materials, and interview strategies.
An open curriculum option is available to students in the Honors Program who have at least two full semesters remaining before graduation. With the approval of the Honors Committee and under its guidance, a student may construct all curricular elements except the proficiency component, subject to the goals of a liberal arts education.

## Honors and Other Special Sections

The University recognizes that any given class contains students who possess a wide range of abilities and attempts to fit students' courses of study to their individual needs. To challenge its best students, the University offers special honors courses or sections, designated by an H alongside the course number, which treat the subject matter in greater depth and with more sophistication than do the equivalent non-honors sections. Preferential enrollment is afforded to members in good standing with the Tulane Honors Program.

## Honors Colloquia

Each semester Tulane offers a limited number of honors colloquia. These colloquia, which are interdisciplinary in subject and approach, may be initiated by students or by faculty and are designed around some integrating factor: a theme, a period, a creative work, or a problem. Usually the colloquium meets once a week, in a seminar format, with emphasis upon class discussion. To be eligible for enrollment in an honors colloquium, a student must be a member of
the Tulane Honors Program, on the Dean's List, or a candidate for a degree with departmental honors.
Additional information concerning colloquia, including non-honors and student-initiated colloquia, may be found under "Courses of Instruction" or obtained from the director of the Tulane Honors Program.

## Less Commonly Taught Languages

Motivated students with demonstrated achievement in foreign language may enroll for courses offered in the Less Commonly Taught Languages Program. The university wide program currently offers Arabic, Haitian Creole, Hungarian, and Swahili, with more languages to be offered in the future. These classes are primarily self-instructional; students use audiotapes, textbooks, and software where available and attend group sessions with a native speaker of the language under study. Progress is monitored by the program director. Courses taken in the program are offered as electives (supplementary program credits for students in Newcomb and Tulane Colleges) and do not fulfill the basic undergraduate foreign language proficiency requirement. For further information on Arabic, Swahili, Hungarian or Haitian Creole, contact Thomas Klinger, French and Italian (504) 862-3121 (e-mail: klinger@tulane.edu).

## The Washington Semester Program

Well-qualified students are eligible to spend a semester in Washington, D.C., for the study of American government in action. A cooperative intercollegiate honors program, the Washington Semester Program is administered by the School of Government and Public Administration of American University. Areas of study include national government and politics, the judicial system, foreign and economic policy, international environment and development, international trade, museum studies, and journalism. The program features a seminar, an individual research project, and either an additional course or an internship. The major curriculum features are planned to provide both a sound common core of study and a reasonable degree of flexibility for each student. Students majoring in political science and other disciplines may apply for admission to the program. Only a small number of students are selected to participate each year. Those interested should contact the campus Washington Semester representative in the Department of Political Science.

## International Programs

## EDUCATION ABROAD OPPORTUNITIES

All Tulane students are strongly encouraged to obtain, before graduation, an international education experience to prepare them for the global environment in which they will live and work. Graduates indicate that their study abroad experience was one of the most meaningful components of their degree program. International study, internships, volunteer activity, and work abroad are experiences that will help one to understand and work with persons from different cultures, provide a venue for foreign language acquisition, enormously add to personal growth, and increase knowledge that will aid the resume for careers based both in the U.S. and internationally. Challenge yourself and become a global citizen!

Freshmen should plan at the earliest possible moment the summer, semester, or year during which the study abroad experience will take place. An academic advisor can help with the decision of when to study abroad. For many programs, different types of financial aid can be applied. Since use of financial aid, course credit, and credit transfer vary substantially depending on the program, it is recommended that students speak with a staff member of the Center for International Studies before making a final decision.
Exciting international education opportunities are currently offered to undergraduates in all the colleges and schools of Tulane and new opportunities are currently being developed. International opportunities available include: Junior Year Abroad Programs (including some semester programs), Semester Abroad Programs, and Summer Abroad Programs. Semester Abroad and Summer Abroad programs are open to both Tulane and non-Tulane students.
Additional education abroad opportunities exist through direct enrollment in foreign universities as well as through participation in education abroad programs of other U.S. universities. Direct enrollment opportunities are for students who are willing to undertake the admissions and study abroad process themselves. Students who choose to participate in non-Tulane programs must follow an approval process, information about which can be found at the Center for International Studies. Students participating in non-Tulane study abroad programs must have a cumulative GPA of 2.70 before program participation in order to transfer credit back to Tulane.
For additional information on education abroad opportunities visit the Center for International Studies, 116 Newcomb Hall, tel: (504) 865-5339 or at www.tulane.edu/~intl.

## Junior Year (and Semester) Abroad Programs (JYA/JSA)

Founded as an honors program in 1954, Tulane University’s Junior Year Abroad Program (JYA) is one of the most highly respected of American study-abroad programs. JYA offers immersion into the student life of a foreign country as well as the opportunity to experience the social, economic, and political life of that country. Outstanding students from Newcomb College, Tulane College, and the Schools of Architecture, Business, and Engineering participate each year.

Students pursue an academic program abroad in most of the fields of study offered at Tulane. Courses taken abroad under the JYA/JSA Program carry credit toward graduation, and grades earned count toward the cumulative grade point average and division honors. JYA/JSA Programs currently are available in: Argentina, Brazil, France, Germany, Greece, Ireland, Italy, Malta, Spain and The United Kingdom. JYA Programs are for a full academic year unless otherwise indicated. Specialized semester options are available in Argentina, Brazil, France (Lyon), Germany, Greece, Italy (Rome), Malta and the UK.

## Argentina-Buenos Aires:

JYA students may choose a full year of study at either the combined program at Universidad de Buenos Aires/Facultad Latino Americano de Ciencias Sociales (FLACSO) or at the Universidad de Belgrano. An on-site intensive language and cultural immersion program precedes the academic year of the southern hemisphere which starts in the late spring/early summer. Courses are taught in Spanish and most Tulane majors are available at one or the other institutions. On-site program support is provided by CIEE. For more information contact the Center for International Studies.

## Brazil-Salvador de Bahia/Sao Paulo:

JYA students study in Portuguese for a full year, selecting from a wide range of subject matter. Student's major and preference will determine study site(s) which may combine both cities. Intensive language and cultural orientation program with family stay precedes the academic year that begins in late spring/early summer in the southern hemisphere. All classes are in Portuguese and students must have two years of college level Portuguese or one year each of Portuguese and Spanish. On-site program support is provided by CIEE. Tulane faculty contact is Chris Dunn, Department of Spanish and Portuguese.

## France-Paris:

Students spend an academic year attending classes with French students in various divisions of the University of Paris (primarily the Sorbonne), the Institut Catolique, and other institutions in Paris. Prior to beginning their studies in Paris, students spend several weeks in Angers intensively studying French language and civilization. A part time resident director provides support for students in Paris.

## France-Lyon:

Engineering and Science students and independent students in other fields are offered the opportunity to spend a year at the University of Lyon I or one or two semesters at the University of Lyon II. Students choose from a variety of courses and attend classes with French students.

## Germany:

Students spend an academic year at the University of Hamburg or Friedrich Schiller University in Jena with full-time German students. Prior to their academic year, students spend one month at one of the Goethe Institutes undertaking intensive language training. The Jena program offers a spring semester only option.

## Germany - Darmstadt:

A special program, in English, for Mathematics and Computer Science students. Students undertake a month long intensive German course, undertake the academic year courses in English, and live in residence halls with German and international students.

## Germany - Dresden:

Designed specifically for second semester sophomore Engineering students, Tulane's School of Engineering joins Boston University to offer a spring semester Engineering program in Dresden. Courses are in English, preceded by a one month intensive language program. Site visits to German companies included as part of the program.

## Greece:

Students study in English, for one year or one semester, in the College Year in Athens. This program is designed especially for, but not limited to, majors in Classical Studies, Art History, and History. Course offerings also include Economics, Literature, Politics, Philosophy, and Religion, among others.

## Italy-Florence:

Students study for an academic year at the Universite di Firenze (Florence) together with Italian students. Prior to the academic year, students undertake six weeks of intensive language study at the Dante Alighieri Center for Italian Language. A part time resident director provides support for students in Florence.

## Italy-Rome ICCS:

Students study, in English, for one or two semesters at the Intercollegiate Center for Classical Studies in Rome. The program is primarily for Classics and Ancient History majors. At the time of application, students should have completed intermediate courses in Latin or Greek, and have completed a Roman history course.
Italy-Rome JCU:
Students study for a year or a semester at John Cabot University. Coursework is done in English and includes but is not limited to Art History, Business, Classical Studies, Economics, English, Italian, History, Philosophy and Psychology.

Malta: Students may study for a year or a semester at the University of Malta in Msida. Courses are taught in English and are available in the following subject areas, among others: architecture, engineering, the arts, archeology, anthropology, mediterranean studies, economics, business, humanities, social sciences, sciences and religion.

Spain: Intensive language and cultural immersion program begins with several weeks of language training and family stay followed by a full year of academic study at the Universidad Complutense de Madrid. Students follow courses from the regular university curriculum and from
a special program for foreign students. A part time resident director provides support to students participating in the Madrid program.
United Kingdom and Ireland: Students enroll for an academic year in one of numerous universities located in England, Scotland, Wales, or Ireland, chosen based on the student's field of study.

JYA Independent Scholar Program: The JYA ISP offers the exceptionally mature, self motivated and academically qualified (CGPA of 3.5+) Tulane student the opportunity to independently develop a personalized study abroad program for the Junior year in a country where no JYA program is currently established. Student receives support in program development from CIS and faculty mentor. For more information visit CIS, 116 Newcomb Hall.

## APPLICATION REQUIREMENTS FOR JYAIJSA PROGRAMS:

Completed JYA applications are due no later than October 15 of the year prior to foreign study for year programs and March 1st of the year prior to the spring JSA programs. Applications should be made to and information is available from the Center for International Studies, 116 Newcomb Hall, with the exception of Architecture students who apply through their Dean. Application is made generally at the end of the freshman or very early in the sophomore year, with the exception of Architecture students who apply in the fall of the third year. Space is limited in each program. Participants are selected by a faculty advisory committee, the Executive Director of the Center for International Studies, Deans, and the host institution.
At the time of application for JYA/JSA, students should have the cumulative GPA required by his/her school or college for JYA participation (Architecture 3.3 for all programs; Engineering 3.0 for all programs; Tulane, Newcomb, Business . 3.0 for all programs except those of Malta, The U.K. and Ireland which require a 3.3.) Where courses are conducted in the language of the country, proficiency in the language of the host country is required. Selection is based on the number of placements available and student qualifications. In general, a student should be able to demonstrate academic achievement, intellectual and emotional maturity, and evidence of good character, as well as the likelihood of sustained interest and self-sufficiency to complete the program with satisfaction to the student and credit to the program. Students must have completed division proficiency requirements before participating in Junior Year Abroad. The student's good health must be certified by a physician. Students on academic, disciplinary, or Honor Board probation may apply for JYA/JSA programs but are not eligible to participate until their records are cleared.

Most scholarships, grants, and loans may be applied to JYA program costs.
JYA program costs vary from country to country and generally are similar to study at Tulane.
Students admitted to the JYA program must accept the supervision and authority of the program's resident director and the Executive Director of the CIS. Neither the University nor the resident director can assume or accept any responsibility for personal injury to program participants or damage to or loss of their property. The University reserves the right to change or cancel any program without advance notice and to limit the number of participating students.

## SEMESTER ABROAD PROGRAMS

Semester Abroad Programs are designed for students who are unable to commit themselves to the educational and cultural immersion of a full year abroad but still wish to have a significant international experience. Semester Abroad Programs offer a wide range of course-work appropriate to a variety of majors, the opportunity to study in English as well as undertake foreign language study and, frequently, coursework in a foreign language. Semester programs are an excellent way to introduce oneself to a new culture as well as deepen area study interests. In addition to the following programs, the Freeman School of Business offers international programs limited to Business students. For more information contact the Center for International Study, 116 Newcomb Hall.

Argentina: Students study for a semester or a year at The Universidad de Buenos Aires and the Facultad Latinamericana de Ciencias Sociales (FLACSO). To participate, students must have the equivalent of 6 semesters of Spanish, and a background in Latin American studies or the social sciences and a 2.75 minimum GPA. Courses offered include Spanish language, international relations, economics, history, literature, sociology, communications, political science and education. All courses are taught in Spanish.
Brazil: Students study for one or two semesters at the Universidade de Sao Paulo or the Universidade Federal de Bahia. Courses include Portuguese language, Brazilian studies, anthropology, art, biological, geological and physical sciences, economics, history, and mathematics, among others. Requirements include a 2.75 cumulative GPA and two years of college-level Portuguese or Spanish or one year of each. Program support is provided by CIEE. Tulane faculty program advisor, Professor Christopher Dunn, Department of Spanish and Portuguese.
Czech Republic: Students may study for one or two semesters at Charles University in the beautiful city of Prague. Courses include history, literature, culture, politics, economics, Czech language, theater, film, religion and music. Courses are taught in English except the Czech language course. To participate, students must have 6 semester hours in history or social sciences and a 2.75 minimum GPA.

France: Students study in English for one or two semesters at the American University in Paris. Courses include anthropology, art history, comparative literature, computer science, European studies, foreign languages, international affairs, economics, mathematics, political science, social sciences, among others.
Ghana: Students study in English for one or two semesters at the University of Ghana in Accra. Course offerings include, among others, African languages and culture, music and dance, agriculture, music, philosophy, drama, chemistry, geology, mathematics, zoology, psychology, archeology, economics, resource development, and sociology.
Hungary: At the Budapest University of Economic Sciences, students may take courses in history, culture, social sciences, Hungarian language, art history, and business. Courses are taught in English except the Hungarian language course. To participate, student must have 6 semester hours in history or social sciences and a 2.75 minimum GPA.

Japan: Study at Kansai Gaidai University in English, except for language courses. A wide variety of courses are available and prior knowledge of Japanese is not a prerequisite. Program advisor, Professor Yutaka Horiba, Department of Economics.

Poland: Study in English at the Warsaw School of Economics (WSE) courses in history, literature, culture, social sciences, business, Polish language and religion. Students must have 6 semester hours in history or social sciences and a 2.75 minimum GPA.
Taiwan: Learn Mandarin and Literary Chinese as a second language through the Chinese Language and Culture Program at the Mandarin Training Center, National Taiwan Normal University, Taipei. Tulane students enroll in the summer program and the first quarter session, and attend classes from the second week in July to the end of November. Program advisor, Professor S. T. Hsieh, Electrical Engineering.

United Kingdom-London and Cambridge: Students of Political Economy, Political Science, and Economics can pursue upper-division undergraduate work in economics, politics, and European studies in the INSTEP program (Institute of Economic and Political Studies, London and Cambridge) administered by Tulane's Murphy Institute of Political Economy. Course offerings vary between INSTEP's London and Cambridge campuses. Internships are available at both centers. Contact the program advisor, Professor Judith Schafer, The Murphy Institute.
United Kingdom-London: A semester in the heart of London at Regent's College is offered Fall or Spring semesters with courses available in the liberal arts, including music and theatre. Classes
and housing will be on or near the college's campus in Regent's Park in central London. Courses are taught by British and American faculty. Internships may also be available with early application.

## Application Procedure for Semester Abroad Programs

Students should consider undertaking a Semester Abroad Program as early as in the Spring of their sophomore year. Applicants' files should be complete no later than October 1 or March. 1 of the semester prior to the semester abroad, with the exception of INSTEP (see program specific information). All applicants for a Tulane Semester Abroad Program must have a minimum grade point average of 2.75 (except for Japan and Ghana where the minimum GPA is 3.00 ). Students who successfully complete a Tulane study abroad semester or year program will be awarded Tulane grades and credits. Students on academic, disciplinary, or Honor Board probation may apply for Tulane’s Semester Abroad Programs but are not eligible to participate until their records are re-evaluated.
Students may use Pell Grants, Stafford Loans, Parents Plus Loans, or other non-Tulane funding for Tulane Semester Abroad Programs. Tulane institutional aid and faculty/staff tuition waivers are not applicable to Semester Abroad Programs.

## SUMMER ABROAD OPTIONS

Summer Abroad Programs vary in length, costs, and details, more specific information on each of the Summer Abroad Programs can be obtained through the program contacts listed below. Locations and courses that have been offered recently:
Barcelona, Paris, and Nice: Seven-week program in Architecture. Open to upper level undergraduate as well as graduate students enrolled in an Architecture program. For more information, contact Peggy Messina, School of Architecture.

Cuba-Havana: Cuban studies, Afro-Cuban culture and history, historic preservation, environment, Spanish language, the Cuban public health system, and the Cuban social work system. For more information, contact Debbie Ramil, Cuban and Carribean Studies Institute.
France-Paris: Art, Social Sciences and French. Contact the Summer School-Summer Abroad Programs office, University College.
Guatemala: Three separate specialized programs are offered in or near Antigua. Tropical architecture practicum and coursework, contact Donald del Cid, School of Architecture. Keqchikel language, course, and field experience, contact Judith Maxwell, Anthropology. In addition, the Center for International Health and Development in Tulane's School of Public Health and Tropical Medicine offers a special public health oriented course.
Mexico-Guadalajara: Courses are offered in both Spanish and English in the following disciplines: Spanish, history, political science, communication, and Latin American studies. For more information, contact Debbie Ramil, Cuban and Carribean Studies Institute.

United Kingdom-Cambridge or London: Political economy offered at the Institute of Economic and Political Studies (INSTEP). Internships may be available. Contact Professor Judith Schafer, The Murphy Institute of Political Economy.
West Indies-Antigua and other locations: Subjects may include Gender, Development, and Communication in the Caribbean; Communication and Culture in the Caribbean, and Carribean Art and Culture. Contact Debbie Ramil, Cuban and Carribean Studies Instititute.

## INTERNSHIPS

Latin America: A flexible six-week, semester, or year internship in rural Mexico, Ecuador, or Cuba is offered through the Community Development Internship Program (CDIP). The program is especially attractive to individuals who want to improve their Spanish skills, and prepare for a career or further study in community development. Project assignments are available in the areas of agriculture, animal husbandry, and micro-enterprise, among others. In order to qualify, students must have a minimum grade point average of 2.5 and have completed at least three semesters of

Spanish or have the equivalent level. Application must be made at least two weeks in advance of desired date of starting program. Contact Debbie Ramil, Cuban and Carribean Studies Institute.
International: Additional internship possibilities can be found through information provided in the Career Services Center, the Center for International Studies, and the Murphy Institute.

## Special Opportunities for International Students

YEAR AT TULANE

Tulane University invites third and fourth year international students to spend a semester or year as a fully matriculated student of Tulane. Classes are available in many academic areas, although the Year At Tulane Program (YAT) is especially attractive to students in American studies or literature, music, Latin American studies, African and Diaspora studies, and architecture. Partial tuition scholarships are awarded to all students accepted into the YAT Program. For further information, contact the Center for International Students and Scholars by phone at (504) 8655208 or by e-mail: ronitw@tulane.edu; or the Office of Undergraduate Admission at (504) 8655731, e-mail: undergrad.admission@tulane.edu

## TESL INSTITUTE

Tulane's English as a Second Language (TESL) Institute attracts students from 80 different nations and many professions and occupations. Small class size, intensive study during each fourweek session, and highly qualified instructors all provide an ideal environment for learning English.

The Institute uses the most modern methods of language instruction and employs instructors who are all highly qualified and experienced in the instruction of English as a Second Language. Intensive classes are offered in four-week sessions twelve times a year so that the student will experience immediate progress as he or she moves from one level to the next. A student may enter the program at the beginning of any of the twelve sessions. The average class size is twelve students, and the maximum class size is fifteen students.
Tuition and fees include orientation and college placement advising, many extracurricular activities, and immigration counseling. For further information, contact the TESL by phone at (504) 865-5803 or by e-mail: esl@tulane.edu

## ROTC Programs

Tulane University recognizes the need for military officers with a quality education in a variety of academic specialties and highly recommends the Reserve Officer Training Corps programs as one method of meeting this need. The University maintains Air Force, Army, and Naval ROTC units. Their programs are open equally to men and women in all schools and colleges. Each of the programs provides an opportunity to develop leadership and management abilities, as well as to perform a valuable service to the nation. Individuals who wish to earn a commission and to serve a brief period of active duty, as well as those who are interested in a career of military service are encouraged to participate.
All of the ROTC curricula have been approved by the Curriculum Committee. The number of ROTC credits which may be counted toward graduation requirements depends upon the student's program of study. ROTC students should consult with their academic advisor to determine how ROTC course work satisfies the graduation requirements of their particular college or school.

## AIR FORCE RESERVE OFFICER TRAINING CORPS

The Air Force Reserve Officer Training Corps (AFROTC) offers two-, three-, and four-year programs through which students, upon graduation, can earn a commission as a Second Lieutenant in the United States Air Force. AFROTC offers a comprehensive program of both academics and hands-on training. Students have the unique opportunity to enhance their interpersonal skills in the areas of communications, teamwork, leadership, and management.
The three- and four-year programs are divided into two parts: the General Military Course (GMC) for freshmen and sophomore students, and the Professional Officer Course (POC) for juniors, seniors, and graduate students. Students in the GMC attend a 1-hour class and a 2-hour laboratory each week. Students in the POC attend a 3-hour class and a 2 -hour laboratory each week. All cadets attend field training (a four-week session for four year students) and this is usually between sophomore and junior years.
The two-year program consists of the Professional Officer Course only. Interested students should apply during their sophomore year. Selected candidates will attend a five-week field training session in the summer prior to entry into the POC. Applicants must have four semesters of either undergraduate or graduate work remaining after attendance at the summer field training session.
Students may enroll in the GMC without incurring any military obligation. Entry into the POC is competitive and requires a commitment to the Air Force. Additional summer programs are available to cadets on a voluntary basis. These professional development opportunities include parachuting, soaring, language immersion, base visits and more.

Textbooks and uniforms are issued to cadets without cost. POC cadets and GMC scholarship cadets qualify for a subsistence allowance of $\$ 250-400$ per month during the fall and spring semesters.

The Air Force offers excellent scholarship opportunities in a wide variety of academic majors. These scholarships cover tuition, university fees, and textbook reimbursement. For additional information or to check scholarship eligibility, contact AFROTC Detachment 320, Tulane University, at (504) 865-5394.

## ARMY RESERVE OFFICERS TRAINING CORPS

Army Reserve Officers Training Corps (AROTC) is a comprehensive program of studies through which a student can qualify to be commissioned as an officer in the United States Army, the National Guard, or the Uited States Army Reserve. Students learn leadership and management skills important in any profession. The Army ROTC program consists of a two-year Basic Course, which is open to freshmen and sophomores only, and a two-year Advanced Course. Nonscholarship students participating in the first two years of AROTC do not incur any obligation to the U.S. Army. Army ROTC offers 4-, 3-, and 2-year scholarships to include the Guaranteed Reserve Forces scholarship. Army scholarships provide tuition assistance, a flat rate for textbooks, and a monthly subsistence allowance (up to 10 months per year). Admission to the AROTC Advanced Course is conditional on meeting academic, physical, and age requirements and the approval of the Professor of Military Science. Physical training is an integral part of the AROTC program.

To be commissioned as an officer, a student must complete either the regular four-year program, a three-year program (whereby the Basic Course is compressed into one year), or a two-year program (requiring completion of the summer AROTC basic camp giving the student credit for the Basic Course). Advanced placement for AROTC training may be given to veterans and students with previous ROTC experience. In addition to these requirements, a student must complete at least one course in the areas of written communication, human behavior, military history, computer literacy and math reasoning.
Uniforms and military science textbooks are issued without cost to all students. Advanced Course and scholarship students receive a subsistence allowance of $\$ 150$ per month. They are also paid for the summer advanced leadership camp they must attend prior to completing the Advanced Course. For further information contact the Army ROTC office at $1-800-777$-ARMY or (504) 865-5594.

## NAVAL RESERVE OFFICERS TRAINING CORPS

There are three general programs through which students can qualify for commissions in the naval service: The U. S. Naval Academy, The Naval Reserve Officer Training Corps (NROTC) Navy or Marine option programs, and direct accession through Officer Candidate School. The NROTC program at Tulane University offers students the opportunity to earn a commission in the Navy or Marine Corps through four-year, three-year, and two-year scholarship programs, and through the NROTC College Program. Students matriculating to Tulane University, who have not already been awarded an NROTC scholarship, may participate in the NROTC College Program and compete for a 3-year scholarship. These students are selected from applicants each year by the Professor of Naval Science.

NROTC Scholarship Program
students are selected annually on a nationwide competitive basis. They receive four-year scholarships that include full tuition, university fees, uniforms, a $\$ 250$ textbook stipend, and a \$250-400 per-month subsistence stipend. Scholarship students participate in paid summer training periods and receive commissions in the Navy or Marine Corps Reserve as Ensigns or Second Lieutenants upon graduation. They have a minimum four-year active duty obligation after commissioning, followed by four years in the inactive reserves.
NROTC College Program students are selected from applicants each year by the Professor of Naval Science. Students may apply to participate in the college program any time during their freshman year. They participate in a four-year Naval Science program with one paid summer training period (between junior and senior years) and receive commissions in the Navy or Marine Corps Reserve upon graduation. They incur a minimum four-year active duty obligation, followed by four years in the inactive reserves. College program students are furnished uniforms and naval science textbooks and a subsistence stipend of \$350-400 per month during their junior and senior years. Additionally four-year college program students may compete nationally for a three-year NROTC scholarship.

NROTC Two-Year College Scholarship Program participants are selected from local undergraduate applicants. To apply, students should contact the NROTC unit on campus not later than the middle of the first semester of the sophomore year or the first semester of the third year if in a five-year program. Applicants who are qualified and accepted attend the six-week Naval Science Institute at Newport, Rhode Island, during the summer prior to entering the program. Travel expenses are paid to and from the institute, and candidates receive approximately $\$ 600$ in salary, plus meals and lodging for the training period. Upon successful completion of the Naval Science Institute, the students are enrolled in the NROTC program in the fall. Students may receive full tuition scholarships plus $\$ 350-400$ per month in subsistence for the remaining two years of college. Active duty obligations are a minimum of four years of active duty followed by four years in the inactive reserves.
Those students who desire a Navy or Marine Corps commission but do not participate in NROTC programs may apply for the direct accession program that leads to a commission upon completion of degree requirements and Officer Candidate School.
The Naval ROTC Unit sponsors many teams in campus intramural sports and many specialty organizations that represent the unit on campus and throughout Louisiana and the southern United States. These include the Drill Team, the Drum and Bugle Corps, and the Color Guard, all of which participate in many Mardi Gras parades and other unit and University functions. Other special organizations which include NROTC representation are a sail team and The Raiders.

If you have any questions, please call the NROTC Unit, Tulane University at 1-800-800-NAVY, or, on campus, dial extension 5104.

## Undergraduate Colleges and Schools

Six of Tulane University's eleven schools and colleges enroll Undergraduate students: School of Architecture, A.B. Freeman School of Business, School of Engineering, Newcomb College for women, Tulane College for men, and University College.

With this distinctive academic arrangement, students have access to diverse interdisciplinary opportunities and research resources. Tulane has one of the widest combined degree selections available at any university, including joint-degree programs between liberal arts and sciences and architecture, or business, or engineering; and between engineering and business at the undergraduate level.
Tulane's 12 to 1 ratio of students to faculty members, combined with the university's commitment to excellence in undergraduate education, means that Tulane classrooms are places of intellectual excitement.
Faculty supervise student research projects in every subject area, making Tulane one of the few universities where students can work individually with faculty members throughout their undergraduate years, not just as seniors or graduate students.

Undergraduates make up nearly $60 \%$ of the student population at Tulane. They come from all 50 states and many other countries, with approximately one-third of full-time freshmen from the Northeast, one-third from the South, and one-third from the West and Midwest.
The average Scholastic Aptitude Test SAT I score for the 2002 freshman class in Architecture, Engineering, Newcomb, and Tulane College was 1330. Over 60\% of the approximately 1624 freshmen ranked in the top 10 percent of their high school classes.

# The School of Architecture 

Mailing Address

School of Architecture
304 Richardson Memorial Building
Tulane University
New Orleans, LA 70118

## Telephone Numbers

Administrative Office
Dean: Donald F. Gatzke
Phone: (504) 865-5389
E-mail: tsarch@tulane.edu
The Tulane University School of Architecture degree programs address architecture's primary concerns: creativity, professional responsibility, technical innovation, and cultural investigations. We offer diverse programs of academic study and professional preparation within a context of rigorous scholarship, artistic sensitivity, environmental awareness, and creative endeavor. The School aims to develop a student's imaginative and intellectual abilities, and to provide the information and strategies needed to address contemporary challenges.
The Architecture curriculum centers on the required design studio sequence, the primary component of each semester. This studio training is coupled with imaginative and comprehensive instruction in architectural history, theory, technology, structures, techniques of representation and professional concerns. As well, the architecture curriculum places emphasis on significant study in the liberal arts and advanced study for upper-level students. Our approach in all coursework emphasizes a variety of theories, points of view, methods, and goals. Our responsibility is not only to enable a student's development as an architect; but also to further the discourse in our discipline, engage with the culture around us, and stretch the limits of the possible for architecture.

## HISTORY

The first courses in architecture at Tulane University leading to a degree in architectural engineering were offered in 1894 under the direction of Professor William Woodward. At this time only about a dozen schools of Architecture had been established in the United States. An article published in 1907 noted,
"the geographical location of the city of New Orleans, its cosmopolitan character, and the age and variety of its unique building types, make it a fit place in which to develop a school of architecture which would be suited to its environment, maintain a reasonableness of planning and construction, and be recognized as appropriate to the climatic conditions." Accordingly, a full four-year professional curriculum in architecture, leading to the Bachelor's degree, was established in the College of Technology (Engineering) in the academic year 1907-1908. At that time Samuel S. Labouisse, Moise H. Goldstein, and Allison Owen joined the staff. In 1912, Professor Nathaniel Cortlandt Curtis was appointed head of the newly independent Architecture Department; he was succeeded by Professor John Herndon Thompson in 1921 and Professor Buford L. Pickens in 1946.
At the conclusion of the Second World War, the faculty and enrollment increased to accommodate returning veterans, and the school continued to grow throughout the next two decades. John Ekin Dinwiddie was appointed dean of the School of Architecture in 1953; he was succeeded by Professor John William Lawrence in 1960. In 1971 the School of Architecture renovated and moved into its present facility, the Richardson Memorial Building, and experienced another increase in enrollment that continued throughout the seventies. Professor William Kay Turner became the dean in 1972, and in 1975 a small graduate program was initiated, offering a course of study leading to the Master of Architecture II as a post professional degree. After beginning his service as dean in 1980, Professor Ronald Coulter Filson established in 1981 the Architectural Coalition for professional research and practice by faculty and students.
Professor Donna V. Robertson succeeded Dean Filson in 1992. Upon the resignation of Dean Robertson in 1996, Professor Donald F. Gatzke was appointed Dean, after a year long search in 1997.

In the summer of 1990 the School began a program offering a Master of Architecture I as a first professional degree for students with undergraduate degrees in other disciplines, and awarded the program's first degrees in 1993 and was granted accreditation in 1994. In the fall of 1997 the School initiated a Masters in Preservation Studies Program with a first-time enrollment of ten students. Also in 1997 a supplemental Certificate in Preservation Studies was offered to undergraduates for the first time. In Fall 1999 the School began offering a Master of Architecture I (professional degree) to students successfully completing the five year curriculum.

## THE UNIVERSITY

The School of Architecture at Tulane University enjoys the advantages of two worlds, as part of a major private research university, and as a distinct institution with its own administration, faculty, staff, students, physical facilities, and admissions. The diversity and resources of the university support the approach of our curriculum, which emphasizes the broad-based concerns of architecture and relationships to other disciplines of thought and action. Our building, the Richardson Memorial Building, is located on the oldest and most attractive quadrangle of the Tulane campus.
Placement under this one roof reinforces our community of architectural study and instruction, and intensifies the common purpose and creative energy of the School. Our low student/faculty ratio allows nearly all students and faculty to become acquainted with each other, and the approach here is informal and direct. Our distinctive character is reinforced by a generous physical setting: inspiring studio spaces for design, various classrooms for reflection, and social gathering spots indoors and out, that allow for lively exchange and support between the members of the School.

## THE SCHOOL TODAY

The Tulane University School of Architecture today includes approximately three hundred students who are taught each semester by twenty-one full-time faculty as well as part-time professionals and visiting faculty. Programs of study leading to the Master of Architecture I are supplemented by a variety of special academic opportunities: Architect's Week, conferences and symposia, the public lecture series, exhibitions, sketch competitions, research, the Special Projects Room, student activities, and School publications.
Most important, the School of Architecture today is characterized by energetic creative exploration and intellectual inquiry; it is an environment supportive of high standards, challenge, and growth.

## NEW ORLEANS

New Orleans has exceptional advantages for the study of architecture. The French Quarter's courtyard buildings of French and Spanish origins, the River Road's plantation houses, and the Garden District's early suburban mansions are unique examples of American architecture. Numerous urbane neighborhoods are characterized by smaller houses, elegant adaptations of European prototypes that demonstrate vital principles of environmentally responsive design. Skyscrapers, sports and commercial facilities, mark the values of the twentieth century here too. All reveal the variety of design influences and cultural values-European, African, Caribbean, Latin, and even, in the twentieth century, International-that have contributed richness and vitality to the city's physical setting.

Constituted as a 'fabric city' favoring a neighborhood's tout ensemble over any one artifact, New Orleans possesses architecture intriguing and seductive. This fabric of buildings interweaves with a teeming landscape of courtyard, parkland, river, lake and swamp, providing multiple examples for landscape design.
New Orleans delights in strategic, architectural juxtapositions: delicate Victorian residences sit next to massive greensward levees, beyond which appear the heavy freighters and wharves of the city's water commerce. Historic Canal Street spans from the River of shipping and French Quarter tourism, through Main Street retail architecture, then urban commercial strip, past mysterious 'cities of the dead', and finally to modernist, planned communities out along Lake Pontchartrain. New Orleans' architectural tradition ultimately deserves the credit for the congruous visual mix: this city always places first emphasis on physical setting, and insists on attention to design, detailing, management of climate and architectural presence.
Beginning with the first architecture courses taught in 1894, the Tulane faculty has involved itself with both preservation of our historic environment, and design of significant new forms responsive to contemporary values.
We instill in our students a sensitivity for our cityscape, teaching enhancement of the old while introducing the new; the city serves as our learning laboratory, in all parts of its cultural and historical makeup.

## FACILITIES

## Richardson Memorial Hall

Designed in 1907 by the New Orleans architecture firm of Andry and Bendernagel to house the Tulane Medical College, Richardson Memorial is located on the oldest and most beautiful quadrangle on the Tulane campus, near New Orleans’ prestigious St. Charles Avenue. The large old oaks in the quadrangle shade a patio between the building's second-level entrance terrace and the quad's spacious lawn; all three are favorite spots for gatherings ranging from the annual graduation ceremony and reception, to outdoor class sessions, to informal discussions and School events.

## Studios and Classrooms

Richardson Memorial's spacious main rooms, with high ceilings, open trusswork, and tall windows on three sides, could not better accommodate their use as lecture hall, library, and architecture studios. Every student in the school is assigned a desk in one of these studios each semester. Studios are accessible at all hours for design and other course work and are fully networked. Classrooms include seminar rooms, lecture and exhibition halls, and special purpose rooms (described below).

## Offices

The School's administrative offices are located on the third floor of Richardson Memorial. Office hours are $8: 30$ a.m. to 5 p.m., Monday through Friday. Faculty members have offices in Richardson Memorial on the first and fourth floors, and make themselves available to meet with students outside of classes, during weekly office hours.

## Computer Facilities

The Mintz Computer Center houses computer assisted design-instruction within the School. Equipment includes microcomputers configured for computeraided design and color graphics. State-of-the-art, three-dimensional modeling, rendering and imaging capabilities are utilized both for student projects and architectural research.
The School of Architecture Computer Lab is both a Windows and a Macintosh environment. A list of graphics and animation software supported include: Form Z, Adobe Photoshop, PageMaker and Premiere, AutoCAD, Showbiz, Revit, Quark, among others. In addition, the Lab supports General Text, a communications and business application. Students have access to university computer facilities and software as well as to the internet. Richardson Memorial is a fully network wired and wireless computing environment.

## The Architecture Library

The School of Architecture houses two special libraries in Richardson Memorial. The Architecture Library contains twelve thousand books and 225 recent periodicals (older periodicals and another 24,000 volumes are stored in the main library). The Emile Weil Memorial Fund allows the Library to maintain subscriptions to architecture journals from all over the world. The Architecture Library provides an optimal setting for quiet and relaxed study and research as well as for browsing and reading. Of particular interest to architecture students is the Southeastern Architectural Archive, in Jones Hall, that has more than three million items, including five hundred thousand architectural drawings and twenty-five thousand photographs. It also has a gallery with permanent and temporary exhibits.

## The Slide Library

The Slide Library is the audiovisual resource facility for the students and faculty of the School. In addition to a constantly expanding collection of more than one hundred twenty thousand slides, the Slide Library maintains slide projectors, overhead projectors, movie projectors, slide duplicating and enlarging equipment, and other photographic equipment. Student work is regularly documented by the staff of the Slide Library. The New Orleans Architecture Database is online at www2.tulane.edu/arch. The database combines the Slide Library's collection of 35 mm slides with the Southeastern Architectural Archive's collection of lantern slides. It presently contains approximately 2500 images of New Orleans, photographed by faculty, staff and students. This project has been funded primarily through a grant from the Provost's Office of Tulane University and a generous gift from Steve and Abbye Gorin.

## Tulane Regional Urban Design Center (TRUDC)

Originally established as a satellite program, the Tulane Regional Urban Design Center (TRUDC) is now fully integrated into the School of Architecture. Run by Professor Grover Mouton III, TRUDC primarily enlists students from within the School of Architecture; the principle activities that the Center is involved in include urban design, programming, and client-user group mediation. In the past several years, students have been involved in a broad consideration of urban affairs, including debates involving historic preservation, slow growth development, housing development, and "new urbanism" among other issues. Students have also had the opportunity to become involved with real-world planning projects across the region, including projects in Covington, Louisiana, New Orleans, and various other cities and towns within the region.

## Darkroom

There is a darkroom in Richardson Memorial Hall for black and white processing and color work. The darkroom aids in the documentation of student and faculty work for exhibitions the Slide Library, and School publications.

## Wood Shop

Located on the ground floor of Richardson Memorial Hall, the Architecture Shop facility enables students to work in wood, metal, concrete and various other materials. The Shop is open weekdays, weekends, and some evenings. Students are encouraged to use the Wood Shop for academic assignments and other projects.

## Publications Office

The ReView has been produced for the last twelve years by various faculty and student editors. Recently, the newly established and equipped Publications Office has undertaken an ambitious publications schedule which includes the Tulane School of Architecture ReView, a catalogue of student work produced each year.

## Snack Bar

The snack bar maintained in Richardson Memorial proves especially convenient for students in the School of Architecture. The snack bar, open weekdays, offers a variety of sandwiches and other selections.

## Programs of Study

The School of Architecture offers three degree programs. The Master of Architecture I degree, a professional degree program, is accredited by the National Architectural Accrediting Board. In the United States, most state registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit US professional degree programs in architecture, recognizes two types of degrees: the Bachelor of Architecture and the Master of Architecture. A program may be granted a six-year, three-year, or two-year term of accreditation, depending on its degree of conformance with the established educational standards.

Master degree programs may consist of a pre-professional undergraduate degree and a professional graduate degree, which, when earned sequentially, comprise an accredited professional education. However, the pre-professional degree is not, by itself, recognized as an accredited degree.
Students enrolling from secondary school:
the Master of Architecture I (no previous college coursework is necessary) is offered in a fiveyear ( 10 semester) program as a first undergraduate degree (M.Arch. I). Students with previous college work may take the first two semesters of required architecture courses in an intensive summer program.

Students enrolling with an undergraduate degree:
students with Bachelors degrees in other disciplines are eligible to enroll in an accelerated curriculum requiring eight semesters and leading to the Master of Architecture I as a first professional degree. Students in the accelerated M.Arch. I program are required to begin in the summer; this makes the first professional degree obtainable in one summer and three academic years.
A Master of Architecture is also offered as a post-professional degree (M.Arch. II). The degree is offered in a two-semester program. Students (with a previous degree) interested in the School of Architecture's graduate programs should contact the School for graduate programs information, catalogues, and admissions. Students interested in obtaining their first degree should contact the Office of Undergraduate Admissions.

A Master of Preservation Studies is offered to students with an undergraduate degree. The degree is offered as a two-semester and summer program. Students interested in the School of Architecture's graduate programs should contact the School for graduate programs information, catalogues, and admissions.
A Doctor of Philosophy is offered in Historic Preservation is offered to students with an undergraduate degree. This interdisciplinary degree is offered by the Department of History and the School of Architecture. Contact the school for information.

## Master of Architecture I

The Master of Architecture I program is structured with required courses and electives to give students a thorough professional preparation, and opportunities for study in the liberal arts, and for advanced study in architecture. First-year courses include required study in design, technology, and structures, in addition to English and other electives. First-year electives allow students to supplement their background in physics or calculus, to begin or advance foreign language study, to broaden their skill in the arts, or to choose any other subject area from among over forty offered throughout the University's undergraduate divisions. Second and third-year courses include the majority of program requirements. Intensive studio work in architectural design is complemented by study in architectural history and theory, structures, and building technology. The fourth and fifth-year curricula involve advanced architectural design in elective studio courses called "platforms", theory, thesis research, and finally the thesis design semester. Upper level study includes many electives intended to provide significant opportunities for study in the liberal arts. In addition to academic year studies, students are required to spend two summers working in architecture firms in order to gain an understanding of architecture as a profession.
Transfer students with previous college work but without any background in architecture may take an intensive summer curriculum as the equivalent of first-year.

The intensive summer program includes no English or general electives because previous college work is a prerequisite. For such students, the Master of Architecture I as a first college degree may then be obtained in four additional years.

## Curriculum: 5 Year Professional Program: Master of Architecture Typical Curricular Schedule

## Credits

## First Year - Fall

Design Studio 1 ..... 6
Introduction to Architecture ..... 3
English 101 ..... 4
University Elective ..... 3
University Elective ..... 3
Semester Total: ..... 19
First Year - Spring
Design Studio 2 ..... 6
Structures \& Technology 1 ..... 3
University Elective ..... 3
University Elective ..... 3
University Elective ..... 3
Semester Total: ..... 18
Second Year - Fall
Design Studio 3 ..... 6
Structures \& Technology 2 ..... 3
History, Theory \& Analysis 1 ..... 3
University Elective - Writing Intensive ..... 4
Architecture Elective ..... 3
Semester Total: ..... 19
Second Year - Spring
Design Studio 4 ..... 6
Structures \& Technology 3 ..... 3
History, Theory \& Analysis 2 ..... 3
University Elective ..... 3
University Elective ..... 3
Semester Total: ..... 18
Portfolio Review
Third Year - Fall
Design Studio 5 ..... 6
Structures \& Technology 4 ..... 3
History, Theory \& Analysis 3 ..... 3
Architecture Elective: Digital Design Tools ..... 3
University Elective ..... 3
Semester Total: ..... 18
Third Year - Spring
Platform ..... 6
Structures \& Technology 5 ..... 3
History, Theory \& Analysis 4 ..... 3
University Elective - Writing Intensive ..... 4
University Elective ..... 3
Semester Total: ..... 19
Summer Internship or Foreign Study
Fourth Year - Fall
Platform ..... 6
Issues in Contemporary Architecture ..... 3
Architecture Elective: History/Theory \& Analysis ..... 3
Architecture Elective ..... 3
University Elective ..... 3
Semester Total: ..... 18
Fourth Year - Spring
Platform ..... 6
Architecture Elective ..... 3
Architecture Elective - Struc \& Tech Elective ..... 3
Architecture Elective ..... 3
University Elective ..... 3
Semester Total: ..... 18
Summer Internship or Foreign Study
Fifth Year - Fall
Platform ..... 6
Concerns of the Profession ..... 3
Research Thesis - (Thesis Prep) ..... 3
University Elective ..... 3
Semester Total: ..... 15
Fifth Year - Spring
Thesis Project ..... 6
Architecture Elective - Prof Concerns Elective ..... 3
Architecture Elective ..... 3
University Elective ..... 3
Semester Total: ..... 15
Summary: 5 Year Professional Program: Master of Architecture
Professional Coursework
5 course Design Studio sequence ..... 30
4 Design Platforms ..... 24
Research Methods (Thesis Prep) ..... 3
Design Thesis ..... 6
5 course Structures \& Technology sequence ..... 15
1 advanced elective in Structures \& Technology ..... 3
Introduction to Architecture ..... 3
4 course History/Theory/Analysis of Architecture sequence ..... 12
1 advanced elective in History/Theory/Analysis ..... 3
Issues in Contemporary Architecture ..... 3
Concerns of the Profession ..... 3
1 advanced elective in Professional Practice ..... 3
1 course in Digital Design Tools (computers) prior to completion of third year ..... 3
Required Professional Credits: ..... 111
5 Architectural Free Electives ..... 15
Total Professional Credits: ..... 126
Portfolio Review at the Conclusion of Second Year
University Distribution and Electives
1 course English 101 writing ..... 4
4 courses humanities and fine arts ..... 12
2 courses social sciences ..... 6
2 courses math or science ..... 6
7 courses general electives ..... 21
2 courses fulfilling distribution or elective requirements must be writing intensive ..... 2
Total of 16 Courses Outside of Architecture: ..... 51

## In addition:

1 course fulfilling distribution or elective requirements listed above must focus on non western traditions, and proficiency in a foreign language must be demonstrated through requirements of the Faculty of the Liberal Arts and Science.
Minimum Credits Required for Graduation: ..... 177

## ELECTIVE AREAS FOR DISTRIBUTION

## Humanities and Fine Arts

African \& African Diaspora Studies
Art History
Art Studio
Classical Studies
Communication
Dance
English
Jewish Studies
Language - placement required
Music
Philosophy
Theatre

## Social Sciences

Anthropology
Economics
Education
History
Latin American Studies
Political Economy
Political Science
Sociology
Women's Studies

## Sciences and Mathematics

Astronomy
Cell \& Molecular Biology
Chemistry
Ecology \& Evolutionary Biology
Computer Science
Geology
Mathematics
Physics
Psychology

## Certificate in Preservation Studies Program

The School offers a certificate for students in the five-year program in preservation studies requiring 24 hours of coursework:
Studio in Building Preservation 6
Studio in Environmental Conservation 6
Introduction to Preservation Studies 3
Preservation Technology 3
Elective* 3
Elective* 3
Summer internship in preservation* 0

Students interested in pursuing the Certificate in Preservation Studies should consult with the Director of the Preservation Studies program. In order to facilitate the selection of the appropriate coursework for the Certificate, students must submit the completed Certificate in Preservation Studies form to the Director of Academic Affairs by second semester of third year.

* With consultation and approval of the program director.


## MINOR OR MAJOR IN ANOTHER DIVISION

An architecture student may elect to pursue a minor or major in another division of the University, in addition to the pursuit of the Master of Architecture (non-accelerated program). Anyone who is interested in such a program should contact the appropriate department chair and develop a program of courses in the chosen field. This proposal should be approved by the department chair and forwarded to the Director of Academic Affairs in the School of Architecture. When all requirements are met, the transcript will reflect that a minor or major has been completed. Successfully completed minor or major courses can fulfill the School's distribution of electives requirement. This does not eliminate other distribution requirements, however, and could require additional courses for graduation.

## MINOR IN ARCHITECTURAL STUDIES

The purpose of the minor in Architectural Studies is to encourage and give official recognition to students who study architecture beyond the introductory level but who do not wish to pursue a major or a professional degree in the field. The requirements are designed to allow students as much flexibility as possible in pursuing their individual interests while also providing a basic overview of the discipline. Students wishing to minor in architectural studies should meet with the Director of Academic Affairs of the School of Architecture to establish a curriculum conforming to the following requirements. (The alphanumeric code in parenthesis following each course title is the course identification code.)
A minor in architectural studies requires that at least four courses and a minimum of 15 hours of course work within the School of Architecture. The only specifically required course is Introduction to Architecture for Non-majors (HTEL 230) [Instead of this course, students may substitute Introduction to Architecture (HSTA 111), but the later course is normally taken in conjunction with its co-requisite, Architecture Studio (DSGN 101). Students do not normally receive credit for both HTEL 230 and HSTA 111.]

In addition to the introduction course, the minor requires two courses from the design, history, structures, technology, and/or theory curricula (courses with designations DSGN, HSTA, STEC, and THRY). Some of these courses have prerequisites, and in order to enroll in them minors must satisfy the prerequisites or have permission of the instructor. [There is one exception to the corequisite requirement; students who have completed Introduction to Architecture for Non-Majors
and wish to take the beginning studio course (DSGN 101) do not have to take Introduction to Architecture.] Students may satisfy the remainder of the credit requirement for a minor with any courses offered within the School of Architecture.
LAS students take 15 credits of Architecture courses; 12 credits count as free options in LAS leaving three credits as an overload. Students should be advised by the Architecture Director of Academic Affairs about the minor and the Director will certify the architecture studies minor.
The following chart summarizes the two ways to fulfill the requirement for the minor in architectural studies.

## Alternative A

Introduction to Architecture for Non-majors (HTEL 230) 3
Elective* 3
Elective* 3, 4 or 6
Elective 3, 4 or 6
Elective (if necessary to complete 15 credits) 3, 4 or 6

## Alternative B

Introduction to Architecture (HSTA 111) 3
Architecture Studio (DSGN 101) 6
Elective* 3, 4 or 6
Elective 3, 4 or 6
*These electives must be from the design, history, structures, technology, and/or theory curricula (courses with designations DSGN, HSTA, STEC, and THRY). In Alternative A, the remaining electives, if necessary, may be courses with any designation within the School of Architecture. Students should see the Architecture Director of Academic Affairs for permission to register in Architecture courses.

## JOINT DEGREE PROGRAMS

## Architecture-Engineering, First Year

Entering freshmen who are considering both architecture and engineering as fields of study, and who have strong academic backgrounds, may elect to spend their first-year in a joint program offered by the School of Architecture in conjunction with Tulane's School of Engineering. Students must be admitted to both Schools to elect the program. This program gives students a chance to explore both disciplines before choosing between them.
At the end of the first-year, students who have successfully completed all courses may choose to continue their studies in either the School of Architecture or the School of Engineering, and then enter directly into the second year of either School with only a minimal amount of extra work to obtain the chosen degree on schedule. (A dual degree in both Schools, because of the requirements in each, would take nearly as long as obtaining the degrees separately.)

## Curriculum

The curriculum for the joint first-year is as follows:

## Fall

Architecture Studio 101
Introduction to Architecture 111
Mathematics 121
Physics 131 \& Lab
Spring
Architecture Studio 102
Structures/Technology I 122
Mathematics 122
Physics 132 \& Lab

## Dual-Degree Programs

School of Architecture students may work toward two Tulane degrees simultaneously. Acceptance by both academic divisions and the approval of both deans is required. Dual degree students are expected to maintain a superior academic record.

## Master of Architecture I with Bachelor of Arts or Bachelor of Science

Students may elect to fulfill, in addition to the requirements for the Master of Architecture I, the requirements for a liberal arts or science degree, including the requirements for one of the majors offered by the Paul Tulane College or Sophie Newcomb College. Men in the School of Architecture receive their second degree from the Paul Tulane College; women in the School receive their second degree from Sophie Newcomb College. Students are required to complete a minimum of two semesters ( 30 credits) in residence in Tulane College or Newcomb College. It is advisable for students to elect this option early in their career so that elective courses can be used wisely. Advice on course work, distribution requirements, and major requirements for liberal arts and science degrees is available from the Dean's office of the appropriate division.

## DEGREE REQUIREMENTS

Requirements are generally taken in the prescribed year indicated in the curricula above, but some required courses may be taken in another year, to allow strategic placement of electives. Generally, all courses required for the professional degree must be completed prior to entry into fifth-year. In special circumstances, the Dean may waive this requirement.

## DISTRIBUTION REQUIREMENTS AND ELECTIVES

To help ensure academic breadth within the liberal arts and depth within the field of architecture, students in the Master of Architecture I curriculum may take elective credits. Students are required to distribute a portion of these elective credits among courses in the humanities and fine arts ( 12 credits, including 8 in lecture courses), social sciences ( 6 credits), science and mathematics ( 6 credits) and 21 additional liberal arts credits. Courses offered by the liberal arts colleges fall into these three categories. All students are required to complete foreign language proficiency (see Liberal Arts and Science section for further information) and to take one elective course with an emphasis on non-Western traditions. Students in the Master of Architecture I curriculum are required to take 3 credits in digital design tools prior to completion of third-year, 3 elective credits in advanced Structure/Technology, 3 elective credits in advanced History/Theory, and 3 elective credits in advanced Professional Practice. Additionally students have to complete 15 credits of architecture electives. The Dean, at his discretion, may authorize waiver of the distribution requirements in special cases. Students in dual degree programs may also receive special consideration.

## SUMMER INTERNSHIP

So that students may acquire practical experience within the profession of architecture, the School requires two twelve-week periods of summer employment in an architect's office after third year and prior to graduation. This internship experience can be fulfilled by work in an architect's office or in related professional areas. Most students do their summer fieldwork after the third and fourth years.
To receive credit for summer work, students must complete a form available in the School office and have it approved by the Dean. At the beginning of the following fall semester, the School requests from the summer employer verification of length of employment and quality of performance. This certification is reviewed by the Dean for approval.

Foreign travel in an organized program or Habitat for Humanity may substitute for one of the summer internship. These proposals must also be approved by the Dean preceding the summer in which the travel or research is to be undertaken.

## Admission

To select students for admission to the Master of Architecture I program, the School looks closely for intelligence, creativity, motivation, achievement, leadership, and character. Academic potential is essential. At the same time, the School seeks students who exhibit energy and the ability to contribute to campus life outside the classroom. In addition, we believe that diversity among students is a great educational enhancement and therefore seek and admit students from varied backgrounds.

## FROM SECONDARY SCHOOL PREPARATION

The best measure of academic potential is past academic achievement. Therefore, the Committee on Admission seeks students who have a strong high school academic record in terms of performance (grades and class rank, if available) and selection and content of courses studied. Tulane recognizes that curricula vary among high schools and that not all students have the same academic resources available to them. The Committee on Admission does look, however, for students who undertake the most challenging college preparatory program possible. Applicants are evaluated in terms of how well they use the resources available, and the committee also takes into consideration the differences in grading standards that exist between schools.
A solid secondary school program should emphasize the traditional college preparatory subjects and include at least four courses each year selected from English, mathematics, foreign languages, science, social studies, and art. An effective college entrance program includes:

- English-four years with extensive reading and writing.
- Mathematics-preferably three years; calculus is desirable.
- Foreign Languages-at least two and preferably three or four years of a classical or modern language; three or four years of one language are generally preferable to two years each of two languages.
- Science-at least two years of laboratory science; physics is especially recommended for architecture applicants.
- Social Studies-at least two years, with emphasis on history.
- Studio Art-at least two years, preferably freehand drawing.

Often, students applying to the School of Architecture ask about drafting or technical graphics courses in high school. These courses may be helpful to some students, but most of our students have found courses in freehand drawing better preparation for our program. Required graphics
presentation work during the first two years of the Tulane design studio sequence assumes no prior knowledge or experience in graphics or technical drawing.

## TRANSFER STUDENTS

## Other Institutions

The School of Architecture welcomes applications from undergraduate students who wish to transfer into the School, either to continue or to begin the study of architecture. Applicants with less than one full year of college-level work should follow the freshman application procedure. The placement of a transfer student within the program depends upon the satisfactorily completed course work applicable to the Master of Architecture.
A transfer student from another architecture program may be admitted either in the fall or, occasionally, in the spring semester. The applicant must present a portfolio of architectural design work to determine placement in the Tulane architectural design course sequence. Credit for previous architectural design work is also awarded on the basis of this portfolio.
A transfer student from another discipline may begin in the intensive summer equivalent of firstyear completing the program in four additional years, or in the fall semester, completing the program in five years. All students working toward their first undergraduate degree must follow the required architectural design course sequence of ten semesters.
In general, transfer candidates are expected to have maintained an average of B or better in all previous college work applicable toward the Master of Architecture. Credit is not awarded for grades lower than C. Credit for work completed but not required in the curriculum may be awarded as elective credit. An evaluation of courses accepted for transfer is made after complete transcripts, course descriptions, and examples of completed work are received.
If, at the time of application, the student is currently enrolled in another institution, his or her acceptance is tentative, pending presentation of an official transcript indicating successful completion of the current courses and all previously attempted courses.

## Other Divisions of Tulane

The School of Architecture welcomes interdivisional transfers from other colleges at Tulane; University College applications are processed through the Office of Undergraduate Admission. Interdivisional transfer students may begin the architecture curriculum in the intensive summer equivalent of first-year, completing the program in four additional years; or in the fall, completing the program in five years.

## READMISSION

A student who has interrupted studies at the School of Architecture for any reason must file an application for readmission that is available from the Director of Academic Affairs in the School of Architecture.

## PORTFOLIOS

All students applying to the School of Architecture from secondary school for the Master of Architecture I are strongly encouraged, but not required, to submit evidence of their creativity, design, and art ability in a document no larger than 8.5 " x 11 ". Portfolios generally include photographs or reproductions rather than original work. Few freshman applicants have done any architectural design; prospective students may submit examples of drawing, painting, photography, sculpture, construction, set design, poetry, prose, or any other work that might help in an assessment of your creative potential and your ability to succeed in the School's program. Some students whose secondary school records are not exceptional excel in the primarily visual orientation of a program in architecture; the portfolio helps the Committee on Admission judge candidates whose academic record may not testify fully to their potential in the study of architecture.

Portfolios are required of all applicants transferring from other architecture programs and those students applying for the Dean's Honor Scholarship. Portfolios will be returned after admissions decisions are made if self-addressed envelopes with sufficient postage accompany them.

## RECOMMENDATIONS

Because the School of Architecture is concerned with personal as well as academic qualities, applicants are asked to submit a recommendation from a guidance counselor, secondary school principal, or headmaster. This recommendation should comment on the applicant's character, maturity and seriousness of purpose-qualities essential to a successful college experience. Students who feel they are better known by a faculty member than by a school administrator may supplement the application with a teacher recommendation.

## VISITING TULANE

We highly recommend campus visits to prospective students. You are welcome to visit Tulane at any time of the year; but you will find a visit during the regular school year the most informative, especially on a Monday, Wednesday or Friday, when afternoon design studios meet. You should plan to spend a full day on campus. Begin with a stop at the admissions office for a group information session directed by one of the admission counselors. Immediately following, you may take a campus tour guided by a current student. A special tour of the School of Architecture can easily be arranged. To arrange a meeting with faculty and a tour of the School of Architecture call the Director of Academic Affairs at (504) 865-5389.
In the spring the University organizes "Tulane Days" especially for visiting prospective students and their families. The activities include campus tours and a visit to the School. A schedule for Tulane Days can be obtained from The Office of Undergraduate Admissions.
For those who are unable to visit our campus, we recommend alumni interviews. In many parts of the country, alumni Admission Committee members are available to meet with you, and they can provide an inside perspective on the University. You may obtain their names by contacting the Office of Undergraduate Admission.

## Academic Resources

Architecture students enjoy the full range of academic resources and support services offered by the University: orientation programs, career planning and placement services, counseling and testing services, the Educational Resource Center, intramural sports, student organizations, and the University Health Service, as described earlier in this catalogue. Students are encouraged to take full advantage of these resources and services to enhance their experience in the School. Within the School occur advising, public lectures, exhibitions, special events sponsored by the School, School publications, the Architecture Student Government, and other architectural organizations.

## ORIENTATION

Each year entering students and their parents are invited to campus before classes begin to participate in special events and activities designed to orient them to the School, the University, and New Orleans. Orientation events acclimate new members of the Tulane community through convocations, meetings, information periods, question and answer sessions, informal discussions, and receptions. Seminars, field trips, discussions conducted by faculty, a faculty showcase, and other activities highlight Tulane's academic strengths. Students find Orientation a time to make friends, to become acquainted with the campus and the city, and to learn about available service, social, cultural, and other resources. Orientation is also the time for proficiency exams, advising sessions, career and major workshops, and registration. In short, it allows students a chance to settle in before the academic year gets under way.
Entering architecture students participate in all the orientation activities offered by the University, as well as special meetings and activities organized by the School especially for them. The size of the entering class allows School of Architecture orientation events to be small and informal, giving ample opportunity for personal interaction with the dean, members of the faculty, and fellow students and parents.

## ACADEMIC ADVISING

There are several forms of academic advising and counseling within the School of Architecture. The advising system stresses mentor relationships between students and faculty. Upon entering the School, each student is assigned an Advisor, with whom he or she remains for the first two years. Beginning in third-year, students are free to choose their Advisor from any of the fulltime faculty.

Contact with the advisor is voluntary and at the initiation of the student. However, students are strongly encouraged to meet with their Advisors at least once a semester, for degree progress audits, short and long-term academic program planning, and information on course prerequisites, sequence of courses, and other requirements defined in this catalogue. A particularly important consideration is the positioning and content of a student's elective coursework, in order to insure a well-rounded program of liberal arts study. Advisors also counsel students on career planning, professional specialties and job placement. Students also consult periodically with the School's Director of Academic Affairs on all matters concerning their academic performance and degree progress.
Any student may contact the Dean's office at any time for information on these matters or for special arrangements regarding their program of study. As well, students may at times need to discuss the fit between their personal and academic life; students are encouraged to bring these concerns to their Advisor, any faculty member and/or the Director of Academic Affairs. Such matters are also addressed by other professional services available on campus, such as the Educational Resources Center.

## CAREER ADVISING

The low student/faculty ratio here allows most members of the faculty to become acquainted with the majority of students and to advise them informally on academic matters as well as professional and general concerns. First and second-year students often need special advice on architecture as their career choice. The design faculty of these years is particularly sensitive and responsive to these needs. Students are given ongoing feedback on their progress throughout this period, and a comprehensive design review concludes the Spring semester of second year.

The School of Architecture alumni are another valuable resource in career advising and facilitation. Our alumni practice throughout the United States, in architecture and a variety of related fields. These successful design professionals often prefer to hire Tulane graduates, and are effective area contacts for the student seeking employment. The School has recently initiated an improved alumni career networking program to assist in securing pre- and post-graduate internships. The Tulane degree is well received nationally: our strong curriculum and extensive training make the Tulane student or graduate appeal to any number of professional concerns.

## PUBLIC LECTURE SERIES

Each year the School of Architecture invites well-known architects, architectural historians, theorists, and critics from the United States and many foreign countries to participate in our public lecture series. Visitors deliver a lecture and often participate in reviews, individual criticism, or informal discussions. Lectures cover a wide range of topics of interest to students and the profession. Practitioners often show their recent work; other lecturers discuss important work of the past and present, and all explore theoretical and topical issues and ideas. Students have the opportunity for questions and discussion with these distinguished guests through question periods, receptions, and other informal contact. In addition to regular public lectures, each year a particularly distinguished architect or scholar is invited to the School of Architecture to deliver a special lecture in honor of its late Dean, John W. Lawrence.

## The Lawrence Memorial Lecturers have been:

| 1972 Louis I. Kahn | 1987 Eduardo Sacriste |
| :--- | :--- |
| 1973 Gyorgy Kepes | 1988 E. Fay Jones |
| 1974 Serge Chermayeff | 1989 Edouard F. Selder |
| 1975 Charles W. Moore | 1990 Mario Gandelsonas |
| 1976 Bernard Lemann | 1991 Peter Eisenman |
| 1977 Christopher Alexander | 1992 Kenneth Frampton |
| 1978 James S. Ackerman | 1993 Anthony Vidler |
| 1979 Aldo van Eyck | 1994 Bernard Tschumi |
| 1980 Spiro Kostof | 1995 Enrique Norton |
| 1981 Susana Torre | 1996 Carmen Pinos |
| 1982 Arata Isozaki | 1997 Patricia Patkau |
| 1983 Ada Karmi Melamede | 1998 Bernhard Reichen |
| 1984 Joseph Esherick | 2000 Joseph Rykwert |
| 1985 David Gebhard | 2001 Juhanni Pallukma |
| 1986 Liu Kaiji | 2002 Jorge Silvetti |

Other distinguished visitors have included: Mario Botta, J.B. Jackson, Rem Koolhaas, Cesar Pelli, Vincent Scully.

## The Arthur Q. and Mary Davis Visiting Critic

Romaldo Giurgola, Antonio de Sonza Santos, Herman Hertzberger, Charles M. Correa, JeanPaul Carlihan, Aldo Rossi, Liu XiaoShi, Henri Ciriam, Oriol Bohigas, Zaha Hadid, William Alsop, Harry Seidler, Gottfried Bohm, Enric Miralles, Jacques Herzog, Pierre DeMeuron, Peter Zumthor, Rafael Moneo, Merrill Elam, Sir Norman Forster, Will Bruder, Dominique Perrault, Peter Oberlander, Brian Mackay, Lyons, Vincent James, James Carpenter.

## J. Herndon and Dorothy Thomson Fellowship for Faculty Travel

Each year the faculty elects one of its members for this award. This travel grant funds faculty research, and academic and professional development. Recipients deliver a public lecture to the School on their travel projects. The Award is supported by Friedrich E. Stoll, M.D., '48. Recipients have been:
1992 - Donald Gatzke
1993 - John Klingman
1994 - Scott Bernhard
1995 - Ellen Weiss
1996 - Ila Berman
1997 - Karen Kinglsey
1998 - Bruce Goodwin
1999 - Stephen Jacobs
2000 - Scott Wall
2001 - Sheryl Tucker de Vazquez
2002 - Elizabeth Gamard
The New Orleans Lecture
The New Orleans Lecture is presented annually by a distinguished authority in the field of Urban Affairs. The subject of each lecture is the City of New Orleans: past, present, and future. Funding for this event is provided by an endowment created in honor of the late Dean Emeritus William K. Turner for his passionate involvement in the affairs of the City.
1995 - Nicholas Lemann
1996 - Christine Boyer
1997 - S. Fredrick Starr
1998 - Andrea Kahn
1999 - Joseph Stroud
2000 - Dell Upton
2001 - Public Symposium on Arts and Economic Development
2003 - Alex Krieger

## Favrot Visiting Chair

The recently endowed Favrot Visiting Chair enables the School to bring in internationally renowned Architect as visiting faculty.
1996-97 - Carlos Jimenez
1997-98 - Vincent James
1998-99 - Vincent James
1999-2000 - Max Bond
2000-2001 - Paul Lubowicki and Susan Lanier
2001-2002 - Paul Lubowicki and Susan Lanier
2002-2003 - Hans Peter Woerndl

## Alumni Lecture

Beginning in the School initiated the annual Alumni Lecture which invites prominent and accomplished graduates of the School to make a presentation on their work and careers.
2001- Elizabeth Martin '87 TSA
2002- Wellington Reiter '81 TSA
2003- Dana Buntrock '81 TSA

## OTHER SCHOOL EVENTS

Architecture students and faculty enjoy a number of annual special events. Each year the student government sponsors Architects’ Week, a week of activities, lectures, competitions, workshops, and other events organized around a common theme or topic. Recent topics have been: "nightsky" whose participants included David Gutherie and Randy Brown; and "TranZense" with Alejandro Anavena, Jim Brown, and Jim Gates.
In addition to the regularly scheduled public lectures, numerous alumni, visitors and local practitioners participate in the design studios and other classes, by serving as guest lecturers, reviewers and field trip guides.
The School of Architecture Student Government also sponsors and organizes Friday afternoon social gatherings, usually held in the patio outside the School, and the annual Beaux Arts Ball, an evening extravaganza.

## PUBLICATIONS

The School of Architecture publishes an annual ReView featuring work of the design curriculum. The ReView is distributed to alumni, friends of the School, students, and prospective students. Offering an annual record of the School's work and activity, the ReView is an important means of communication with our concerned constituencies, colleagues and interested parties.
The independent journal AULA: Architecture and Urbanism in Las Américas is edited by a TSA faculty member Dr. Robert Gonzalez. AULA publishes scholarly research and criticism on both historical and contemporary Latin American topics.

Other special publications include an occasional newsletter and special theme publications on lectures and other programs.

## STUDENT GOVERNMENT

The School of Architecture has its own student government which organizes student activities, hold student meetings, attend faculty meetings, administer the annual Faculty Award (given by the graduating class each year to an instructor for teaching excellence). In addition, recent student government projects have included a "Big Buddy" system and other contributions to first year orientation. Tulane students are active in campus and national student affairs.

## AIAS

The Tulane chapter American Institute of Architectural Students is an active student organization focused on program benefiting students in their professional development. AIAS sponsors numerous professional and social programs and events.

## HONOR SOCIETY

Tau Sigma Delta is a national honorary architectural fraternity open to fourth and fifth year students. Membership is based on scholarship, leadership, character, and creative ability. The Tulane chapter of Tau Sigma Delta is the continuation of an earlier organization called the Gargoyle Society.

## SPECIAL PROGRAMS

## Directed Study

The Directed Study option allows a student to propose a course of individual study in a subject that is not available within the regular curriculum. Under the direction of a faculty member he or she has chosen, the student designs course objectives, methods, content, and requirements. The Dean prior to registration must approve course credit. The student continues to work closely with the faculty advisor throughout the semester through scheduled meetings. Students register for a directed study through the School of Architecture Director of Academic Affairs office. Credit is awarded and final evaluation undertaken jointly by the faculty sponsor and the Dean.

## Junior Year Abroad

Students in the School of Architecture may participate in this Tulane honors program during their fourth-year. TSA students typically study at schools in Great Britian, Scotland, or Spain. Courses taken abroad under the JYA program carry credit toward graduation, and grades earned count toward the cumulative grade point average. Application to the JYA program is made through the School of Architecture Director of Academic Affairs office in the fall of the third-year. Architecture students with at least the required minimum grade point average of 3.3 are notified of their eligibility for consideration and then submit to the Director of Academic Affairs a statement of interest. Program participants from the School of Architecture are selected and recommended to the JYA committee of the school. In addition to academic achievement, candidates are judged on the basis of maturity, seriousness of purpose, and self-sufficiency. (See the University-wide section for further information.)

## Summer Programs Abroad

The School of Architecture sponsors various programs of study, research, and travel during the summer. These programs, developed by individual faculty members, carry elective and/or design platform credit. Programs offered change over time, but recent programs have been conducted in Finland, Central Europe, Spain, and Guatemala. All of these have included additional travel associated with the curriculum.
Any student interested in a program submits an application stating whether the student seeks design studio credit or elective credit for the work. While no specific grade point average is required for participation in these programs, the Dean and the director of each particular program counsel each student to ascertain the suitability of the program for the student. In considering the student's maturity and the studios previously taken, the Associate Dean, in consultation with the student's advisor, may determine that a student should receive only elective credit and not design studio credit. The Dean will determine whether a given student may substitute such a studio for part of his or her summer work requirement.
Proposals for work in other summer programs must be approved by the Dean and are treated as transfer credit.

## Academic Policies

## HONOR CODE

Regulations regarding student conduct are given in Supervision of Student Conduct, which is available in the Office of the Assistant Dean of Student Services. The School of Architecture Honor Code and information on the Honor System are available in the Director of Academic Affairs' office. Students accused of conduct or Honor Code violations will be given a hearing in accordance with the procedures described in these documents. Penalties range from a reprimand to disciplinary probation, suspension, and expulsion. Suspension occurs for a specified period of time, and the fact is entered in the student's record and transcript while it is in effect. Expulsion is entered in the student's record and will appear on all transcripts issued after that time.

## COURSE LOADS

The normal course load for undergraduate students varies from 16 to 19 credits per semester. The student who completes these credits each semester in the required and elective courses as outlined in Programs of Study will meet the graduation requirements in the customary five years. A lighter load must have the approval of the Dean.

Students with a 3.0 or higher grade point average in the previous semester may request permission from the Dean to register for more than 19 credits.

## ADVANCED STANDING

Students normally proceed through the architecture studio and platform courses sequentially. The exceptional student who feels his or her design work merits advancement into a higher level studio course must be sponsored by a member of the faculty in a request for advancement. The faculty sponsor petitions the Dean in writing; the Dean convenes the faculty to judge the merit of the faculty sponsor's proposal. The faculty makes a recommendation to the Dean regarding the appropriate level of architectural design instruction for the student.
For architecture courses other than studio and platform courses, students with superior ability or previous course work in a given subject area may request that the instructor of that subject review their past work and transcripts. The instructor makes an evaluation to determine whether or not the course should be waived or credit given.

## AUDITING COURSES

Any full-time undergraduate student may audit courses without credit in any college of the University. Auditing courses requires formal registration and approval of the instructor. Students in the first year are urged to take all courses for credit rather than to audit or visit them.

## CLASS ATTENDANCE

Regular attendance at classes, studio and laboratory periods, and scheduled course conferences is required; for most students it is essential to successful academic progress. All absences must be reported to the course instructor; the only excused absences are those for reasons of health or crisis, and must be justified with written documentation.

Unexcused absences could reduce a student's course grade, as will late arrivals or early departures from class. Three consecutive absences or four nonconsecutive absences will, in normal circumstances, mean that the instructor may give a WF grade to the student.
Instructors are not authorized to excuse absences which extend holidays.
A student who stops attending a course listed on his or her registration form without formally dropping it receives a WF grade if recommended by the instructor on or before the official deadline for authorized drops. Students should officially withdraw from a course if they are no
longer attending it. After that date, the student will be assigned an UW as a final grade. (See University-wide section for further information.)

## EXAMINATIONS

Attendance at final exams is required. A student who must be absent from a final examination will be given permission to take a special examination only if he or she presents to the course instructor and the Dean's office an acceptable excuse and appropriate documentation before or within three days after the examination. A student whose absence from an examination is excused will be given an I (Incomplete) and a makeup examination; a student whose absence is not excused will be given an F in the course. Incomplete grades must be resolved with final grades reported to the dean's office within thirty days from the end of the semester or the I grade becomes an F. (See University-wide section for further information.)

## GRADES

The School attempts to keep its students informed of their progress at all times. Federal law prohibits the sending of grade information to third parties, including parents and guardians, unless the student provides written authorization for release of such information by the Office of the University Registrar or the Director of Academic Affairs. A student who has a complaint regarding grading or academic evaluation has recourse to the grievance procedure developed by the University Senate Committee on Academic Freedom and Responsibility of Students. Copies of the Student Grievance Procedures are available in the Director of Academic Affairs office. The student must first discuss the complaint with the professor; then, if dissatisfied, submit a written complaint to the Dean of the School of Architecture.
At the end of each semester, a final course grade is given in each subject. This grade is based on all the student's work during the semester and is entered on the student's transcript. The School of Architecture uses the University-wide grading system for courses. Exceptions are as follows:
Pass Satisfactory completion of course with no grade points.

## Fail Failing

The Pass/Fail grade type is used in specific courses designated by the Faculty. In Master of Architecture, Thesis (DSGN 502) the Pass/Fail grade type includes commend (CM) for exceptional projects as designated by the thesis directors.
WF Withdrawn with failing grade
WF grades may be administratively assigned, for excessive absences, for disciplinary penalty or for failure to attend a course, which is shown on registration records. WF grades are treated as F grades in computing semester and cumulative averages. They remain on the record even if the course is later completed successfully.
W Withdrawn
W grades do not imply a penalty or affect the grade point average.
I Incomplete
Any officially authorized I grade, if not resolved (changed to another grade) within 30 days after the end of the semester, is recorded as an F.
Pr Progress
This grade is used to denote progress during the first semester of a year-long special project or honors course. When the final semester's grade for the course is awarded, the Pr is changed to reflect that grade and grade points are awarded accordingly.
X No Credit or Grade

This grade designates course work taken without credit awarded or grade recorded. The student may reenroll in the course to obtain a grade and credit.
S Satisfactory completion of a course on the satisfactory/unsatisfactory option, with no grade points. (Minimum C- performance level required.)
$\mathbf{U} \quad$ Failure to earn credit in course which was taken on the satisfactory/unsatisfactory option.

## Grade Point Averages

Cumulative grade point averages are computed by dividing the total number of quality points by the total number of credits attempted. Credits completed on the S/U basis are not included in this computation.
Semester grade point averages are calculated for architectural design courses (the design average) and for all courses together (cumulative average) by dividing the number of quality points by the number of credits attempted. Credits completed on the S/U basis are not included in this computation.

## Satisfactory/Unsatisfactory Option

Qualified second through fifth-year Master of Architecture I students who are not on probation may elect to take one course in a standard semester course load on a satisfactory/unsatisfactory basis. No more than 4 satisfactory/unsatisfactory courses may be counted toward graduation. The satisfactory/unsatisfactory option may not be used in required course work or in architectural electives. It may be used in non-architectural electives being used to satisfy distribution requirements.
Satisfactory/unsatisfactory grades do not carry quality points and are not included in computation of grade point averages. A minimum performance level of C - is required for the grade of "satisfactory."
The School does not accept satisfactory/unsatisfactory or pass/fail credits earned at other institutions. Students should be aware that satisfactory/unsatisfactory credits might not be acceptable in transfer to other institutions.
The satisfactory/unsatisfactory option form must be filed within the prescribed period following registration and no later than the official calendar deadline. Changes to or from satisfactory/unsatisfactory status after the deadline has passed cannot be authorized. There are no exceptions.

## DEAN'S LIST

After final semester grades have been reported, a list is prepared of all students who have distinguished themselves by superior academic achievement. First and second-year students are placed on the Dean's List if their grade point averages are at least 3.25 ; third, fourth, and fifthyear students are placed on the Dean's List with grade point averages of 3.50 or higher.

## LEAVE OF ABSENCE

Students in good academic standing normally attend the School of Architecture each semester consecutively; however, occasionally it is in the best interest of the student to take a leave of absence from the School for a semester or a year. Students considering a leave of absence should consult the Director of Academic Affairs.

To obtain a leave of absence, the student must make written application to the Dean stating the reason for the request and the proposed period of absence. Upon written approval by the Dean, the student is guaranteed readmission if all conditions of the request and approval are met. (See University-wide section for further information.)

## VOLUNTARY WITHDRAWAL

## From a Course

To drop a course, a student must obtain the approval of the instructor and the Dean's office. Withdrawals from courses are not recorded for the first four weeks of class. After the fourth week of classes and before the last date for drops as reported in the official calendar, a grade of W will be recorded only if withdrawal is officially approved and the instructor reports satisfactory standing in the class at the time of withdrawal. Students considering withdrawal from required courses must consult the Director of Academic Affairs; required courses in the School of Architecture must be taken sequentially and withdrawal may result in the extension of the program of study. Students must always carry the fulltime minimum course load of 12 credits.

## From the School

A student who decides to withdraw or resign from the School of Architecture after the semester begins must discuss withdrawal plans with the Dean and file a written request for permission to withdraw from all classes. This statement should include the student's reason for requesting to withdraw. Withdrawal forms and a letter from parent or guardian indicating awareness of the withdrawal plans must be turned in at the time of withdrawal. Withdrawal forms may be obtained at the Director of Academic Affair's office.
The authorized date for withdrawal generally is the date that the formal withdrawal request is received. This date is important in determining eligibility for refund or account adjustment and grading status.
Requests for retroactive medical withdrawals cannot be approved after a student has completed his or her final examinations and the semester has ended. (See University-wide section for further information.)

## QUALITY OF WORK REQUIREMENTS

The School of Architecture is not obligated to give individual warnings to students in danger of probation or exclusion, or to their parents. Each student is responsible for his or her academic performance and its consequences.

## Promotion

School of Architecture students are expected to follow the appropriate curriculum outlined in Programs of Study. Students are classified within a given year according to the number of credits earned. A student may be excluded from the School of Architecture for lack of sufficient academic progress toward fulfilling degree requirements. Failure to meet stated degree requirements within a reasonable period of time may result in exclusion. Sufficient academic progress is also measured by minimum credit and grade point requirements.
To qualify for readmission for a second-year, a fulltime student must pass 24 credits of C average work in a calendar year (August to August, including a summer session, if necessary).
To qualify for readmission for a third year, a fulltime student must pass 50 credits of C average work in the preceding two calendar years (August to August).
In each subsequent semester, a fulltime student must earn at least 12 credits of $C$ average work.

## Probation and Exclusion

At the end of the semester a student must have 12 hours of C average work or be placed on probation. C average work is defined as courses whose quality point average is at least 2.0. Any student who does not remove C average probation by the end of the spring semester will be required to attend summer school to continue enrollment in the School. Normally, only work undertaken in Tulane University Summer School may be applied toward removal of probationary status or toward remedying a grade point deficiency.
Students in the School of Architecture are also placed on probation in the following instances:

- A student, whose cumulative academic grade point average falls below 2.0 for a given academic year, as calculated at the end of the spring semester, is placed on academic probation for the subsequent academic year. If the student's cumulative average has not risen to 2.0 by the end of the probationary year, the Student is not permitted to remain in the School.
- A student, whose grade point average in architectural design courses falls below 2.0 for a given academic year, as calculated at the end of the spring semester, is placed on design probation for the subsequent academic year. If the student's year average in architectural design courses has not risen to 2.0 by the end of the probationary year, the student is not permitted to remain in the School.
- A student excluded from the School as a result of failure to remove academic or design probation may reapply for admission only after at least one year of work under the supervision of an architect approved in advance by the dean. Upon reapplication, the student must submit examples of work undertaken during this period, along with a letter of evaluation from the employer. A student readmitted to the School under these circumstances must achieve a grade point average of 2.0 (C average work) in the first semester; or he or she will not be permitted to remain in the School or to reapply for admission.


## Student Work

Any work performed for credit by students enrolled in the School of Architecture may be retained by the School for its records. Students may, as an alternative, provide suitable reproductions. Thesis students are required to provide complete documentation of the thesis to the School for the Architecture Library. Although some student work may be retained for a period of time in order to document it, the School is not responsible for any student work (or equipment) left in Richardson Memorial Hall after the end of the term in which it is executed.

All examinations and assigned written work other than design work that are used by an instructor to arrive at an academic evaluation, and are not returned to the student, are kept by the instructor for a period of six months after the semester's end.

## Studio Work Portfolio Requirements

Each student in the School of Architecture maintains a portfolio, in 8.5 " x 11 " format, recording comprehensively the design studio work undertaken in the School each term. This portfolio is collected and evaluated by design faculty during the spring semester of the second year. At this time a student may be asked to meet with a group of faculty for discussion of the work and his or her status, progress, strengths, and weaknesses. Although the portfolio review is advisory, maintaining a portfolio is an important part of the curriculum. It provides a valuable opportunity for a student to see the work from a broader perspective than a single semester's evaluation affords.

Submission of the portfolio is required for application to many of the School's special programs and academic opportunities as well as consideration for awards offered by the School. This portfolio also forms the basis of the professional portfolio each student assembles to seek summer and long-term employment.

## SUMMER SCHOOL CREDIT

Students sometimes wish to earn extra academic credit or fulfill requirements during the summer months. Only summer courses taken in Tulane University Summer School will be considered in computing grade point averages. In order for academic work undertaken during the summer at other institutions to receive Tulane credit, students must have the courses they wish to take in summer school approved during the previous spring semester, and must earn a grade of C or better. Course descriptions and other information about the institution to be attended must be supplied. Forms available in the Director of Academic Affairs' office must be filled out and approved by the appropriate university department to determine equivalency to Tulane offerings: for architecture courses, the Dean's office; for English courses, the English department, etc. Courses must be so approved before they are considered for transfer of credit.

## TRANSFER CREDIT

Except for approved summer school credit (see above), once a student enrolls in the School of Architecture, only work undertaken within Tulane University-including the approved programs described under Special Academic Opportunities-may be applied toward the requirements for a degree in the School. Work undertaken at another institution during a leave of absence is not considered for credit unless prior written approval has been obtained from the Dean and the student earns a grade of C or better.

## REPEATED COURSES

A course completed with a passing grade may be repeated. The first completed credit with a passing grade is counted toward graduation and in the cumulative average. The repeated effort is recorded on the permanent record, but does not count as credit earned and does not affect the cumulative average. If an F, X, or WF graded course is repeated, both the original F, X or WF and the grade for the repeated effort are recorded. F and WF are counted in the cumulative average (the grade X is not counted for credit or in the cumulative average).

## COMMENCEMENT POLICIES AND PROCEDURES

A candidate for graduation must complete the total number of credits and all courses required for his or her program of study, must have a cumulative grade point average in all academic courses of at least 2.0 for the Master of Architecture I (five year program), and must receive certification for graduation by the faculty of the School of Architecture.

Students must complete a minimum of two years (66 credits) including the final year (30 credits) of their total degree requirements in residence at Tulane in the School of Architecture.
Unless excused by the Dean, candidates are required to attend commencement. Requests for an excused absence must be submitted in writing at least two weeks prior to the ceremony.

## FELLOWSHIPS AND AWARDS

## Fellowships

The John William Lawrence Travel Research Fellowship and the Moise \& Lois Goldstein Research Travel Fellowship are awarded annually to a student for research during the ensuing summer. Any undergraduate student who has a grade point average of 2.5 or above and completed third-year design is eligible.

Each eligible candidate, notified by the Dean in the first semester, may submit a detailed proposal for research to be undertaken if awarded the fellowship. Proposals include a format for reporting findings to the School and the sponsors, as well as the nature of a permanent record of the research for the School.

The recipient and an alternate are selected by a panel consisting of the Dean of the School, and two members of the faculty appointed by the Dean.
The Class of '73 Architectural History Travel Fellowship shall be awarded annually to a student for research on the subject of architectural history during the summer prior to the final year of course-work. Any student pursuing a Master of Architecture degree who has completed third-year design is eligible to submit a detailed research and travel proposal for consideration by a committee composed of faculty and one member of the Class of 1973. The recipient must produce a document to be catalogued in the Architecture Library as a permanent record of the research, and also make a public presentation of their work at the School on the second Friday of November.

## Awards Presented at Graduation

The Alpha Rho Chi Medal is awarded by this national architectural fraternity each year to a graduating student on the basis of leadership, service to the School, and professional promise as indicated by the student's attitude and personality. The student is selected by the faculty.
The American Institute of Architects Medal is awarded by the American Institute of Architects/AIA Foundation Scholarship Program to a graduating student for the highest overall academic achievement, as evidenced by grade point average. A certificate is given to the recipient as well as to the runner-up.

The John William Lawrence Memorial Medal is presented by the faculty of the School to a fifth-year student for design excellence. This award was instituted in 1971 to honor the School's former Dean.
The Faculty Thesis Award is awarded by the faculty of the School for superior achievement in thesis study.
The Ronald Katz Award is awarded annually by the Thesis Design Directors. The award was instituted in 1991 in memory of Ronald F. Katz '63. It is awarded for outstanding personal growth through thorough and careful development of a provocative thesis idea.

## Other Awards

The Nathaniel Cortlandt Curtis Memorial Prize is awarded for an outstanding essay relating to the theory or history of architecture.

The Thomas J. Lupo Award is awarded annually to a student or class for excellence in metropolitan studies. The recipient is selected by the faculty.

The I. William Sizeler Award is given each year for the outstanding design by a fourth or fifthyear student in the field of high-density, commercial, mixed-use architecture.

## Courses of Instruction

The School of Architecture offers courses in seven subject areas: architectural design, design topics, structures/technology, history and theory, landscape \& urban design, professional concerns, and visual communication. Courses in architectural design, the Introduction to Architecture course (111), and some others are open only to architecture students; but other architecture courses may be taken by students in other Tulane divisions. Check with the Director of Academic Affairs, 304 Richardson Memorial Hall, about eligibility for a particular course.

Areas of instruction that include required courses list required courses before electives. Generally, in the University, courses numbered 100-199 are primarily for first year students; 200-299, second year students, and so on. 600 level courses can be either undergraduate or graduate level. 700 level courses are for graduate students. In general, courses with odd numbers are offered in the first semester, those with even numbers in the second semester, although elective courses may be offered in a different semester each year and may have either odd or even numbers. Not all elective courses listed in this catalog are offered every semester.
The amount of credit awarded for successful completion of each course is indicated in parentheses after the course title.

Course descriptions for new courses in the Master of Architecture I (M. Arch. I) curriculum will be made available as the courses are implemented.

## FACULTY

The full-time permanent faculty is listed below. The faculty is augmented by visiting instructors of national or international reputation and local architectural practitioners.

## Professors

C. Errol Barron, M.Arch., Yale University, 1967.

Eugene D. Cizek, B.Arch.: Ph.D. in Soc. Psych. and Urban Design, Tulane University, 1978, Koch Chair
Ronald C. Filson, B.Arch.: Dipl. Arch., American Academy in Rome, 1970.
Stephen P. Jacobs, M.Arch., University of Pennsylvania, 1967.
Karen Kingsley, Ph.D. in History of Art and Architecture, University of California, Berkeley, 1980, Favrot Professor.

John P. Klingman, M.Arch., University of Oregon, 1983, Favrot Professor.
Stephen F. Verderber, M.Arch.: Arch.D., University of Michigan, 1982, Favrot Chair.
Ellen B. Weiss, Ph.D. in History of Architecture, University of Illinois, 1984.

## Associate Professors

Ila L. Berman, D.Des., Harvard University, 1993, Harvey Wadsworth Professor.
Scott D. Bernhard, M.Arch., Rice University, 1988, Associate Dean.
Michael K. Crosby, M.Arch., University of California, Los Angeles, 1983.
Elizabeth Burns Gamard, M.Arch., Yale University, 1984, Favrot Professor.
Donald F. Gatzke, M.Arch., University of Wisconsin Milwaukee, 1979, Dean.
Bruce M. Goodwin, M.Arch., University of California, Los Angeles, 1979.
Carol McMichael Reese, Ph.D., University of Texas, 1992, Harvey Wadsworth Professor.

Scott W. Wall, M.Arch., Rice University, 1988.

## Assistant Professors

Elizabeth C. English, Ph.D. in Russian Architectural Theories, University of Pennsylvania, 2000.
Robert A. Gonzlez, Ph.D in History of Architecture, University of California, Berkeley, 2002.
Graham W. Owen, M.Des, Harvard University, 1990.
Sheryl Tucker de Vasquez, M.Arch., University of Texas, 1998.

## Architectural Design (DSGN)

REQUIRED COURSES
101, 102 Architecture Studio (5, 5)
Staff. As an introduction to the basic concerns and procedures of architectural design, students are given an immediate experience of the design process, developing their capacity to conceive, manipulate and analyze architectural form. Skills of architectural representation are stressed, enabling students to express and communicate their ideas. The studio develops the students' capacity for critical thinking through constructive evaluation.

## 201, 202 Architecture Studio (6, 6)

Staff. Second year studio concentrates on developed architectural form and design methodologies through processes of analysis, synthesis and transformation. Students work on the conceptual frameworks for their designs, with emphasis on issues of context, urban design, and cultural systems and their impact on architectural form. The relationship between form and content is studied. Different approaches to the making of form are investigated, along with principles of organization, such as spatial hierarchy, circulation, structure, and site relationships.

## 301 Architecture Studio (6)

Staff. The first semester of third year is the culmination of the required studio sequence; thereafter, students select their own platforms and thesis projects. Architecture 301 provides an opportunity for the student to synthesize the skills and ideas developed through two years of work. Projects are longer and more complex than those previously assigned. They generally include analysis and design at the scale of the neighborhood or the city, as well as thorough and detailed design of a large building with a complex program. Emphasis is placed on the coordination of structural and building systems in the design-work.

## 302, 401, 402, and 501 Architecture Platform (6, 6, 6, 6)

Staff. During the four semesters of architecture platform, upper-level students from all the degree programs work together in small groups with fulltime and visiting faculty. The platform studios offer a choice of topics and projects exploring a variety of architectural issues, theories, programs and building types. Topics range across the disciplines of building, landscape, interior, urban and industrial design. Students choose platform sections that suit their interests, needs and goals, in order to conceive and then apply their own developed design strategies and theories. This concentration develops areas of expertise beneficial to future professional growth.
A student must choose one Comprehensive Studio out of the four available semesters. This platform offers a design problem requiring the coordinated design of all aspects of a complex project: structural, mechanical and electrical systems, spatial and formal issues, siting, developed elevations, and attention to program and code issues. The semester centers about the design and siting of a building of moderate to large size that the student develops for an entire semester. Sketch problems and exercises may be included to isolate specific issues of coordination.

## 502 Master of Architecture Thesis (6)

Staff. The thesis project is the culmination of the architectural design curriculum. Students do their principal design and presentation work for individual thesis projects previously conceived, defined and researched (in 511 Thesis Research). Independence and responsibility are encouraged and supported by the thesis director, a faculty member available in regular studio sessions. Public presentation of the thesis projects at the end of the second semester allows for assessment of student accomplishments, both individually and collectively.

## 511 Master of Architecture Thesis Research (3)

Thesis Directors. Implementation of a flexible framework within which students construct the concepts, research and methodology for their upcoming design thesis project in the spring semester. Emphasis is on each student's individual preparation for the thesis project, as guided through regular consultations with a thesis director, and through an acquaintance with other students' progress. Each student produces a substantial document consisting of a précis, a comprehensive architectural program and site analysis, and annotated research with bibliographical information.

## History/Theory/Analysis (HSTA)

REQUIRED COURSES

## 111 Introduction to Architecture (3)

Staff. The theoretical, analytical and formal structure of architectural thinking, is shown through lectures, field trips, readings, tests and a semester notebook. This general introduction to architecture emphasizes its cultural, aesthetic, functional, phenomenal, social, historic, and professional dimensions.

## 211 History of Architecture I (3)

Staff. An examination of form and meaning in architecture and urbanism from prehistoric times through the Middle Ages using examples from prehistoric, Egyptian, Greek, Roman, Early Christian, Romanesque and Gothic design.
212 History of Architecture II (3)
Staff. An examination of the history of architecture from fifteenth through through eighteenth centuries.

## 311 History of Architecture III (3)

Staff. An examination of the history of architecture and urbanism through the 19th and into the early 20th centuries.

## 312 History of Architecture IV (3)

Staff. The architecture and urban forms of the 20th century, seen within the century's social, ideological and technological contexts.

## ELECTIVES (HTEL)

## 230 Introduction To Architecture For Non Majors (3)

E. Barron. A basic and general introduction to architectural history, theory and design with slide lectures will highlight the historical evolution of construction and technology, the development of symbolic forms and spatial conceptions, and the significance of buildings as a means of cultural expression. Note: not open to architecture students

## 235 Islamic Architecture (3)

K. Kingsley. The seminar examines architecture and urbanism in Muslim lands, emphasizing the $7^{\text {th }}$ to the $16^{\text {th }}$ centuries. Selected building types-the mosque, the palace, the tomb, and the garden-will be analyzed in detail in the context of regional traditions in, for example, Iran, Turkey, Spain, and India. The course also will investigate issues in the relationship between architecture and ornament, and between tradition and modernity. (Formerly HTEL 335)
250 Frank Lloyd Wright (3)
E. Weiss. An examination of the life and work of Frank Lloyd Wright, including individual monuments, formal themes, and theoretical foundations for the work. (Formerly HTEL 350)

## 274 American Urbanism (3)

E. Weiss. An examination of the ideas behind the forms of American cities in the 20th century. Introductory lectures outline European and American backgrounds to contemporary urbanism. Students present two slide lectures to the class on a topic chosen with the instructor. (Formerly HTEL 374)

## 331 Other Modernisms: The Avant-Garde in The Topics (3)

R. González. This seminar is an introduction to the field of Latin American modern architecture and will introduce students to projects that range from newly constructed cities like Brasilia to avant-garde experimental projects like Mathias Georitz's "El Eco" in Mexico City. Focusing on various themes (nationalism, internationalism, tropicalism, utopianism, etc.), the seminar introduces key terms and examples in the built environment. Latin American modern architecture presents alternative examples-"other modernisms"-to the mainstream modern projects of the United States and Europe. The notion of the "avant-garde in the tropics" suggests a critique of how "the tropics" has often been treated as a synechdoche, as a representation of all of Latin America. A critical reconsideration of "the tropics" will occur as we study modern Latin American architecture's specific thematic currents.

## 347 Rethinking Anthropomorphism: Body Maps \& Architectural Spaces (3)

I. Berman. This seminar focuses on the constitutive and mutually defining relations between the human body and architecture and the shifting theoretical frame that has governed the development of their relations.

## 348 Modernism

K. Kingsley. An examination of American modern architecture from c. 1945 into the early 1970s, which focuses on the 1950s and 1960s, the great period of American modernism when American architecture had world-wide prestige.

384 Housing in the $20^{\text {th }}$ Century (3)
S. Bernhard. This course is an introduction to the physical and theoretical issues surrounding the creation of multi-family housing during the $20^{\text {th }}$ century. The course is a seminar following the chronological sequence of development in housing ideas throughout the United States, Western Europe, and Japan. Concepts in housing are discussed academically and then experiments in implementation are perused and discussed. These experiments are offered as short exercises throughout the course and form part of the basis of evaluation. (Formerly THRY 384.)
421 Modern Architecture, Place and Culture (3)
S. Tucker de Vazquez. In this seminar students will explore the cultural and geographic heritage of four modern architects: Tadao Ando, Gunnar Asplund, Luis Barragan and Samuel Mockbee. The course will examine how the architect's perception of his distinctive "place in the world" transformed the universal forms of modernism into places of emotional recognition and local identity. In addition to exploring the physical qualities of place, the course will draw upon the work of philosophers, novelists, poets and filmmakers, among others, to reveal the deeper threads of order that connect the whole of a culture.

## 425 Representing Culture and Ethnicity in the Public Sphere (3)

R. González. This seminar will explore ideas and forms of public space and public life in the city in their manifestations-civic, social, religious, formal and informal, official and unofficial, licit and illicit-primarily, but not exclusively in the United States and Latin America.

## 436 Koolhaas, Machado and Silvetti, Moneo: Theorizing the Real in Contemporary Practice (3)

G. Owen. The course focuses upon selected works of three noted and influential contemporary practices, and in particular on the way that each understands the idea of the "real" as a guiding and originary idea in architecture. Significantly, each of the three practices operates crossculturally, drawing attention to the frictions among ideas of regionalism and global culture, universal modernity and local tectonics. Equally significantly, these practices are recognized for their theoretical writing as well as for their projects, enabling comparative analysis within the practice itself. (Formerly THRY 436)

## 446 Philosophy of Architecture

B. Goodwin. This seminar begins with a consideration of philosophy as a foundation for the development of an architectural theory. After a discussion of some basic concepts and terms we sketch a broad outline of the categories and organization of the discipline of philosophy. We then study the rationalist and empiricist positions in architectural theory, the emergence of Kantian critical philosophy, the shift in emphasis in $20^{\text {th }}$ century philosophy from epistemology to ontology that is characteristic of Existentialism, and the late $20^{\text {th }}$ century attack on traditional epistemology characteristic of poststructuralism. We then discuss the emergence of literary theory as a paradigmatic discipline in the last 30 years as well as the expansion of western philosophy to include aspects of Zen Buddhism, Taoism, and eastern mystical traditions. With this foundation, the course focuses more specifically on theories of architecture and aesthetics and their relationships to various philosophical positions. (Formerly THRY 446)
453 Survey of Russian Art (3)
W. Brumfield. An introduction to the art and architecture of Russia from the 12th century to the present. The first part of the course deals with the medieval period (church architecture, icons, frescos); the second part begins with the assimilation of Western European styles during the 17th century and concludes with a survey of developments in the Soviet Union.
454 Material Topography and Architectural Landscape (3)
I. Berman. An exploration of the complex relationships that exist between architecture and the material landscapes that constitutes its site - that encompassing outer territory that defines the context within which architecture is situated and grounded, and against which it is seemingly defined. The course will specifically focus on the relation of architecture to the environment, calling into question the tools and techniques architects have employed to map, document and analyze site conditions, and the built objects produced. (Formerly THRY 450)
456 Theory and Anti-theory in Contemporary Practice
C. McMichael Reese. The relationship of theory and practice shapes architectural production. The course focuses on interfaces between theories of architecture proposed this century from within the profession by practitioners and those proposed from without by philosophers, artists, poets, filmmakers, and scientists, among others. One of the goals of the course will be to examine the interconnected roles that theory and practice play in establishing architecture as a critical cultural activity. (Formerly THRY 448).

## 463 Sexuality and Space (3)

I. Berman. This seminar focuses on the relationship between sexual subjectivity and the construction of space. The outlining of potential intersections between contemporary feminist thought and architectural practice, this course critically examines the presumed sex/gender neutrality of architectural ideology and representation while simultaneously investigating formation of a critical, transformative and affirmative feminist space. (Formerly THRY 463)

## Design Topics (DSTP) <br> REQUIRED

## 432 Issues in Contemporary Architecture (3)

I. Berman. This course will trace and examine some of the most critical bodies of theory that have influenced the development of contemporary architectural thought and practice since the late 1960s. The course will emphasize and study important ideas and theoretical systems that have evolved in fields outside of architecture from a wider network, a complex interdisciplinary web, within which architecture is situated and against which its practices gain a certain coherence and cultural validity, while providing the external material that architects have traditionally encountered for the inventive transformation of their practice.

## ELECTIVES

## 178 Introduction to CAD (Computer Aided Design) (3)

S. Jacobs. CAD modeling is presented as one of a battery of graphic tools available for generating, developing and presenting design ideas. For students with no prior computer or CAD experience. (Formerly DSTP 378)
288 Architecture and Music (3)
M. Scheuerman. A survey and research course dealing with the relationship through the ages of architecture and music and how each one complements the other. Some special topics that will be investigated include proportion, acoustics, notation versus drawings, aural versus visual, structure, composition, harmony,
"musical" buildings, "architectural" music, decoration and ornamentation. No musical training is required. (Formerly VSCM 388 and DSTP 388)

## 320 Facility Planning and Evaluation (3)

S. Verderber. An introduction to the theory and practice of architectural programming and postoccupancy evaluation. Both activities are seen as a creative process, as integral components of architectural design, and as distinct professional service.

## 334 Shop Tech and Materials (3)

S. Richards. Through the course of several projects students will be introduced to the methods, tools and techniques of working with wood, metal, plaster, and plastics. This is a 'hands-on' class with the intention of giving the student a basic understanding of the logic of making things from a practical perspective.
368 Architecture and Human Health (3)
S. Verderber. An interdisciplinary course exploring the complex relationships among architectural design, human well-being, and health. Emphasis is placed on the planning and maintenance of health care facilities. The course focuses on user-based planning and design methods.

## 375 Digital Graphics (3)

S. Longo. This course is intended to explore the fundamental concepts of two dimensional and three dimensional computer imaging. Pen and paper, tracing paper, mylar, drafting, colored pencils, napkins, cardboard models, water colors, pencils, straight edge, x-acto knife...are all tools used to represent ideas and thoughts relating to architecture and design and each adds its unique ability. So too is the computer yet another tool, not a replacement, to help develop our
goals. Computers add a variety of options to architecture. In addition to providing a presentation tool, it excels in its ability to aid in the design process. This course will explore the concepts of 2D and 3D modeling and how its application helps shapes and objects create form and space. Once the general understanding of the structure of modeling software is obtained, the ability to visualize digitally can be applied to any object or space, or other software programs. Enrollment is restricted to $1^{\text {st }}$ year, $2^{\text {nd }}$ year, $3^{\text {rd }}$ year students.

## 385 Computer Graphics (3)

B. Bell. An intermediate course in microcomputer graphic applications to architectural design. Students acquire proficiency in the use of two and three dimensional graphic software.

## 464 Advanced Digital Media (3)

B. Bell. An advanced course in computer graphic applications used in the production of a design portfolio. Through the introduction of a variety of software students acquire graphic and production knowledge necessary to produce both digital and analog portfolios. A general working knowledge of basic graphic presentation skills and 3D digital modeling will be expected.

## Structures/Technology (STEC)

## REQUIRED COURSES

## 122 Structures/Technology I (3)

B. Goodwin and E. English. An introduction to materials and methods involved in building construction, providing an overview of the many systems that must be understood and applied in the design of buildings. The role of structure, materials, and thermal comfort and mechanical systems play in generating and defining building form is explored historically in current practices. Corequisite: Design 102.

## 221 Structures/Technology II (3)

E. English. Dead loads, live loads, and seismic loads. Code requirements. Design and analysis of wood trusses, beams, columns, walls, and connections. Shear wall and diaphragm systems for lateral loads.

## 222 Structures/Technology III (3)

M. Crosby. An introduction to building and site technology, presenting the role of architecture in mediating the extremes of the environment. Topics include climate responsive design, site planning, passive cooling/heating, and mechanical building systems. A qualitative and quantitative comparison of the environmental effects of architectural decisions is undertaken for the four major climate zones in the United States.
321 Structures/Technology IV (3)
J. Klingman. A continuation of the structures/technology sequence. Including day-lighting, artificial lighting, acoustics, and the integration of active and passive environmental systems and issues of environmental sustainability systems.

## 421 Structures/Technology V (3)

E. English. Steel and concrete structures. Design and analysis of tension compression, bending elements, and combinations. Design of floor systems including connections and details. Longspan systems including rigid frames, arches, and shells. Lateral load systems including portal and braced frames.

## ELECTIVES (STEL)

325 Project Methods and Management: A Case Study Approach to the Building Process (3)
P. Stouse. Using two area building projects currently under construction as case studies, this course examines the architect's role as a stakeholder in the building process. We will sequentially consider the phases of building construction from project inception, architect selection, design, and preparation of construction documents, through competitive contractor bidding and
construction, with emphasis on construction management. Project management software and critical path method scheduling techniques are introduced and utilized to graphically present interrelating phases of the project life cycle and the management tools used in project execution. Through periodic site visits and discussions with the case project professionals, we will examine some of the particular challenges the architect will encounter as construction team member.
342 Technology and Form: The American Skyscraper in its Urban Context (3)
E. English. This course examines the technology of the skyscraper in relation to its cultural context and iconographic content. More specifically, we study innovations in technology in relation to other issues critical to the development of skyscraper form, taking a case-study approach and using this building type as a means to investigate the dynamics of the relationship between technology and culture. How may the development of new materials, structural systems and construction techniques be understood as manifestations of social / historical / cultural phenomena? The geographical and ideological sites of New York and Chicago serve as the initial context for this investigation.

## 424 Sustainability \& Tectonics (3)

J. Klingman. The course offers an opportunity to explore two major areas of building technology in greater depth. The first of these is sustainable design. While the concept of sustainable design is widely lauded, fundamental principles and techniques of implementation are less clearly understood. Sustainability will first be investigated regarding issues at the scale of the site, linking place and building. Subsequently sustainability at the scale of building systems and materials will be a major focus. The second focus of the course is tectonics, consideration of the physical conditions of architecture, including the logical application of materials and systems. These issues will be considered first in the relation between structure, envelope and finish conditions, particularly at the building perimeter. Subsequently, the interweaving of systems within the building and their expression will be the topic. This course is an extension of the material from the required technology sequence, and the completion of that sequence is a prerequisite for admission to this course.

## Landscape and Urban Design (LNSP)

440 Natural Landscape and Built Form (3)
M. Thomas. An approach to the understanding of the interrelationships of man, nature, culture and technology, and the resultant built environment. Each semester the course focuses on a distinct region, emphasizing local flora, fauna, and climatic considerations in relationship with native, imported and evolving culture. Classes focus on design issues that integrate plant materials in built environment contexts.

## 441 Site Planning (3)

E. McNaughton. This course is a study and exploration into the art and science of site planning and its integration with architecture. Emphasis will concentrate equally on aesthetic and technical issues, and their resolution through design. Class focus will be on the development of a technical knowledge base for use in site planning and design decisions along with an expansion of the students' sensitivity to observation, experiencing and understanding of the site.

## Professional Concerns (PFCR)

REQUIRED COURSE

## 415 Concerns of the Profession (3)

R. Filson. An overview of professional concerns through examination of the history of the profession, the ethical issues confronting individual practitioners and the profession at large, and the activities, services, markets, clients, and the organization of professional firms. Issues relating to project management, marketing, and the economic base of an architecture practice are discussed.

## ELECTIVES (PCEL)

352 Ethics, Efficacy \& Architecture in the Globalized Economy (3)
G. Owen. The course is an interdisciplinary seminar, deliberately crossing the boundaries among theory, professional practice and pedagogical studies, and considering the significance for architecture of issues in economics, sociology, criminology, political science, and intellectual history. This broad scope is essential in addressing paradigms of value and action as they constitute ethical (or counter-ethical) models within architectural practice, education and criticism in an increasing globalized economy and professional context. We will examine the political economy of the relations between practitioners and critics, between publications and public relations, intellectual ethics and democratic practices.

## 354 Studies in Contemporary Practice (3)

E. Gamard. Taking a moderate, albeit speculative approach, this course focuses on the manifold internal and external contexts that inform architectural practice and education. These include the history and development of the profession and education practices, the role of technology, the impact of litigation and contemporary culture; economic 'drivers' and wealth creation; management practices; the social underpinnings of architectural education and practice; and the various criteria pursuant to the mantle of 'professional practitioner.' The course concludes with a significant case studies component, where those firms that exhibit a particular 'typology' of practice are analyzed in light of the issues addressed over the course of the term.

## 463 Legal Concerns of Architecture (3)

V. Stilwell. The legal aspects of architectural practice, including the rights and obligation of architects, their professional engineering consultants, owners, contractors, subcontractors, material men and suppliers, to one another and to third persons. The course includes specific topics such as professional registration, professional liability insurance, contract information, conditions of construction contracts, claims normally encountered and methods of dispute resolutions, lien rights and copyrights. The general subject matter of this course forms part of state licensing examinations and is essential for practicing architects.

## Visual Communication (VSCM)

## ELECTIVES

## 176 Drawing Techniques for Architects (3)

M.Scheuermann. This is a course that explores, in detail, various drawing techniques useful to architects in the initial design process through the presentation phase of a project. The course will focus not only on freehand drawing, layout and rendering techniques, but also on mechanical drawing shortcuts as an aid in presentations and model building. (Formerly VSCM 376)

## 185 Photography (3)

M. Scheuermann. A basic introduction to the use of the 35 mm camera. Lectures, demonstrations, and discussion focus on the operation of the camera and lenses, developing negatives, and printing procedures. Students are required to submit negatives and prints for class criticism and discussion. Students must own or have access to a single lens reflex 35 mm camera with adjustable aperture and shutter speed. The architecture darkroom is available for a fee to students enrolled in the course. (Formerly VSCM 385)
373 Color and Light (3)
A. Weiskopf. The main emphasis in this introductory studio painting course will be on the interplay of color and light. Translating these visual perceptions onto canvas in two dimensions, students will acquire principles of color theory and apply these principles to mixing color. Students will also discover how to structure a painting by organizing line, plane, volume and space, which are the rudiments of composition. An additional aid in understanding composition will be through the analysis of particular painters.

## 374 Architectural Drawings (3)

E. Barron. Drawing is not a "talent," it is a willingness to pay attention. The "talented" succeed through a desire to be specific and precise, to convey a connection to, a "feel" for, that being observed. Drawings, like buildings, are the result of a process involving an understanding of structural and surface conditions, the role of geometry, and a sensitivity to the effects of light. Exercises involving freehand drawing develop attentiveness and engagement, with special emphasis on the development of a personal sketchbook.

## 383 Cinematic Architecture/Digital Filmmaking (3)

M. Crosby. By viewing, critiquing, and making, students will explore the design process through visual thinking. The technology used in digital film making allows students to view, edit, and make a short digital film.

## Urban Studies (RBST)

## ELECTIVES

## 344 Interpretive Urban Design (3)

G. Mouton. This course will examine the concept of interpretive issues within the traditional urban design framework today. Interpretive issues have become a major part of cultural and economic development in city design. Within the relocation of traditional downtown retail to suburban malls, cultural development has become a principle economic tool in re-establishing critical mass in the downtown. (Formerly DSTP 344)

## 352 Inventing Urban Identity in the Americas,

 19th-20th c. (3)C. McMichael Reese This course focuses on the development of America's major cities and particularly on the role that architecture and urbanism played in creating images of urban modernity. Emphasized are selected American cities which have experienced significant immigration after 1880 and in which questions of cultural identity have loomed large, including Montreal, Toronto, Vancouver, New York, Washington, Chicago, Los Angeles, New Orleans, Havana, Mexico City, Montevideo, Santiago de Chile, Lima, Sâo Paulo, Rio de Janeiro, and Buenos Aires. Within an interdisciplinary framework of investigation, the course considers the ways in which architectural and urbanistic ideas have been presented and disseminated for national and international consumption.*

## 641 Urban Analysis and Design

I. Berman. The primary objective of this course is to investigate the evolution of the contemporary global city from the perspectives of urban theory, analysis and design, as it emerges within a modern historical context. The course will provide students with both a developed knowledge base in contemporary urban history and theory, while simultaneously providing conceptual and graphic tools with which to map and analyze complex urban environments.

658 Designs on Los Angeles: 20th-century Architecture, Urban Planning, and Metropolitan Imagery in the Making of America's "Second City" (3)
C. McMichael Reese. This seminar investigates the particular role that twentieth-century architecture and urban planning played in creating Los Angeles's current image as a pre-eminent metropolitan node of design arts. We will establish political, economic, geographic, and ecological contexts for twentieth-century architecture and urban design in L. A. as we study not only built works and executed plans, but also visionary, unrealized projects. We will examine these works of architecture and urbanism against the background of other contemporaneous modes of Los Angeles artistic endeavor in fiction, music, dance, graphic arts, photography, and film, as well as in landscape and garden design. Includes a five-day tour of the Los Angeles metropolitan area that combines visits to historic sites and buildings and more recently completed projects; visits to museums, educational, and other cultural institutions; and visits to architectural offices (large and small) to see work "on the boards." (Formerly HTEL 358)*

## Preservation Studies (PRST)

## 651 Building Preservation Studio (6)

E. Cizek. This studio is the beginning orientation course that examines all aspects of preservation concerns related to the individual building or group of buildings. The student will learn how to analyze the condition of the building(s) and its (their) context. The studio will examine the differences between building stabilization, adaptive reuse, renovation and restoration. A travel and research component will use real life experiences to illustrate the interdisciplinary nature of preservation in the Americas. An internship in an area of personal choice (such as house museum, community action organization, governmental agency, heritage education or community renewal program) will be developed during this studio.

## 652 Studio in Environmental Conservation (6)

E. Cizek. Students will do extensive field work to learn analysis, documentation, interpretation and the techniques required for neighborhood, community and general environmental renewal. Basic land use controls, urban design and planning components and developmental alternatives as related to preservation and conservation concerns will be investigated. The role played by landscape and natural systems will be investigated as they relate to the evolution and future opportunities of both rural and urban contexts.

## 653 Internship (1)

E. Cizek. A sixty hour internship with an approved preservation agency such as the Preservation Resource Center of New Orleans, the South Eastern Architecture Archive at Tulane, the NEW Orleans Historic District Landmarks Commission, the Vieux Carre Commision, the Historic New Orleans Collection or some similar entity will provide the student with hands on experience, research opportunities, archival work, public service and heritage education opportunities. The internship can be performed at anytime during the course of academic studies. It will require a contract that defines the activities of the internship and a letter of successful completion from the Director of the chosen agency. The internship will be coordinated by the Director of the Preservation Studies Program and an advisor.
661 History of Architecture of the Americas I (3)
A. Masson. This course will investigate the Pre-Columbian world of the Americas through the Colonial Period. Landscape, decorative arts and furniture will be surveyed. Design, theory, and their influences will be considered. The course will utilize examples of preservation and conservation projects to illustrate the changes in architectural styles over time and the special issues and challenges that have been created. Individual and group projects and reports will develop public presentation skills.

662 History of the Architecture of the Americas II (3)
A. Masson. This course will focus on the natural and built world of the Americas during the $19^{\text {th }}$ and $20^{\text {th }}$ centuries. Pattern books, interior design, landscape, and urban design theories will be investigated through careful studies of preservation and conservation. Group discussion and individual presentation of research projects will allow the student to integrate their research findings in a public format.

## 671 Introduction to Preservation Studies (3)

D. del Cid. Through this course, the history of the preservation movement in the Americas will be studied to understand the theoretical, ethical, and philosophical concepts and ideas that will render the physical activity of restoration valid. Values and attitudes of the various cultural groups and settings in the Americas will be reviewed. The role played by preservation philosophies and theories of European and Oriental context will be studied.

## 672 Preservation Technology (3)

D. del Cid. This course will study the highly complex construction methods and systems ranging from traditional rammed earth systems, sun dried bricks, fired bricks, stone and wood, to the new materials developed since the industrial revolution (i.e., iron and steel, reinforced concrete, petrochemical based materials). Understanding the process of procuring construction materials and production, will allow the student to understand the process of deterioration which eventually leads to the need of understanding Preservation Technology.

## 690 Practicum (6)

E. Cizek and Advisors. Each student in the Master of Preservation Studies Program must complete either a Practicum or a Masters thesis; The Practicum requires that the student work with a preservation entity on a volunteer basis for a period of twelve full-time weeks or its equivalent. A contract must be developed between the student and the agency that spells out very clearly what activities will be required and what desired results are to be. A comprehensive schedule of activities must be developed. The Practicum should focus on an area of the preservation profession that is of great interest to the student. The student shall submit a written Practicum Report that defines the Practicum and their special skills and knowledge learned through the experience. The report should document the Practicum process with text and visual illustrations. The initial contract, outlines of proposed activities and final report are to be approved by the Director of Preservation Studies. The Practicum Report will become an integral part of the Portfolio of Work that is to be submitted before approval for graduation.

## 692 Preservation Thesis (6)

E. Cizek. The thesis requires that the student complete a Masters Thesis in Preservation Studies that utilizes research, experimentation and observation to create new knowledge about some aspect of historic preservation and conservation. The thesis should be developed in such a manner as to expand the academic experience of the student in an area that relates to their chosen focus and professional interest. A complete outline within proposed methodologies of research is required in the semester before the thesis will commence. The thesis will be developed in the format required by the Graduate School and the School of Architecture. Students should select an advisor for their research. All of the details of the thesis including its final acceptance are to be approved by the Director of Preservation Studies. The thesis will become an integral part of the Portfolio of Work that is to be submitted before approval for graduation.

# A. B. Freeman School of Business 

Mailing Address

A. B. Freeman School of Business

Goldring/Woldenberg Hall, Suite 200
Tulane University
New Orleans, LA 70118

## Telephone Numbers

Office of the Dean
Dean: James W. McFarland, PhD
Phone: (504) 865-5407
(800) 223-5402

## HISTORY

The College of Commerce and Business Administration was founded in September 1914, supported by business leaders who envisioned a school that would strengthen the New Orleans economy and capitalize on its international ties. Under the leadership of Dean Morton A. Aldrich, the College joined 16 leading business schools in founding AACSB International - The Association to Advance Collegiate Schools of Business (AACSB International) and thus set the standards for business education in the United States. The School has maintained continuous accreditation since 1916.

In 1984, the A. B. Freeman School of Business was named in honor of Alfred Bird Freeman, founder of the Louisiana Coca-Cola Bottling Company. Freeman, a renowned business innovator and civic leader, advocated foreign trade zones and further development of the port of New Orleans.

Today, the Freeman School continues to meet the needs of the business community-locally, nationally, and internationally-by educating the leaders of today and tomorrow through its Bachelor of Science in Management, Master of Business Administration, Master of Accounting, Master of Finance, and Doctor of Philosophy in Business Administration degree programs.

## FACILITIES

The Freeman School is housed in Goldring/Woldenberg Hall, a seven-story complex built in 1986. The building offers an outstanding educational environment and professional support services, all under one roof. Currently under construction, Goldring/Woldenberg Hall II is scheduled to open in Fall 2003. It will house graduate and professional business programs.

## Lillian A. and Robert L. Turchin Library

The Turchin Library provides support to the teaching, learning, and research activities of the Freeman School, as well as supporting the business and management information needs of Tulane students and faculty. The library is open 91 hours per week during the normal semester, and has extended hours during exam periods. Access cards must be used after normal business hours and on weekends.

## Management Communication Center

The MCC offers professional writing instruction and assistance in developing business presentation skills.

## Management Technology Center

The MTC is equipped with Pentium-based multimedia workstations, laser printers, mainframe and Internet access. Students also have e-mail access within the business school and on the Internet. Use of the Management Technology Center is limited to Freeman School students who must use access cards to gain entry. Wired and wireless Ethernet access allows connectivity from student notebook computers.

## Computer Classroom

This addition to the labs, the Freeman School features 42 networked Pentium II-based multimedia workstations for hands-on computer instruction.

## Media Services

Located in Room 261, Media Services provides a wide range of audiovisual equipment and support for class presentations. There are ten classrooms equipped with an overhead projector, an Intel Pentium computer, and a stereo DVD/VHS videocassette player. Mobile equipment is available for classrooms not equipped with multimedia consoles. Videorecording services for both taping class presentations and simulated job interviews are available. Use of media equipment is subject to the Media Services Student Policy statement. Call 865-5670 for additional information.

## Career Development Center

The Career Development Center (CDC) at Freeman provides students with the professional resources to implement effective job searches.
The center offers a number of services and resources including personalized counseling, networking opportunities, on- and off-campus recruiting programs, and state-of-the-art resources to help students define their career objectives, master effective communication techniques, network with alumni and employers, acquire interviews with local and national employers, and evaluate career opportunities.

Career Counseling and Development
The CDC's counseling staff meets with students individually, through formal classroom instruction, and through workshops to provide information on self-assessment, career direction, professional objectives, effective communication skills, and evaluating job offers.

## NETWORKING

Each year, the CDC hosts several networking events to unite students with alumni and companies. These events provide students with the opportunity to enhance their communication and interpersonal skills while meeting valuable contacts within the business community.
Freeman Days in New York and Houston: Students are given the opportunity to network and interview with Freeman alumni and affiliates in the New York and Houston business communities.

Career Networking Receptions: These networking events are designed for students interested in career opportunities in certain geographic locations. The participants in these events include local employers, alumni, parents and friends of Tulane University. Past host cities include Atlanta, Chicago, Houston, New York, and Washington, D.C.

## RECRUITING

The CDC has a formal recruiting program that brings high quality employers to campus to meet with and interview Freeman students. Over 100 companies per year recruit future employees from the Freeman School. In addition, the Freeman School is involved in several consortia and is affiliated with national organizations that host yearly events designed to facilitate interviews among students and employers. Recruiting activities include, but are not limited to:
Mardi Gras Invitational Career Fair: The two-day event, sponsored by Tulane University and other New Orleans-area colleges and universities, provides students access to over 125 local and national employers seeking candidates in all majors and disciplines for internship and full-time employment.
Resume Books: Full-time and internship resume books profile the incoming and graduating classes and are distributed to local and national companies.

On-line Resume Database: Employers receive 24-hour access to view and obtain student resumes from the CDC's web-based resume file.

## RESOURCES

The CDC also provides students with a variety of resources and services for access to the latest career-related research and reference information.
CDC Website: The official website of the Career Development Center provides direct links to reference materials and resources relating to students' career development. Students may also access full-time listings, internship listings, on-campus recruiting schedules, a bulletin board of scheduled workshops and seminars, and detailed information regarding upcoming events and activities seven days a week, 24 hours a day.

Career Consultant Network (CCN): A database of over 800 Freeman alumni who have volunteered to serve as advisors to students.

Resource Library: An array of reference materials, including directories, contact information, and publications to assist students with career information and the job search.
Watts Line: Private phone lines are available to assist students with contacting out-of-state employers and alumni during business hours. A fax is also available to aid students in the job search process. Both services are available during office hours at no cost to the student.
Executive-in-Residence: A Freeman alumnus chairs discussion groups, hosts seminars, and assists students with job search strategies and industry trends.

## CENTERS OF EXCELLENCE

The Freeman School has established several centers of excellence that complement its educational mission and promote specialized research and community outreach.
William B. and Evelyn Burkenroad Institute for the Study of Ethics and Leadership in Management: Created in 1990, the goal of this institute is to increase the understanding of ethical dilemmas in business. The institute encourages fundamental research into the effects of personal values on economic decisions.
Freeman Center for Doctoral Studies and Research: Established in 1992 through a generous endowment from the Ella West Freeman Foundation, the Freeman Center, located on the seventh floor of Goldring/Woldenberg Hall, houses the Freeman School doctoral program in business administration. The Center has doctoral offices that are equipped with computers and research facilities for doctoral students and research programs. The Center provides funding for doctoral students and graduate faculty. The Freeman Center was founded to facilitate faculty and student research and to serve as a conduit for the doctoral program to reach a preeminent position in management education and research.
Goldring Institute of International Business: Established in 1991 and named for the Goldring family, longtime contributors and supporters of Tulane and the Freeman School, the Goldring Institute administers Freeman School international programs. The Goldring Institute is guided by an advisory board of distinguished business, government and academic leaders who contribute to the achievement of the Institute's goals. The Institute's activities are divided into three major categories: Academic Programs, Center for Latin American Business Studies, and Research Programs.

Levy-Rosenblum Institute for Entrepreneurship: This institute, founded in 1991 through a gift from the Levy-Rosenblum Family Foundation, provides a forum where the Freeman School assists the corporate and family business community to identify and explore business issues through shared learning experiences. The Institute also trains and inspires entrepreneurs through coursework, community service projects, research assistantships, and internships. Additionally, it contributes to regional economic development through the coordination of joint academic,
government, and business initiatives that stimulate private enterprise. The Levy-Rosenblum Institute seeks to fulfill its goals by organizing its efforts into four divisions: Corporate Partners for Community Service Program, Entrepreneurial Studies and Research Program, Family Business Center, and Economic Development Center.

## STEWART CENTER FOR EXECUTIVE EDUCATION

The Executive Master of Business Administration (EMBA) Programs: Tulane's EMBA programs provide a convenient format for experienced managers and professionals to earn their MBA degrees while maintaining their full-time careers. Students gain advanced management knowledge, which they are able to apply immediately to their work. Classes are taught in an accelerated, weekend format. Tulane's Freeman School conducts EMBA programs in the U.S. (New Orleans and Houston) and abroad (Chile, China, and Taiwan). Graduates earn a Tulane MBA degree.
Partnership Certificate Programs: The Freeman School has been instrumental in establishing executive education programs in Latin America and in Asia in conjunction with prominent universities and corporations. Program graduates earn certificates from Tulane, often coupled with MBA or Master of Management degrees from the partnering university.
Custom-Designed Management Development Programs: Executive management training programs are custom-designed to equip mid- to upper-level managers with the skills and knowledge needed to meet challenges and changing demands in today's business. Courses may be selected from a standard selection or customized to address unique client issues. Working with program faculty or administration, the client may create an effective program that suits its specific management training needs.
Corporate Master of Business Administration (MBA) Programs: The Freeman School has initiated in-house MBA programs for corporations in the United States (Entergy) and in Asia (Solectron). These programs meet all AACSB International accreditation standards and seek to incorporate materials and courses specific to the sponsoring company.

## Programs of Study

## DEGREE

The Bachelor of Science in Management (BSM) program integrates the liberal arts and sciences (LAS) with studies in business management. To earn an undergraduate management degree at Tulane, students must first complete two years in the liberal arts and sciences colleges, or an equivalent, and then transfer to the Freeman School for two years of concentrated business studies. The hallmark of the program is its flexibility in mixing a variety of disciplines while providing the structure and guidance necessary for a successful undergraduate experience. By design, the BSM program emphasizes a generalist approach to management education. The program's goal is to train well-rounded managers who can analyze problems and propose workable solutions.

## REQUIREMENTS FOR DEGREE

Candidates for the Bachelor of Science in Management degree are required to complete 122 credits of academic work and to achieve a minimum cumulative grade point average of 2.00 overall and a minimum cumulative grade point average of 2.00 in their business and major courses. The BSM degree comprises 54-60 Freeman credit hours and 62-68 non-Freeman credit hours.

BSM students should consult with the Director of Undergraduate Education at least once a semester, usually just before registration, to ensure that they are meeting all requirements for graduation and for their majors. Although every effort is made to ensure accurate advising, the student is responsible for knowing and satisfying all of the degree requirements.

## Proficiency Component

(16 Credit Hours)
English 101
Foreign Language $101^{1}$
Foreign Language 102
Foreign Language 203

## Distribution Requirements

(16 Credit Hours)
Lab Science
Humanities ${ }^{2}$
Fine Arts ${ }^{2}$
Social Science ${ }^{2}$

## Business Prerequisites

(18-20 Credit Hours)
Mathematics-115 or 121 or 131
Mathematics-111 or 114 or ECON 323
Accounting-203
Social Science-Microeconomics (ECON 101)
Social Science-Macroeconomics (ECON 102)
(3)

Science-Psychology 100, 101, or 102
Free Non-Business Electives
Credit Hours Total:
Business Required Courses (Core)
Course I.D. Course Title Credit Hours
ACCT $301 \quad$ Managerial Accounting
ISDS 375 Computers in Business
MCOM 335 Management Communications
MKTG 382 Marketing Management
PERS 321 Managerial Perspectives
FINC 352 Financial Management
OBHR 331 Organizational Behavior
PSOM 371 Operations Management
GMGT 415 Management Policy
Credit Hours Total: ..... 27

## Freeman Electives

Non-Business Electives ${ }^{3}$
(24-30 Credit Hours)
(3-9 Credit Hours)

## Credit Hours Total:

$\underline{33}$Required for Graduation: ..... 122
${ }^{1}$ Students transferring from other institutions and from Tulane's Schools of Architecture and Engineering may substitute three courses of approved computer science coursework, taken in the recommended sequence, for the foreign language requirement.
${ }^{2}$ Of these courses, one must be listed as a Foundations of Western Culture course, and one must be listed as a Non-Western or Latin American Cultures course in the pamphlet entitled' "The General Curriculum 2003-2004 Tulane College and Newcomb College" and subsequent pamphlets published at the colleges.
${ }^{3}$ Non-business electives may be from LAS, engineering, or architecture, and they must be at the 200 level or higher, with no more than 3 credit hours at the 200 level. Junior-level electives may also be satisfied by ROTC, up to 12 credits. Non-business electives are restricted to those offered for credit by the equivalent departments, not including education, physical education, or exercise and sport sciences courses as shown in the Tulane University Undergraduate Catalog 2003-2005. University College courses that are not cross-listed in the undergraduate catalog as LAS classes do not satisfy degree requirements (i.e., classes beginning with " $U$ " do not fulfill any Freeman requirement).

## Admission

Students initially enroll at Tulane University in Tulane College, Newcomb College, the Schools of Architecture or Engineering, or University College. During their first two years, students must fulfill general degree requirements in addition to six BSM prerequisite courses: Microeconomics (ECON 101); Macroeconomics (ECON 102); Calculus (MATH 115 or 121); Statistics (MATH 111 or 114); Introductory Psychology (PSYC 100), Seminar in General Psychology (PSYC 101), or Intensive General Psychology (PSYC 102); and Financial Accounting (ACCT 203).

During the sophomore year, preferably during the fall semester, interested students must file a BSM Admission Data Form and Interdivisional Transfer (IDT). These forms should be obtained from and returned to the student's undergraduate adviser's office. Students who attain a cumulative grade point average of at least 2.00 and complete the six BSM prerequisites with a minimum grade point average of 2.00 will be accepted to the BSM program. Other students will be evaluated on an individual basis.
For more information, contact:
A. B. Freeman School of Business

Office of Academic Programs
Goldring/Woldenberg Hall, Suite 200
Tulane University
New Orleans, LA 70118-5669
Phone: 504-865-5418
Fax: 504-862-8733
Web: http://www.freeman.tulane.edu

## TRANSFER STUDENTS

Students transferring from another university or college must fulfill all Tulane general degree requirements and complete BSM prerequisite courses to be considered for admission. If all requirements are not met, students may be considered for admission to Tulane College or Newcomb College where they may complete any deficiencies.
Transfer applications are available from the Office of Undergraduate Admission. Students should include course descriptions for all completed coursework. Syllabi and tables of contents of texts used in business courses should also be submitted. Business courses should have been taken at an AACSB International-accredited school, and their content should match business courses offered at the Freeman School for transfer credit to be awarded. The admission decision will be made once this evaluation is completed. The Office of Undergraduate Admission must receive transfer applications for admission by June 1 for the fall semester and by November 1 for the spring semester.
Credit toward requirements of the Tulane BSM degree will be granted by evaluating student transcripts.
There are some general limitations in evaluating courses for transfer credit. Business or management courses at less than the junior level generally are not accepted. Credit is not granted for courses with a grade of less than C (2.00). Grades on transferred courses are not used in calculating grade point averages nor for Dean's List nor honors eligibility. Even if a transfer student is granted more than 62 semester hours of credit for non-Tulane work, the student will be required to take a minimum of 60 semester hours of credit at Tulane University.

## NONBUSINESS STUDENTS AT THE FREEMAN SCHOOL

Students enrolled in other divisions at Tulane are welcome to take courses at the Freeman School, subject to satisfaction of course prerequisites and available space. Authorization for registration is obtained from the Director of Undergraduate Education.

## CROSS REGISTRATION AND EXCLUDED CLASSES

The following courses do not satisfy BSM degree requirements. They are considered extra coursework, over and above the 122 credits required for the BSM degree.

- All University College courses not cross-listed with liberal arts and sciences. These courses have an alphanumeric identification code which begins with "U"
- Exercise and Sports Sciences (EXSS) courses
- Education (EDUC) and Center for Education (CTED) courses (with the exception of EDUC 200)

BSM students may not cross register for courses at Loyola or the University of New Orleans. Courses taken at either university are treated as transfer work.

## CURRICULUM

The Freeman School offers courses in the following areas of study:

- Accounting and Taxation (ACCT, TAXN)
- Finance and Business Economics (FINC)
- Strategy and Entrepreneurship (GMGT)
- E-Business and Information Systems (ISDS)
- Marketing (MKTG)
- Organizational Behavior (OBHR)
- Operations Management (PSOM)
- Business and Law (PERS, BLAW, MCOM)

Once enrolled in the Freeman School, students typically take:

- a core set of 27 credit hours of required Freeman School courses,
- 24 credit hours of advanced (300-or 400-level) electives from the Freeman School,
- three credit hours of advanced non-business elective courses, and
- six hours of advanced Freeman School or non-business electives.


## A Typical Program:

## Junior Year-Fall

ACCT 301 Managerial Accounting
ISDS 375 Computers in Business
MKTG 382 Marketing Management
PERS 321 Managerial Perspectives
Elective (Business or LAS)

## Junior Year-Spring

FINC 352 Financial Management
MCOM 335 Communication in Business
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OBHR 331 Organizational Behavior
PSOM 371 Operations Management
Elective (Business or LAS)

## Senior Year-Fall

GMGT 415 Management Policy or Elective (Business)
Elective (Business)
Elective (Business)
Elective (LAS)
Elective (Business or LAS)

## Senior Year-Spring

Elective (Business) or GMGT 415 Management Policy
Elective (Business)
Elective (Business)
Elective (Business)
Elective (Business or LAS)
Following the two-year BSM template (A Typical Program), electives can be chosen provided the area core course has been completed.

## MAJOR PROGRAMS

The Freeman School offers seven majors in the BSM program: accounting, finance, information systems, legal studies in business, management, marketing, and business. The accounting major learns about generating, evaluating, and using financial information for external and internal reporting, taxation, and decision making. The finance major takes an integrated approach to basic concepts of valuation, investment, and financial structure in management. The information systems major concentrates on using emerging technologies to enhance business decision making. The legal studies in business major learns about legal and risk concepts, legal research, and legal writing as they apply to business. The management major focuses on the skills and tasks that a manager performs in managing the total business enterprise. The marketing major gains experience analyzing marketing problems from a managerial viewpoint.

The business major option provides great flexibility in tailoring a program of study. It is possible, for example, to develop a concentration in an area of business where a major is not yet available. Students wanting breadth across all areas of business may distribute their electives broadly within the School.

## Major in Accounting

This major prepares students for careers in public or corporate accounting. The curriculum also provides excellent preparation for the Certified Public Accountant (CPA) examination. Students interested in corporate or tax law may also wish to pursue an accounting major.
A BSM graduate completing the following courses, at a minimum, is eligible for transcript designation of a major in accounting.

ACCT 303 Intermediate Financial Accounting I
ACCT 403 Intermediate Financial Accounting II
Complete three from these five electives. (One must be Advanced Managerial Accounting or Advanced Financial Accounting.)
ACCT 402 Auditing
ACCT 404 Advanced Financial Accounting
TAXN 425 Business Taxation
ACCT 407 Advanced Managerial Accounting
ACCT 409 Accounting Information Systems
Coursework required for the Certified Public Accountant exam in Louisiana and a number of other states follows:

ACCT 203 Financial Accounting
ACCT 301 Managerial Accounting
ACCT 303 Intermediate Accounting I
ACCT 402 Auditing
ACCT 403 Intermediate Accounting II
ACCT 404 Advanced Financial Accounting
TAXN 425 Business Taxation
and two additional accounting electives beyond the elementary level. In addition, 24 semester credit hours of nonaccounting courses are required, including Business Law (BLAW 421).

Note: Qualifying to sit for the CPA examination requires courses beyond the minimum for an accounting major. Be aware that the CPA requirements changed for candidates registering in the state of Louisiana at the end of the 1996 calendar year, and 150 hours of college/university credit are now required in addition to meeting specific accounting and business requirements. Other states currently or will soon require 150 credit hours. The Freeman School provides a one-year Master of Accounting program for students wishing to meet that 150 -credit-hour requirement through a fifth year of study. For more information about requirements in other states, contact the state board of accounting where you plan to practice.

Additional accounting and taxation electives are particularly appropriate for students not majoring in accounting or planning to take the CPA exam. These electives are:
ACCT 405 Financial Accounting Analysis
ACCT 407 Advanced Managerial Accounting
ACCT 409 Accounting Information Systems
TAXN 425 Business Taxation

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## Major in Finance

Coursework for the finance major covers concepts of valuation, investment, and financial structure in corporate financial management. Many finance majors begin their careers in commercial banking, corporate finance, or as analysts in investment banking firms.
A BSM graduate completing FINC 451 Advanced Financial Management, and ACCT 303 Intermediate Financial Accounting I or ACCT 405 Financial Accounting Analysis, and four additional electives from FINC is eligible for transcript designation of a major in finance.
Students may elect to substitute one FINC elective with an approved ECON 4xx elective.
The approved economics courses are ECON 433 International Trading Relations and ECON 452 Public Finance.

## Major in Information Systems

The information systems major may be appropriate for students who want to integrate emerging technologies with other decision-making tools such as accounting, finance, management, and marketing in preparation for careers as varied as project managers and consultants.
A BSM graduate completing five electives from ISDS is eligible for transcript designation of an information systems major. Accounting Information Systems (ACCT 409) and Management of Promotions (MKTG 481) may be used as ISDS electives.

## Major in Legal Studies in Business

The legal studies in business major coursework covers basic legal concepts as they apply to business. Legal studies in business majors can tailor their curriculum to prepare them for careers in such fields as risk management, real estate, insurance, consulting, human resources management, e-commerce, and conflict management. Some legal studies in business majors may go on to manage the business operations of law firms. Finally, the legal studies in business major provides a solid foundation for those students wishing to pursue a law degree.
A BSM graduate completing the following courses is eligible for transcript designation as a legal studies in business major.
BLAW 421 Business Law
BLAW 425 Legal Writing and Research
Complete three of the following electives:
BLAW 422 International Business Law
BLAW 468 Real Estate Law
BLAW 469 Law of E-Commerce
GMGT 437 Negotiations
or
OBHR 436 Negotiations
TAXN 425 Business Taxation
And, for those students seeking admission to law school, complete the noncredit review for the LSAT.

## Major in Management

The management major may be appropriate for the students who want to develop the skills and knowledge to run a family business, to launch and manage the expansion of a high-potential, rapid-growth business, to work in operating units of large or established organizations, or to gain a foundation of business knowledge that can be valuable in a graduate or professional school program.
A BSM student completing Dimensions in Human Resource Management (OBHR 432) and five additional electives from GMGT and OBHR is eligible for transcript designation of a major in management. The five electives may be used to develop some depth in a specific area or to provide greater breadth for a career in management.

## Major in Marketing

Building on the marketing management survey course, the marketing major can tailor the curriculum to prepare for various careers in sales/promotion, research, and management of products and services both domestically and internationally.
A BSM graduate completing five MKTG electives is eligible for transcript designation of a major in marketing.

Every effort will be made to offer these electives annually, but availability is not guaranteed.

## Major in Business

The business major option provides great flexibility in designing a program of study to meet specific objectives. Students can develop a concentration in an area of business for which a major is not available or can distribute their electives across all areas of business. A BSM graduate completing eight Freeman elective courses in addition to the core set of courses, is eligible for transcript designation of a major in business.

## Approved Economics Electives

In addition to the maximum of three LAS electives, BSM students may substitute up to two approved economics department electives for Freeman School business electives. The following courses are those approved for such substitution. Most of the courses will not satisfy specific requirements in the finance major. (Refer to the Major in Finance section for those that do.) None of them satisfies specific requirements for majors in accounting, management or marketing.
ECON 334 Government in the Economy
ECON 422 Industrial Organization
ECON 423 Econometrics
ECON 433 International Trading Relations
These courses have prerequisites which must be satisfied prior to enrollment. Check the LAS section of this catalog for a description of the prerequisites for each course.

## DOUBLE MAJORS

Students enrolled in the BSM program may have double majors within the business curriculum. No elective course may count as a major requirement more than once. Students may also have a second major outside of the Freeman School if approved by the other academic department.

## MINOR PROGRAMS

Business majors may wish to earn a minor in the liberal arts and sciences (LAS). This requires a proposal to the Director of Undergraduate Education for permission to take up to five liberal arts and sciences electives while enrolled in the Freeman School. The proposal must describe the minor and explain how it fits into a coherent academic program.
The feasibility of this curriculum plan also depends upon the minor requirements completed prior to transfer to the Freeman School and approval of the department granting the minor. Using some of the free liberal arts and sciences electives for the minor requirements during freshman and sophomore years eases the completion of the minor.

BSM students with a liberal arts and sciences minor use the one required upper-level LAS elective, two additional allowed LAS electives and, by approval of the proposal by the Undergraduate Curriculum Committee, up to two additional business electives. Students intending to enter the Freeman School have four free LAS electives available during the freshman and sophomore years. These electives, along with the ones available while enrolled in the Freeman School, may be used to complete the requirements of an LAS minor, normally five to eight courses.

## Business Minor

For students in the School of Architecture, School of Engineering, Tulane College, and Newcomb College, the following selection of seven courses leads to a minor recognized by the Freeman School:
ECON 101 Microeconomics
ACCT 203 Financial Accounting
Any four of the following seven Freeman School courses:
ACCT 301 Managerial Accounting
FINC 352 Financial Management
MCOM 335 Communication in Business
MKTG 382 Marketing Management
OBHR 331 Organizational Behavior
PERS 321 Managerial Perspectives
PSOM 371 Operations Management
ISDS 375 Computers in Business
and one Freeman School elective*
Students who elect to complete the requirements of a business minor must earn a grade point average of at least 2.00 in courses counting toward the business minor.
*The additional elective may be any Freeman course for which the student has the necessary prerequisites. We recommend, however, that minors select their additional course from the list above. Students may substitute both semesters of More Than Just Business (TIDB 101 and 111) for the Freeman elective. Only freshmen may enroll in TIDB 101 and 111.

## SPECIAL PROGRAMS

## Summer Study Abroad

The Freeman international business program enables students to live and study in another culture. During the intensive summer study abroad, students earn elective credits toward completion of their Freeman business degrees. The courses develop their international management skills by focusing on cultural understanding and global strategies that create competitive advantages in international business. All courses are taught in English by Freeman School and international faculty. At the host institutions abroad, students study in a campus environment. Courses are offered at two European locations each year. Courses completed during the summer study abroad are considered Freeman School courses, count as Freeman electives, and will be included in the Tulane grade point average.
Semester Study Abroad
The Freeman School offers students who had a 3.00 GPA the previous two semesters the opportunity to study abroad while enrolled in the business school. Currently, there are multiple approved sites.
The business school's semester abroad is a flexible program in which students may select the semester in which they go abroad. The curriculum can also be tailored to the students' individual needs. Business courses, language courses, and courses pertaining to the specific country in which they are studying are all possible choices. Students approved to study abroad must submit their academic plan to their academic advisor for approval the semester prior to departure. This plan ensures that the students will be making satisfactory progress toward the BSM degree, while benefiting from an international educational experience.
The semester study abroad program is a direct exchange program with our partner institutions. The coursework a student completes at the other university is considered Freeman School coursework and, therefore, is counted in the Tulane grade point average. The business courses taken as part of the semester study abroad are counted as Freeman electives. Enrolled students pay Tulane University tuition.

## Independent Studies (Tutorials)

Senior BSM students of superior scholastic standing interested in directions different from and beyond those provided by the School's normal offerings may assume more responsibility for their own education by proposing an independent study to a faculty member. Based on the merits of the student's proposal, the faculty member may agree to sponsor it. In this tutorial arrangement, the student investigates an area or set of topics not covered elsewhere in the curriculum, or pursues applications and extensions of prior coursework in greater depth. All tutorials to be counted as Freeman School electives must fall into one of the areas taught in the Freeman School, and must be approved by the Chair of the Undergraduate Curriculum Committee.
Seniors demonstrating academic excellence may design a course for up to three hours of elective credit; BSM students are limited to a maximum of three credit hours of such coursework. Acceptable projects would include, but are not limited to, an in-depth research paper, applications and extensions of material to case studies, study of academic literature not currently covered in the Tulane BSM program, or a combination of these. While an internship is not an acceptable tutorial, it may serve as the basis for an acceptable project such as a research paper. The workload of a tutorial must approximate that of a regular academic elective.
Tutorials are best attempted in the final semester before graduation. Students may apply for one only if it is in addition to the business electives required for the degree. An independent study will not satisfy a major requirement.
A written proposal must be presented on an appropriate form to the Director of Undergraduate Education. This must be signed by the student and sponsoring faculty member and submitted for the approval of the chair of the Undergraduate Curriculum Committee prior to registration for the
semester in which credit is to be given for the study. A tutorial proposal will be approved only if it reflects careful thought and preparation.
Although this option offers the student the opportunity to propose projects to faculty members, they are in no way obligated to accept such proposals.

## Joint Major in Economics

Business students may take additional economics electives and earn the equivalent of an economics major. Economics major requirements are met by substituting economics courses for two of the business electives and by taking prescribed math and economics courses for the liberal arts electives. This course of study requires careful planning. Interested students should consult the Freeman School's Director of Undergraduate Education and the chair of the economics department early in their academic careers. Ordinarily, successful completion of this second major will require careful planning before the junior year in order to schedule the full set of courses needed. Upon graduation, a student's transcript will reflect economics as the second major if the student has successfully fulfilled the stipulated requirements.

Specific requirements include the following:
ECON 101 Microeconomics
(3)

ECON 102 Macroeconomics
(3)

ECON 301 Intermediate Microeconomics
or
ECON 303 Intermediate with Calculus
(4)

ECON 302 Intermediate Macroeconomics
(3)

300 level Economics Electives
400 level Economics Electives
(6)

MATH 301 Probability and Statistics or
MATH 112 Probability and Statistics II or
ECON 323 Economic Statistics

* Economics 323 may be counted as one of the two additional 300-level economics courses required for the major if it is selected as the statistics requirement. The student must earn a C-or better in Intermediate Microeconomics and Intermediate Macroeconomics. No credit is given for internships even if credit is gained in Economics.


## Honors Program in Political Economy

This program allows a BSM student to participate in the interdisciplinary study of political economy while fulfilling the requirements of the BSM degree. The Honors Program is designed to enhance a student's understanding of the interrelationships between political and economic activities and institutions. It also seeks to develop moral and historical perspectives important in understanding the connections between government and private economic enterprise. Some of the requirements of this program may be met by using political economy courses in the Murphy Institute as electives in the BSM course of study. Preparation for this program is best begun in the earliest stages of curriculum planning during the freshman year. Some courses may be taken to fulfill general distribution requirements before the junior year. For students who have not done that, an extra semester of study is recommended to fulfill all requirements without excessive overloading. The requirements for the program are:

## Course

ECON 301 Intermediate Microeconomics

## Credit Hours

Three of the following courses in Political Economy:
PECN 301 Introduction to Political Economy
(3)

PECN 302 Political Economy: Ancient and Modern
PECN 303 Individual Society and State
PECN 304 Economics and Policy-Making
PECN 499 Honors Project Fall Semester, Senior Year
PECN 600 Majors Seminar
Additionally, students are encouraged to take Intermediate Macroeconomics (ECON 302).
Admission to the Honors Program is open to students in the BSM program having a GPA of 3.3 or above. Interested students should declare their intentions to pursue the Honors Program as early as possible and should confer with Dr. Judith Schafer, Associate Director of the Murphy Institute, located in Room 108 Tilton Hall.

## Master of Accounting

Tulane's 30 credit-hour program is designed to meet the needs of future accounting professionals. Unique features of the program are the ability to custom design a curriculum based on your career aspirations as well as a busy (accounting) season internship. Freeman School students may apply for admission to the Master of Accounting program in their junior year.

## MBA Early Admit Program

The Freeman School offers early admission to its MBA program in conjunction with Tulane College, Newcomb College, and the School of Engineering. Qualified undergraduates begin study toward the MBA as seniors. Courses taken in the first year of the MBA program will serve as electives for the undergraduate degree. Thus, with careful planning, students can earn both degrees in five years rather than the customary six.
There are no prerequisites for the early admit program. Admission is highly selective and is made primarily on the basis of undergraduate GPA and performance on the Graduate Management Admission Test (GMAT). To be considered, students must complete all undergraduate major and distribution requirements by the end of the junior year; therefore, students in the BSM program and Tulane's School of Architecture are not eligible. Interested students should contact the Office of Academic Programs at the Freeman School and their undergraduate advisor's office as early as their freshman or sophomore year to ensure that their curricula are planned with this program in mind.

## Master of Finance

For students interested in a future in finance, Freeman offers a 12-month 37 credit-hour graduate program. The Master of Finance program is designed for students who want in-depth coverage of finance without the broad-based managerial curriculum typical of MBA studies. Students must have earned an undergraduate degree before they begin the Master of Finance program.

## HONORS AND AWARDS

## Honor Societies

Beta Alpha Psi: This honorary national accounting fraternity seeks to promote continuous selfimprovement, to foster high moral and ethical standards, to encourage and recognize scholastic and professional excellence, to cultivate a sense of responsibility and service, to promote the collegiate study of accounting, and to provide an opportunity for association between its members and practicing accountants. Membership, by invitation only, is based on scholarship and professional attributes.

Beta Gamma Sigma: The purpose of this honorary business scholastic fraternity is to reward scholarship and accomplishment in all phases of business, to promote the advancement of education in the science of business, and to foster principles of honesty and integrity in business practices. High scholarship and promise of marked ability are the prime requisites for selection of graduating seniors for membership. New members join by invitation at the annual meeting that is held in conjunction with graduation activities.

## Academic Honors

The Freeman School recognizes superior academic performance by awarding degrees with honors. To qualify for graduation honors, a student must complete the final two semesters in residence at the Freeman School and achieve one of the following cumulative GPAs:

| Summa cum laude | GPA of 3.80 |
| :--- | :--- |
| Magna cum laude | GPA of 3.60 |
| Cum laude | GPA of 3.40 |

## Awards Bestowed at Commencement

BSM Scholastic Achievement Award: Established in 1997 to recognize excellence in academics, this award is presented to the graduate of the Bachelor of Science in Management program with the highest cumulative grade point average.
Evelyn and William Burkenroad Award: This award is presented each year to an outstanding member of the graduating class in honor of Mr. and Mrs. William Burkenroad. The recipient is chosen by the senior class on the basis of scholarship, integrity, amiability, and contributions to the professional, social, and academic quality of the business program.
TABA Community Service Award: Established in 1993 by the Levy-Rosenblum Institute for Entrepreneurship and conducted in partnership with the Tulane Association of Business Alumni, this award recognizes those graduates who, under the auspices of the Institute and mentored by TABA members, have completed at least 25 hours of pro bono service with a disadvantaged business or not-for-profit organization in the New Orleans area.
Dean's Service Award: Established in 1991, this award recognizes those graduating students who, in the opinion of the administrative staff and the dean, have added dimension to the School through outstanding contributions of time and effort.
The James T. Murphy Teaching Excellence Award (faculty award): Established in 1994 and named in honor of a longtime faculty member, this award recognizes professors in the Bachelor of Science in Management and the Master of Business Administration programs for excellence and advancement of the highest standards in teaching. Selection is based on student vote, course evaluations, and review by a committee of students and administrators.
Tulane Association of Business Alumni Award: The TABA Award is presented each year to the graduating senior, selected by a committee of alumni, staff, and faculty, who exhibits outstanding leadership qualities and academic achievement.
The Teacher Honor Roll (faculty award): This award was established to honor faculty members for excellent teaching performance. The Honor Roll is selected by student votes as conducted by the Freeman School Government (FSG) twice each academic year, once for the fall semester and once for the spring semester. Any person teaching a credit course in the Freeman School is eligible for the Teacher Honor Roll. Anyone selected for the Teacher Honor Roll during the fall or spring semester of the academic year is eligible for the Wissner Award, presented at spring commencement.
Wall Street Journal Award: Each year the Wall Street Journal Award is presented to a graduating senior who has shown outstanding achievement in the area of finance.

The Howard W. Wissner Award (faculty award): This award is presented each spring by the undergraduate student body to the faculty member deemed to have exhibited the most outstanding teaching qualities during the year and to have made significant contributions to the Freeman School. Selection is made by the student body and administered by the FSG.

## Academic Policies

## ACADEMIC ADVISING

Academic advising, registration, and maintenance of academic records for Freeman School students is the responsibility of the Director of Undergraduate Education in Suite 200 of Goldring/Woldenberg Hall. As the academic advisor for all Freeman School undergraduate students, the Director of Undergraduate Education also provides guidance relating to students’ academic endeavors or problems. Additionally, the Director of Undergraduate Education keeps students aware of the many services offered by the School and the University to ensure student success.
Petitions for continuing, overloading, independent studies, transfer arrangements, and similar requests should be submitted to the Director of Undergraduate Education for consideration by the Undergraduate Curriculum Committee. While every effort will be made to ensure students are well-informed about academic rules affecting them, each student is ultimately responsible for fulfilling all graduation requirements.
Students are expected to take an active part in the advising process. They should feel free to consult with their advisor on all matters related to their academic work and their career objectives.

## ACADEMIC AND CONDUCT CODES

## Academic Integrity

Each student is expected to read and be familiar with the Honor Code, included in the BSM Handbook which is distributed to all students when they enter the program. The Honor Code Committee is a joint student and faculty committee. It meets to hear cases of alleged violation of the Honor Code. Student representatives from each program serve on the committee.
Plagiarism and cheating are not tolerated in the Freeman School and may be grounds for expulsion.

## Conduct

Freeman School students must represent themselves as responsible members of the Tulane University community at all times. The University's Code of Student Conduct applies to all BSM students and is also included in the BSM Handbook.

## Placement Ethics

Students must conduct themselves in an ethical and responsible manner when seeking jobs or applying to graduate and professional schools. The ethics by which students are to conduct themselves are contained in the Code of Placement Ethics, in the BSM Handbook.

## Grievance Procedures

Procedures for filing and resolving a grievance are detailed in Student Grievance Procedure in the BSM Handbook.

## EXAMINATIONS

In an effort to minimize scheduling conflicts, the final examination schedule is determined following the last day to add a course. The schedule is normally available to students one month after the beginning of the semester. Faculty may, at their discretion, schedule other examinations during the semester.

## COURSE LOADS

The normal full-time load per semester for BSM students is 15 credit hours. Part-time students are those enrolled for fewer than 12 credit hours per semester. An overload beyond 18 credit hours is allowed only with permission to second-semester juniors or seniors who have achieved a 3.00 or better GPA during the previous semester. All other overloads must be requested in writing and must be submitted to the Director of Undergraduate Education for approval by the chair of the Undergraduate Curriculum Committee.

## GRADES

The Freeman School uses a letter grade system with the following numerical values:

$$
\begin{array}{ll}
\mathrm{A}=4.00 & \mathrm{C}=2.00 \\
\mathrm{~A}-=3.67 & \mathrm{C}-=1.67 \\
\mathrm{~B}+=3.33 & \mathrm{D}+=1.33 \\
\mathrm{~B}=3.00 & \text { D }=1.00 \\
\mathrm{~B}-=2.67 & \text { D- }=0.67 \\
\mathrm{C}+=2.33 & \text { F }=0.00
\end{array}
$$

The total number of quality points for all courses is computed by multiplying the numerical values of the grades received by the course semester credit hours. Grades of W (withdrawal) and WF (withdrawal failing) are assigned by the instructor when students withdraw from courses before their completion. A WF is calculated into the GPA as though it were an F.
Credit is awarded for grades of D - or better; however, low grades must be offset by grades high enough to maintain the 2.00 Tulane GPA, 2.00 Freeman School GPA, and 2.00 major GPA necessary to meet continuation and graduation requirements.

## DROPPING AND ADDING COURSES

Dropping a required course may require the student to withdraw for the term. BSM students may use the Tulane University Touchtone phone Online Registration (TUTOR) or Tulane Online University Records (TOUR) until the last day to add in the semester. After that time, Drop/Add forms, which are available in the Freeman School's Office of Academic Programs, must be completed and signed by the student and the Director of Undergraduate Education.

After the last day to drop with W or WF, any course dropped is recorded as an unauthorized withdrawal (UW) and will be calculated in the GPA as an F.

## SATISFACTORYIUNSATISFACTORY OPTION

BSM students are allowed to take no more than two liberal arts and sciences courses using the satisfactory/unsatisfactory (S/U) option. Only one S/U grading option is allowed per semester. S/U options taken prior to enrollment in the Freeman School are included in the limit of two. This grading option may not be used for any Freeman School courses taken by BSM students or students working toward a business minor, nor for approved economics electives taken by BSM students. A minimum performance level of C- must be achieved to earn the "satisfactory" grade. U grades are handled as Fs in determining probationary status. Students on academic probation may not use the $\mathrm{S} / \mathrm{U}$ grading option during the probationary period. Changes to or from the $\mathrm{S} / \mathrm{U}$ grading option cannot be authorized after the published university deadline. A grade of S earns the credit hours only while a grade of $U$ earns no credit. Neither affects the grade point average.

## REPEAT OF COURSES

Credit is earned on all courses in which a grade of D- or higher is earned. Courses for which a student has received credit may not be repeated. A student must repeat any required course in which a failing grade has been earned. When a failed course is repeated, both grades contribute to the grade point average. Elective courses do not have to be repeated, but the 122 -credit hour requirement for graduation must be met.

## PASSIFAIL

The Freeman School uses the designation Satisfactory/Unsatisfactory rather than Pass/Fail. Freeman School students cannot use the P/F grade type for any course taken at Tulane. Students working toward a business minor may not take Freeman courses on an S/U or P/F basis.

## AUDITING COURSES

Auditing of courses is discouraged by the Freeman School.

## GRADUATE COURSES

BSM or other undergraduates may not take Freeman School graduate courses (600- and 700-level courses).

## ACADEMIC PROBATION

The Undergraduate Curriculum Committee has established the following guidelines for academic probation.

1. Student grade reports are reviewed at the end of each semester.

Probation will follow under any of the conditions below:
a. term grade point average below 2.00 ,
b. Tulane cumulative grade point average below 2.00,
c. Freeman cumulative grade point average below 2.00,
d. any failing grade including F, U, and UW
2. Any student on probation at the end of the junior year because of either semester's academic work must be authorized by the Undergraduate Curriculum Committee to return for the senior year.
3. Terms of a student's probation will be set by the Undergraduate Curriculum Committee in light of the Committee's evaluation of the student's ability to:
a. repeat any failed course with a grade of C or better,
b. offset D grades with A or B grades,
c. earn the requisite quality points for graduation, and
d. master the required courses of the BSM program.
4. Any summer school work required to meet conditions of probation must be taken at Tulane, unless alternative plans are submitted to the Director of Undergraduate Education and are approved by the Undergraduate Curriculum Committee.
5. A first-semester junior whose Freeman grade point average falls below 1.60 at the end of the fall semester will be subject to dismissal.
6. Students who remain on probation two consecutive semesters or whose Freeman grade point average falls below 1.85 are subject to dismissal from the School.
7. A student denied continuation has the right to a written appeal of this decision within two weeks of receipt of the letter denying continuation. This appeal should be submitted to the Director of Undergraduate Education for review by the Undergraduate Curriculum Committee.
8. A student who has discontinued studies at the Freeman School for any reason for more than one year must seek approval of the Undergraduate Curriculum Committee in applying for readmission to the School.

## DEAN'S LIST

BSM students enrolled in a minimum of 15 hours of regularly graded coursework and who exhibit outstanding achievement academically are awarded Dean's List standing at the end of each semester. Students in the junior year must obtain a minimum semester grade point average for all coursework taken at Tulane University of 3.50 to be eligible. Seniors must achieve a 3.67 for all coursework taken at Tulane to be eligible. A list of these students' names is posted on the bulletin boards on the first floor following each semester.

## COMMENCEMENT POLICIES AND PROCEDURES

To qualify for a Bachelor of Science in Management degree at the Freeman School, a student must earn a minimum of 122 semester hours of credit as specified in this catalog. All degree candidates are expected to participate in commencement exercises unless excused in advance by the Dean. Commencement ceremonies are held in May. December graduates may participate in the official graduation ceremonies held the following May. Students who will complete degree requirements by the end of summer session may participate in commencement ceremonies in May, assuming certain conditions are met.
Degree candidates must file an "Application for Degree" form with the Freeman School’s Office of Academic Programs within the first two weeks of the final semester.
Please refer to page xx for University commencement policies and procedures.

## SUMMER SCHOOL TRANSFER CREDIT

General requirements to receive credit for summer school work taken outside Tulane:

1. Accredited status of institutions: Transferred business courses should be from AACSB International accredited schools. Transferred, nonbusiness courses need not be from AACSB International schools but must meet the approval of Tulane College or Newcomb College.
2. Minimum credit hours: Courses taken in a classroom environment should bear at least three semester hours of credit, or the equivalent in quarter hours. Any credit granted by Tulane should equal the semester hours (or their equivalent) earned for the transferred course or what would be earned at Tulane, whichever is less.
3. Minimum grades: Transferred courses must have been completed with a grade of C or better.
4. Prior written approval: Transfer credit will not be granted for courses taken without prior written approval. Before enrolling in a summer business course, the student must submit the course syllabus, the table of contents from each textbook, and catalog description to the Director of Undergraduate Education for review by an appropriate faculty member to determine equivalence to a Freeman School course. For liberal arts and sciences courses, normally the course description is sufficient for review to determine equivalence. Students should contact the equivalent liberal arts and sciences department at Tulane to determine what information that department requires for course approval.

## Other Transfer Considerations

Incoming Juniors will not receive credit against Junior-Level Requirements (i.e., core courses) for business/management courses taken at institutions other than Tulane during the summers preceding entrance to the Freeman School.
Students are required to take a set of eight specific business courses in the junior year and one in the senior year. All of these required courses should be taken at the Freeman School, and none should be dropped or taken elsewhere.
Transfer credit cannot be granted until an official transcript of summer work is received by the Director of Undergraduate Education. Arranging delivery of the transcript is the responsibility of the student.

Credit transferred to Tulane for academic work in the summer preceding the senior year may not be used to reduce the amount of credit earned at Tulane in the senior year below 24 hours of Tulane credit for the BSM degree. That is, the last 24 hours of degree credit must be earned at Tulane preceding the granting of a degree. Courses taken as part of Summer or Semester Study Abroad are considered Freeman and Tulane coursework.

## STUDENT ORGANIZATIONS

## American Marketing Association (AMA)

Open to all majors, Tulane’s collegiate chapter of the American Marketing Association sponsors presentations by marketing professionals. Members receive a subscription to Marketing News, the AMA's biweekly magazine that covers career opportunities and ongoing shifts in the industry.

## BSM Ambassadors

The BSM Ambassadors assist the Office of Academic Programs and the Career Development Center in representing and promoting the Freeman School to current and prospective Tulane students and parents, and corporate recruiters. Ambassadors participate in a variety of activities including on-campus recruiting, Open House, Orientation, Tulane Days, and Parent/Family Weekend.

## Financial Management Association (FMA)

FMA, a chapter of FMA International, assists in the professional, educational, and social development of students interested in finance, banking, and investments. FMA encourages interaction among business executives, faculty, and students of business and finance.

## Freeman School Government (FSG)

The Freeman School Government is the formal organization of students enrolled in the BSM program. All BSM students are automatically members of FSG. The FSG influences many of the curricular and extracurricular activities of the School. Students play a role in modifying the curriculum, in evaluating courses, in planning academically related activities, in selecting faculty for special honors, and in organizing a schedule of social events. BSM students are encouraged to take a leadership role in the organization and to support the activities sponsored by the FSG.

## Toastmasters International

Toastmasters is a national organization devoted to developing the speaking skills of its members. Students who participate in Toastmasters gain confidence and techniques that prove invaluable in classroom presentations as well as in future business situations.

## Tulane Association of Business Alumni (TABA)

TABA, the formal organization of the Freeman School alumni, sponsors programs and projects throughout the year. Graduates usually join TABA after commencement to continue their support of and association with the Freeman School. TABA supports programs such as TABA Community Service Program, networking receptions including Freeman Days in New York and Houston, and receptions welcoming the newest alumni. The annual Tulane Business Forum is the largest half-day business conference in the Greater New Orleans area, featuring nationally and internationally renowned business leaders.
Tulane Entrepreneurs Association (TEA)
The Tulane Entrepreneurs Association's mission is to assist members in expanding their entrepreneurial skill base. TEA sponsors lectures, workshops, and social networking events, and provides student entrepreneurs with assistance in organizing their own ventures. TEA coordinates student teams that create business plans for entry into business plan competitions, and sponsors the Tulane Business Plan Competition. TEA is open to all Tulane students.
Tulane International Business Society (TIBS)
TIBS brings together students and faculty interested in the international business arena. The organization hosts speakers from around the world to present current international business topics. TIBS organizes business debates to increase members' participation and explore diverse points of view. TIBS also sponsors the annual International Dinner, to which all members of the Freeman community are invited.

## Undergraduate Curriculum Committee

This group of faculty, staff and students recommends changes in curriculum to the faculty. The Committee reviews issues relating to the academic performance of students such as probation, the denial of continuation, and requests for course substitutions. Written appeals of academic decisions are made to this Committee through the Director of Undergraduate Education. Student members do not participate in discussions relating to individual students. Revisions and interpretations of the curriculum are made by the Undergraduate Curriculum Committee. The president and vice president of academics of the Freeman School Government serve as members.

## Course and Faculty Listings

## ACCOUNTING AND TAXATION

## Professor

C. Jevons Lee, PhD, University of Rochester, 1977.

## Associate Professors

David W. Harvey, PhD, University of Minnesota, 1972.
John R. Page, PhD, Tulane University, 1975.
Soliman Y. Soliman, PhD, University of Georgia, 1979.

## Assistant Professors

David Lesmond, PhD, State University of New York at Buffalo, 1995.
Joshua Rosett, PhD, Princeton University, 1989.
Yong-Chul Shin, PhD, Massachusetts Institute of Technology, 2000.
Weimin Wang, PhD, Washington University, 1999.

## Instructor

Beauregard J. Parent, Jr., MBA, Loyola University of the South, 1969.

## Clinical Professor

Karen Foust, PhD, Tulane University, 1994.
Pamela Shaw, PhD, University of Florida, 1989.

## ACCT 203 Financial Accounting

This BSM prerequisite introduces concepts, techniques, and conventions for measuring and communicating the results of operations and the financial position of a business enterprise. It emphasizes the development and the use of financial information reported to the public. Freeman School prerequisite course.

## ACCT 301 Managerial Accounting

Prerequisite: ACCT 203. ACCT 301 emphasizes the role of accounting information in management decision-making for profit-seeking organizations. It develops the importance of information to decision-relevance through the study of traditional cost accounting, managerial economics, operations research, and the behavioral sciences. Junior-level core course.

## ACCT 303 Intermediate Financial Accounting I

ACCT 303 is a concept-oriented course that introduces the intensive examination of financial reporting issues and financial statement categories. It is required for accounting majors and recommended for finance majors and others who desire advanced exposure to financial reporting issues. ACCT 303 continues in ACCT 403.

## ACCT 402 Auditing

Prerequisite: ACCT 303. ACCT 402 examines the professional auditing function, particularly emphasizing public accounting. The course is recommended for CPA examination candidates only.

## ACCT 403 Intermediate Financial Accounting II

Prerequisite: ACCT 303. A continuation of Intermediate Financial Accounting I, ACCT 403 considers the institutional environment of financial accounting.

## ACCT 404 Advanced Financial Accounting

Prerequisite: ACCT 403. ACCT 404 explores complex accounting areas, including consolidations, partnerships, not-for-profit accounting, and multinational accounting. It is recommended for CPA examination candidates only.

## ACCT 405 Financial Accounting Analysis

Prerequisite: ACCT 203 and 301. Primarily for students not majoring in accounting, ACCT 405 develops knowledge of accounting and reporting methods and issues; skills in understanding transactions and events behind the numbers; and ability to make judgments about firms based on their financial disclosures. Because of its breadth of scope and emphasis on analysis, this course is especially useful for management and finance majors.

## ACCT 407 Advanced Managerial Accounting

Prerequisite: ACCT 301. ACCT 407 explores recent developments in managerial accounting theory and practice. The course features quantitative approaches to collecting, analyzing, and transmitting cost, revenue, and profit data for internal planning and control, and it uses readings, problems, cases, and computer exercises. The course is recommended for both accounting and finance majors.

## ACCT 409 Accounting Information Systems

Prerequisites: ACCT 203 and 301. ACCT 409 integrates the concepts of accounting and computer systems to develop an understanding of computerized accounting information systems. The course involves the extensive use of computer systems, including system development and maintenance as well as output use. It is recommended for accounting and finance majors, and for others who desire exposure to this area.

## ACCT 470 Equity Analysis/Burkenroad Reports

See ACCT 471. Students may receive credit for ACCT 470 or 471, but not for both.

## ACCT 471 Equity Analysis/Burkenroad Reports

In this valuable hands-on course, teams of three to four students meet with top management, visit company sites, develop financial models, and publish an in-depth investment research report on a public company. The reports become available on the Freeman School web site and are distributed to more than 6,000 institutional and individual investors. The web site is http://www.burkenroad.org. Students are also responsible for introducing company management at the BURKENROAD REPORTS Investment Conference each spring. The companies followed are located in Louisiana, Mississippi, Alabama, Texas, and Georgia. This course is the same as FINC 471: students cannot earn credit for both ACCT 471 and FINC 471.

## TAXN 425 Business Taxation

Prerequisite: ACCT 303. TAXN 425 examines the Federal System of Taxation as it relates to businesses. The course includes an analysis of the taxation of corporations, S corporations, and partnerships. TAXN 425 uses a business-cycle approach, wherein the tax effects of formation, ongoing operation, and disposition of the entity are discussed. Tax effects of various transactions as they relate to the shareholders/partners are also discussed. The course is "Code" (Internal Revenue Code) oriented, emphasizing the primary authorities that govern tax matters. TAXN 425 is required for CPA examination candidates.

## BUSINESS AND LAW

Clinical Professors
Michael H. Hogg, MBA/JD, Tulane University, 1984.
Frank Jaster, PhD, Tulane University, 1977.
James C. Marvel, MA, University of Pennsylvania, 1966.
F. Kelleher Riess, LLM, Boston University, 1972.

## BLAW 421 Business Law

BLAW 421 examines the basic legal element of almost every business transaction: a contract. The course focuses on how businesspeople form and perform contracts, as well as possible remedies for breach of a contract. In addition to contracts, the course examines negotiable instruments, which are credit devices that serve as a substitute for money and how negotiable instruments function in the banking system. The course then focuses on the general rights of creditors and how bankruptcy affects creditor rights. Business Law presents material on the structure of business organizations, including mergers and consolidations, and the use of agents in business. The course concludes with a variety of special topics including property law, landlord-tenant law, insurance law, estate law, and professional liability law.

## BLAW 422 International Business Law

BLAW 422 introduces students to relevant features of the various legal systems currently governing the conduct of international business-national, regional, and international. Topics include international trade agreements, international dispute resolution, jurisdictional and choice of law problems, treatment of foreign investments, foreign corrupt practices, conflicting standards on labor, the environment, competition, and tariff law. The course presents policy problems and operational concerns that arise as the result of conflicting laws, gaps in laws, and developing international standards.

## BLAW 425 Legal Writing and Research

Prerequisite or corequisite: PERS 321. BLAW 425 is designed to teach the fundamentals of legal writing and to acquaint the student with the basic resources of computerized legal databases. Students learn the techniques of legal problem-solving and learn to research and draft legal memoranda and briefs through a series of progressively more complex written assignments.

## BLAW 468 Real Estate Law

BLAW 468 examines the fundamentals of real estate financing and development from a legal and managerial perspective. The course introduces real estate law to students. The course develops the student's skills in using legal concepts in a real estate transactional setting. The main topics covered include the following: land acquisition; subdivision; construction; permanent loans; joint ventures; management (leasing, environmental); limited partnerships; disposition of real property (sale of mortgaged property, foreclosures, wraparound mortgages, sale-leasebacks); and recent legal developments.

## BLAW 469 Law of E-Commerce

BLAW 469 examines the law relating to the developing field of electronic commerce or electronic business. The first part of the course looks at the online legal environment. Online legal environment issues typically involve dispute resolution, cyber torts and crimes, and intellectual property issues. The second part of the course examines management and e-commerce issues, which involve e-contracting, risk management, and information security. The third part of the course focuses on marketing and e-commerce and examines online marketing, consumer protection, and privacy issues. The fourth part of the course examines employment relationships and web technology, including monitoring employee activities. The fifth section of this course focuses on the economics, finance, and taxation of e-commerce.

## MCOM 335 Management Communications

MCOM 335 develops students’ abilities to 1) speak with confidence in public situations, 2) produce and revise memos and reports, and 3) examine communication issues in both internal and external business environments. Junior-level core course.

## PERS 321 Managerial Perspectives

PERS 321 focuses on the legal environment of business. This course examines the context within which businesses operate and analyzes this context from a variety of changing perspectives, which include ethical and global issues; the influence of political, social, legal and regulatory, environmental, and technological issues; and the impact of demographic diversity on organizations. In discussing these issues, the student will gain insights into the importance of understanding business perspectives vis-a-vis their impact on the overall management process and, ultimately, on the competitive success of an organization. Junior-level core course.

## E-BUSINESS AND INFORMATION SYSTEMS

## Professor

Amiya Chakravarty, PhD, London School of Economics, 1976.

## Assistant Professors

Gove Allen, PhD, University of Minnesota, 2001.
Geoffrey Parker, PhD, Massachusetts Institute of Technology, 1998.

## ISDS 375 Introduction to Information Systems

ISDS 375 provides an overview of the hardware, software, and organizational foundations of Information Systems. Students will get hands-on experience with Internet security, web page authoring, analysis using electronic spreadsheet software, and database management. Before registering for ISDS 375, students should be familiar with basic computer use (e.g., word processing). Upon successful completion, students will be able to manage data stored in relational database management systems (such as Microsoft Access), extract those data for analysis in electronic spreadsheet software (such as Microsoft Excel), and publish findings on the World Wide Web. Junior-level core course.

## ISDS 438 Information Strategy

ISDS 438 examines the difficult and multi-disciplinary task of managing information systems. Furthermore, it analyzes the interaction between business strategy, information strategy, and organizational structure and people. Students who take this course will be able to develop an information strategy targeted at creating a knowledge-based organization and will understand how the different elements of it interact.

## ISDS 441 Emerging New Technologies

ISDS 441 examines the cutting-edge, state-of-the-art information technologies. The course emphasizes not only recognizing the current capabilities and applications of such technologies, but also predicting and benefiting from the timing and nature of the future application of these technologies for value creation. Student teams will research and present various new technologies and their implications for companies, industries, countries, and other technologies.

## ISDS 460 E-Business Design and Implementation

ISDS 460 provides students the fundamental skills to develop Internet sites to conduct business on the World Wide Web. E-Business is characterized by the merging of Internet technologies and database technologies. As such, this course focuses on skills needed to build environments (such as electronic storefronts) that allow consumers or organizations to conduct business (such as place orders) at a website that is integrated with other business processing systems by means of a database management system. Prior experience with database management systems or prior experience with a computer programming language is helpful but not required.

## ISDS 473 Database Management

Prerequisites: ISDS 375, or equivalent experience, plus proficiency with Windows 95/98/NT. ISDS 473 provides a fundamental overview of the values, concepts, principles, skills, and techniques of modern database management systems and of database (data-driven) business application system development. Topics include the needs of business functions for database systems; components of modern database management systems; components of database application systems; logical/functional planning and design of database applications; modeling new database applications; structures of relational database application systems; and fundamentals of using a typical modern dbms (Access 2000) to build database application systems. Students will first learn the foundations of database and application structures, tools, and techniques. Then, given a case for database and multi-functional business application requirements, students design, construct, and test an integrated database and associated application components.

## ISDS 478 Information Systems

Prerequisite: ISDS 375. ISDS 478 explores the use of management information systems to solve problems in light of distributed processing and new-user responsibility. This class studies the microcomputer's impact on the corporate data center and its role as a personal work station. Finally, the class studies the merger of the information center and the automated office.

## ISDS 480 Intranets and Extranets

ISDS 480 covers the use of Internet technologies to support secure and directed communications with people inside the firm (intranets) and with trusted people outside the firm (extranets). These communications can include not only collaboration between individuals or groups on specific projects, but also expedited buying or selling relationships. The course covers hardware and software needs, as well as the generalized criteria for establishing systems to support intranets and extranets.

## ISDS 482 Business Programming

ISDS 482 gives the student a background in computer programming logic, concepts, and design through a systematic approach to business problem-solving and the application of systemsdevelopment approach. Although the course uses Visual Basic as the programming platform, a goal of the course is to concentrate on programming concepts independent of the programming language used. The logic and concepts learned in this class are transferable to other programming projects using macro languages in software products, statistical analysis software, and full-scale software development projects.

## ISDS 489 Electronic Commerce

In ISDS 489, students learn how information technology—and particularly the technologies of the Internet - can create new forms of business organization and commerce and new ways of creating value for shareholders in this new marketplace. We explore how these computer and communication technologies can create value through new products, new distribution channels, and new means of customer service.

## FINANCE AND BUSINESS ECONOMICS

## Professor Emeritus

James T. Murphy, PhD, University of Iowa, 1962.
Professors
Kenneth J. Boudreaux, PhD, University of Washington, 1970.
Robert Hansen, PhD, University of Florida, 1980.
James W. McFarland, J. F. Jr. and Jessie Lee Seinsheimer Dean's Chair in Business, PhD, Texas A\&M University, 1971; Dean.
Thomas H. Noe, A. B. Freeman Chair of Finance, PhD, University of Texas at Austin, 1987.
Paul A. Spindt, Keehn Berry Chair of Banking and Finance, PhD, University of California at Santa Barbara, 1977.
John M. Trapani III, Martin F. Schmidt Chair of International Business, PhD, Tulane University, 1972.

## Associate Professors

David A. Malueg, PhD, Northwestern University, 1983; joint appointment with Economics.
Russell P. Robins, PhD, University of California at San Diego, 1982; Associate Dean.
Venkat Subramaniam, PhD, University of Texas at Austin, 1994.

## Assistant Professors

Suman Banerjee, PhD, University of Iowa, 1999.
John Hund, PhD, University of Texas at Austin, 2000.
George Nishiotis, PhD, Northwestern University, 1999.
William Reese, PhD, University of Arizona, 1988.
Sheri Tice, PhD, Michigan State University, 1997.

## Clinical Professors

Peter F. Ricchiuti, MBA, University of New Orleans, 1986.
Leslie K. McNew, MBA, New York University, 1991.

## FINC 352 Financial Management

FINC 352 provides an overview of modern finance and introduces the student to the fundamental concepts that underlie contemporary financial management. The class is organized around four ideas: the organization of the firm; the time value of money; the valuation of stocks, bonds, and real investment projects; and the efficiency of the capital market. The skills and concepts covered in this class provide the basis for further study in finance. Junior-level core course.

## FINC 434 Venture Capital and Private Equity

Prerequisite: FINC 352. FINC 434 analyzes the concepts and theories of entrepreneurial finance, which includes venture capital and private equity. The course builds on the core finance topics covered in FINC 352 and FINC 451. The course covers a wide range of topics related to entrepreneurial finance. Apart from an in-depth analysis of new venture financing, the course also covers the financial aspects of strategic and business planning, financial forecasting, valuation, organization design and financial contracting, and financing and harvesting choices.

## FINC 451 Advanced Financial Management

Prerequisite: FINC 352. FINC 451 develops the theories and techniques of corporate valuation, including investment and financing decisions. New topics include mergers, leasing, options, warrants, and convertibles, all in a corporate finance framework. FINC 451 is required for the finance major and is only offered in the fall semester.
FINC 453 Cases in Financial Management
Prerequisite: FINC 352. An applications-oriented course, FINC 453 typically deals with cases involving working capital, mergers, corporate valuation, and capital budgeting analysis and planning. The course reinforces and applies concepts and techniques from accounting and financial economics in a practical setting. Credit analysis for bank lending is included.
FINC 454 Investments
Prerequisite: FINC 352. FINC 454 focuses on equity securities as investments. The major topic areas are equity markets, valuation, and portfolio management. The course content consists of a mix of descriptive material, theoretical models, and model application. Topics include market exchanges, market indices, risk, diversification, market efficiency, portfolio evaluation, fundamental analysis, and technical analysis.

## FINC 455 Financial Markets and Institutions

Prerequisite: FINC 352. FINC 455 examines financial markets, the various institutions that operate within them, and the regulatory environment. Its primary focus is debt markets. The discussion includes credit analysis for bank lending and recent innovations such as securitization. The course also emphasizes measuring and managing liquidity and interest-rate risk of financial institutions.

## FINC 456 Risk Management and Financial Innovation

Prerequisite: FINC 352. FINC 456 focuses on (1) the identification of financial risks associated with interest rates, currencies, and commodities; (2) measurement of risk exposure; (3) the corporate hedging decision; (4) risk-management strategies; (5) risk-management tools including forwards, futures, options, and swaps; and (6) the integration of risk management and innovative financing techniques. Case studies will illustrate and reinforce conceptual development.

## FINC 457 Commercial Bank Management

Prerequisite: FINC 352. FINC 457 explores emerging institutional changes as they relate to the structure of commercial banks. Topics include asset and liability management, loan evaluations and policies, investment policies and management, and financial analysis of banks.
FINC 460 Inside Commercial Banking
Prerequisite: FINC 352. FINC 460 approaches the commercial banking industry by covering different types of risk. It begins with a review of the overall banking system, how it works, and the necessity for government regulation and oversight. The course then addresses bank performance from different financial and risk perspectives, evolving into a more traditional area for risk analysis: commercial lending. Text and assigned readings complement lectures and class/case discussions.

FINC 462 International Finance
Prerequisite: FINC 352. FINC 462 covers (1) international financial markets, (2) foreign exchange, (3) exchange rate determination, (4) international investing, (5) international financing, (6) currency risk, and (7) international financial instruments such as currency forwards, futures, options, and swaps.

## FINC 468 Real Estate Planning and Development

FINC 468 places the student in the role of real estate project manager, using the tools of the developer, entrepreneur, and business person. The primary responsibility of the principal or consultant in a real estate venture is to manage all resources efficiently and effectively. The course will examine current professional development in real estate and the decision-making process under changing economic conditions, environmental expectations, and federal and state tax legislation.
FINC 470 Equity Analysis/Burkenroad Reports
See FINC 471. Students may receive credit for FINC 470 or 471, but not for both.

## FINC 471 Equity Analysis/Burkenroad Reports

In this valuable hands-on course, teams of three to four students meet with top management, visit company sites, develop financial models, and publish an in-depth investment research report on a public company. The reports become available on the Freeman School web site and are distributed to more than 6,000 institutional and individual investors. The web site is http://www.burkenroad.org. Students are also responsible for introducing company management at the BURKENROAD REPORTS Investment Conference each spring. The companies followed are located in Louisiana, Mississippi, Alabama, Texas, and Georgia. This course is the same as ACCT 471: students cannot earn credit for both ACCT 471 and FINC 471.
FINC 472 Darwin Fenner Student Managed Fund
FINC 472 combines academic study with actual investing. As part of the course, students manage a portfolio of stocks called the Darwin Fenner Student Managed Fund. The class will study state-of-the-art academic research papers and classic writings that have significantly influenced equity investing. Through reading and discussing these papers, students develop a critical thinking process and proprietary investment models. Working in groups of three, students analyze all S\&P 500 stocks in their assigned sector and give a buy or do not buy recommendation for each. Teams also evaluate the current portfolio holdings in their sector and make a sell or hold recommendation for each stock. In addition, the class evaluates the historic performance of the Darwin Fenner Student Managed Fund. Enrollment is by invitation only.

## MARKETING

## Professors

Victor J. Cook, Jr., PhD, University of Michigan, 1965.
William A. Mindak, PhD, University of Illinois, 1954.
Mita Sujan, Malcolm Woldenberg Chair of Marketing, PhD, University of California at Los Angeles, 1983.

## Associate Professors

Edward C. Strong, PhD, Stanford University, 1972.
Harish Sujan, PhD, University of California at Los Angeles, 1983.

## Assistant Professors

Mahesh Gopinath, PhD, University of Michigan, 1996.
Manish Kacker, PhD, Northwestern University, 1997.
Daniel Padgett, PhD, Pennsylvania State University, 1998.
Jianan Wu, PhD, Pennsylvania State University, 1998.

## MKTG 382 Marketing Management

MKTG 382 familiarizes students with the fundamental theoretical concepts and techniques of modern marketing management. The course surveys the roles of advertising, distribution channels, pricing, and product policy as they affect marketing programs. Students gain valuable marketing management experience by applying their newly acquired skills to real-life marketing situations. Junior-level core course.

## MKTG 410 Entrepreneurial Marketing

Prerequisite: MKTG 382. Because MKTG 410 continues a service-marketing emphasis, marketing faculty advise that students take either MKTG 480-or MKTG 410. MKTG 410 examines service systems of operations, delivery, and promotion. The class uses cases and handson projects to examine the particular problems and opportunities of entrepreneurs. Students might find helpful connections with Entrepreneurial Management (GMGT 410).

## MKTG 464 International Marketing

Prerequisite: MKTG 382. MKTG 464 focuses on marketing management problems, techniques, and strategies necessary to incorporate marketing concepts into the framework of the world marketplace. It follows a multi-disciplinary approach to create a broad understanding of the subject matter, including concepts from sociology, political science, economics, and marketing. This class also considers contemporary issues including globalization and the impact of the Internet.

## MKTG 465 Global Marketing

Prerequisite: MKTG 382. MKTG 465 examines the evolution of international, multinational, and global marketing. MKTG 465 also examines marketing's dynamic socio-cultural, political-legal, economic, and technological environments. Students will use case studies to analyze marketing decision-making process and examine the similarities and differences with "domestic" marketing. Students will perform in-class exercises with market assessments using International Trade Administration data, and also market repositioning.
MKTG 480 Services Marketing
Prerequisite: MKTG 382. MKTG 480 compares and contrasts service-based businesses with their manufacturing/product-based counterparts. A systems emphasis looks at operations, delivery, and promotion with the aim of improving service quality and productivity. Services run the gamut from health care, finance, and entertainment to professional and nonprofit segments. Students will have the opportunity to do a hands-on project in a service area.

## MKTG 481 Management of Promotion

Prerequisite: MKTG 382. MKTG 481 provides an overview of the marketing communications mix: advertising, public relations, sales promotion, and sales as they apply to consumer/industrial goods and services. The course emphasizes the growing use of the Internet as an integral part of business-to-business and business-to-consumer marketing programs. Students also receive handson experience in executing a web-based promotional campaign.

## MKTG 482 Sales Force Management

Prerequisite: MKTG 382. MKTG 482 covers theory and practice in sales force management. Technical issues include compensation, division of territories, and organizational considerations of managing a sales force. On the practical side, MKTG 482 covers specific sales techniques. Students learn how to sell "tangibles" as well as "intangibles." The skills learned in this course apply to a variety of situations both within and outside the context of sales.

## MKTG 483 Marketing Research

Prerequisite: MKTG 382. MKTG 483 helps organizations understand their markets. An interaction of marketing management, behavioral sciences, and statistics, this course deals with the collection, analysis, and interpretation of marketing information. The course familiarizes students with important concepts of marketing research and provides hands-on experience with real-world cases on marketing research problems.
MKTG 484 Consumer Behavior
Prerequisite: MKTG 382. MKTG 484 teaches students the knowledge, skills, insight, leadership, and passion to successfully influence customer and consumer behavior. The course includes hands-on experiential computer exercises, cases, and fieldwork.

MKTG 485 Marketing Strategy
Prerequisite: MKTG 382. MKTG 485 integrates the functioning parts of marketing decisionmaking with long-term planning. Readings, cases, and classroom discussions will cover productmarket portfolios, market share, experience curves, and resource allocation. Students play a business-simulation game, MARKSTRAT3, in which they link short-term decisions with longrun value of the firm.

## MKTG 489 Retailing

Prerequisite: MKTG 382. MKTG 489 helps students develop an understanding of marketing channel functions and an appreciation of the retailer's role in the distribution of goods and services. Topics include channel design, selection and motivation of channel members, pricing and promotional issues within the channel, retail location, merchandising strategy, and inventory valuation and control.

## MKTG 495 Marketing Engineering

Prerequisites: MKTG 382 and FINC 352. MKTG 495 helps students respond to the changes of the marketing manager's job because of the pervasive use of high-powered personal computers, exploding volumes of data about customer behavior, and flattened organizations. Students will receive a technology-intensive education that allows them to use databases, models, analyses, and computer simulations to design effective marketing plans.
MKTG 497 New Product and Brand Management
With the increasing market globalization and competition, effective new product and brand marketing management in differentiating products has become essential for today's marketing managers. This course deals with concepts, methods, and applications in new product and brand management. Unlike most of the marketing courses that focus on the conceptual side of the exercise only, this course blends the conceptual foundation with the analytical skills to translate conceptual understanding into specific operational plans in new product and brand management.

## OPERATIONS MANAGEMENT

## Associate Professors

Yasemin Aksoy, PhD, University of Florida, 1988.
Larry R. Arnold, PhD, The Johns Hopkins University, 1971.

## Assistant Professors

Jovan Grahovac, PhD, University of California at Los Angeles, 1995.
Jun Zhang, PhD, Carnegie Mellon University, 2000.

## PSOM 371 Operations Management

Prerequisite: MATH 111, 114, or 301. PSOM 371 provides an overview of one of the most challenging areas in business-operations management. Operations management focuses on the systematic planning, design, and operation of all processes that deliver goods and services. The subject spans almost all the value-added and supporting activities of an organization, including product and process design, inventory management, project management, and process improvement. This course has two primary objectives: (1) to familiarize students with operations management decisions and the environment in which these decisions are made; and (2) to help students master the basic quantitative techniques of operations management. Junior-level core course.

## ORGANIZATIONAL BEHAVIOR

## Professors

Arthur P. Brief, Lawrence Martin Chair of Business, PhD, University of Wisconsin at Madison, 1974.

Michael J. Burke, PhD, Illinois Institute of Technology, 1982.
Robert G. Folger, PhD, University of North Carolina at Chapel Hill, 1975.
Associate Professors
Mary A. Konovsky, PhD, Indiana University, 1986; Senior Associate Dean.
Mary Waller, PhD, University of Texas at Austin, 1995.

## OBHR 331 Organizational Behavior

OBHR 331 develops and applies concepts from psychology and social psychology to organizational problems that managers face. Topics such as perception, communication, attitudes, motivation, influence, group dynamics, and organizational change are covered in a lecture, discussion, and problem-solving framework. Junior-level core course.

## OBHR 432 Dimensions in Human Resources Management

OBHR 432 introduces the major strategies and procedures for effectively managing human resources. Through readings, cases, and a series of experiential exercises, students learn about the legal environment of human resource management, analyzing jobs and work, staffing, performance management, training, compensation, and workplace safety.

## OBHR 436 Negotiations

This course addresses the theoretical foundations and practical skills used in resolving differences and negotiating mutually satisfying outcomes. Students develop skills through simulated negotiations in a variety of contexts. Class topics include the nature of negotiations, different negotiating styles, distributive versus integrative bargaining, conflict, and intercultural bargaining. Self-reflection and giving and receiving feedback are key aspects in developing negotiation skills. Students may only receive credit for either OBHR 436 or GMGT 437, but not for both.

## OBHR 437 Leadership and Motivation

Prerequisite: OBHR 331. OBHR 437 explores, through lecture, discussions, cases, and exercises, a variety of conceptions of leadership and their applications to organizations. Viewing leadership as management, the course examines the circumstances confronting management. Students become familiar with a number of motivational programs currently popular in organizations and use the leadership and management concepts discussed in class to analyze the development of current business leaders and the reasons for their success or failure.

## STRATEGY AND ENTREPRENEURSHIP

## Professors

Jeffrey A. Barach, DBA, Harvard University, 1967.
Scott Cowen, DBA, George Washington University, 1975; President, Tulane University.

## Associate Professor

Gerard E. Watzke, PhD, Stanford University, 1972.

## Assistant Professors

Frances E. Fabian, PhD, University of Texas at Austin, 1997.
Douglas Miller, PhD, Ohio State University, 2000.
Clinical Professors
James Biteman, DBA, Harvard University, 1979.
John B. Elstrott Jr., PhD, University of Colorado at Boulder, 1975.

## GMGT 375 Environmental Management

GMGT 375 surveys key environmental issues affecting business and industry in the 21st century. The class opens with an overview of the fundamental properties of nature that set the boundaries for resource availability and human opportunity in the future. The course then reviews the origins and history of the environmental movement, as well as the current status of environmentalism. The major environmental components of resources, population, habitat, pollution, and society are examined from the perspective of business boundaries and opportunities. Students will use case studies to explore business ventures in which environmental issues have been successfully or unsuccessfully managed.

## GMGT 410 Entrepreneurial Management

Prerequisite: ACCT 203. GMGT 410 consists of two parts. In the first part, class members team up to choose a business. The teams then create a business plan. By maintaining the books of the firm, students see the financial impact of their decisions. This format emphasizes how day-to-day decisions add to or detract from corporate liquidity and profits or losses. The second part of the course comes from the professor's 37 years of business experience. Topics include developing and recognizing business opportunities; using teamwork to organize a business; building a realistic business plan; raising capital and borrowing money; interviewing, hiring, and managing people; determining cost structure; analyzing margins; pricing; making decisions in groups; considering ethics; identifying industry characteristics; evaluating financial statements; negotiating; dealing with labor unions; creating a successful business partnership; understanding the banking system and how it works globally; and developing a philosophy of business. This course is available only in the fall semester.
GMGT 411 Cases In Entrepreneurship
GMGT 411 reviews 13 actual business cases. A visiting CEO (or other top executive) and the professor teach each case jointly. The class explores problems and opportunities encountered in the search, evaluation, and acquisition of new, as well as ongoing, ventures. Students will further develop analytical skills in finance, accounting, business analysis, management, and marketing that they have acquired in other courses. Brainstorming sessions will challenge and improve innovative thinking; assignments and presentations hone business communication skills. Discussion of entrepreneurship, family business, and small business management gives the student an overview of the alternatives to traditional corporate employment. Most importantly, students interact with top-level executives as role models from whom they can learn how to be successful entrepreneurs.

## GMGT 414 Business Ethics

GMGT 414 explores the responsibility of business on such issues as unjust firing, harming customers or workers, dumping hazardous waste, drug testing, sexual harassment and discrimination, lying and bluffing, deceptive advertising, and competitor intelligence gathering. Various market failures, such as the public goods problem and the assurance problem, that contribute to ethical problems are explored, but no prior knowledge of economics is required. The course also explores the role of self-regulation, civil law, and criminal law in solving ethical problems. The class explores various ethical theories, including utilitarianism, human rights theory, and virtue ethics, and students will develop and use a practical, comprehensive synthesis of the theories to find solutions to ethical problems. Students will also consider various theories of social justice and their implications for the responsibility of business. Students are encouraged to develop their own theoretical approach and choose an area of special interest for class discussion and term papers.

## GMGT 415 Management Policy

Prerequisite: All 300-level required courses. In GMGT 415, students integrate knowledge from each basic functional area core course to evaluate strategic decisions from the general management perspective. This case-based course stresses environmental and industry analysis, strategic profiling and formulation, and problems in strategy implementation. Students assume the role of the practicing general manager, developing a capacity to propose, argue, and implement appropriate strategies. Senior-level core course.
GMGT 421 Project Management
GMGT 421 addresses project management from the perspective of a business manager who faces the planning, initiation, and culmination of large or small projects in a variety of settings. The course presents the basic nature of managing all types of projects (such as public, business, and engineering information systems, etc.), as well as the critical skills and specific techniques and insights required to carry out successful projects. Topics include characteristics of projects; project selection and organization; work breakdown structure; personnel selection; scheduling; budgeting and resource allocation; conflict and negotiation; project control; evaluation; and termination. The course also introduces and uses industry-standard project management application software.

## GMGT 422 Corporate and Cooperative Strategy

Prerequisite: completion of or concurrent enrollment in GMGT 415. In GMGT 422, students integrate knowledge from each basic functional area course to evaluate strategic decisions in the corporate context. This case-based course emphasizes alternative modes of organizing transactions across businesses (e.g., the multidivisional corporate structure, alliances, and networks). Also covered are such topics as economies of scope in high technology companies, international issues in alliances, common management problems in mergers and acquisitions, and financial valuation of diversified firms. Students work individually and in teams on a major project.

## GMGT 437 Negotiations

GMGT 437 emphasizes formulating objectives and building effective negotiation strategies to achieve those objectives. The course builds skills by requiring students to analyze, in a variety of exercises in and out of class, specific strategies and tactics within the overall negotiations process. Students may only receive credit for either GMGT 437 or for OBHR 436, but not for both.

## GMGT 463 Management of International Business Operations

GMGT 463 deals with challenges of managing business operations on an international scale. Its special focus is on managerial practices as they relate to the environmental, strategic, and organizational issues that arise in conducting business across national boundaries. Building on a theoretic framework, the course explores various practical constraints facing managers abroad. The course relies almost exclusively on case analysis and class discussion. Juniors may take GMGT 463.

GMGT 465 Global Strategic Management
GMGT 465 focuses on the managerial challenges associated with formulating international business strategies and implementing plans in firms whose operations extend across national boundaries. Lectures and cases emphasize strategic factors differentiating the MNC (multinational corporation) from the UNC (uninational corporation). Identifying and resolving the challenges to conventional decision rules of the UNC provide the students with the necessary knowledge, skills, and sensitivity to manage effectively in globalizing markets.

## The School of Engineering

Mailing Address

School of Engineering
Tulane University
New Orleans, LA 70118

## Telephone Numbers

Phone: (504) 865-5764
Fax: (504) 862-8747

## MISSION STATEMENT

The mission of the Tulane School of Engineering is to provide outstanding opportunities for learning and discovery in engineering and computer science and to foster an environment that is student focused, research intensive, entrepreneurial and responsive to the needs of the community.

## INTRODUCTION

Engineering and Computer Science are professions where knowledge of Math and Science is applied to solve problems to address the needs of society in an economically efficient manner. Engineers and computer scientists are applied mathematicians, applied scientists, designers, and builders.
Engineering at Tulane has a long and distinguished history dating back to 1884 when the first classes in engineering were offered. Graduates of the School helped build the infrastructure of New Orleans and of the South. Its graduates have also been pioneers in developing communications satellites, in designing medical devices, and in mining the resources of the internet. The faculty members of the School of Engineering are working at the cutting edge of their disciplines and bringing that knowledge into the classroom. While the School is research intensive, it maintains the strong commitment to teaching that has characterized it through the decades.
The School of Engineering offers four-year undergraduate programs leading to the Bachelor of Science in Engineering. These include the programs in biomedical engineering, chemical engineering, civil engineering, electrical engineering, mechanical engineering, and environmental engineering, which are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology. Programs also exist in computer engineering and an individually designed major. In addition, the School offers a program leading to the Bachelor of Science in Computer Science. The program in computer science is accredited by the Computer Science Accreditation Commission (CSAC) of the Computing Sciences Accreditation Board (CSAB), a specialized accrediting body recognized by the Council on Postsecondary Accreditation (COPA) and the U. S. Department of Education.

Special options allow study in the liberal arts, participation in the Junior Year Abroad program, participation in a senior honors program, or the adaptation of an engineering program to meet medical school or law school entrance requirements. These options are described under Programs of Study.
The Master of Business Administration program at Tulane is ordinarily a two-year program, but qualified engineering students can earn a Bachelor of Science in Engineering Science degree and a MBA in five years. Engineering students are particularly well-suited to the MBA program because of their strong quantitative background, and there are many responsible management positions in business and in government open to those with this combination. This option is also described under Programs of Study.
Programs leading to the Master of Science in Engineering, the Master of Science in Computer Science, and the Doctor of Science degree are administered by the Graduate Division of the School of Engineering. The Master of Science in Engineering and Doctor of Science are offered in biomedical engineering, chemical engineering, civil engineering, electrical engineering, environmental engineering, and mechanical engineering. The Doctor of Science is also available in computer science. Programs leading to the Master of Science and Doctor of Philosophy degrees are available through the Graduate School.

While it is an important and thoroughly integrated part of the university as a whole, the School of Engineering maintains its own unique identity and takes pride in the close relationship between faculty and students and in the strong unity and esprit de corps among the students themselves. The engineering student body and the student council sponsor a number of social and professional activities, including an Engineering Week each spring. The School also supports very active chapters of Tau Beta Pi, the national engineering honor society, and Upsilon Pi Epsilon, the national computing sciences honor society. There are student chapters of professional societies in all departments.

## FACILITIES

The School of Engineering is housed in a building complex consisting of the Lindy Boggs Center for Energy and Biotechnology, the Chemical Engineering Building, the Civil Engineering Building, the Mechanical Engineering Building, and Stanley Thomas Hall.
The Department of Biomedical Engineering is primarily located on the fifth floor of the Boggs Center, with additional space on the second, fourth, and sixth floors. The department has more than 15,000 square feet of offices and laboratories. The facilities include laboratories for biomaterials, mechanical testing, computers, imaging and computer graphics, respiratory function, neuromonitoring and neurosignal analyses, biomedical electronics, senior projects, specimen preparation, and cell and tissue engineering. The computational facilities include PC's and Mac's networked with departmental "front-end" workstations (IBM RS6000, and SGI). The mechanical testing laboratory houses an MTS 809 high-capacity combined tension-torsion machine. The biomaterials laboratory houses EG\&G PAR computerized electrochemical testing equipment. These instruments are capable of DC measurement and AC impedance testing of corrosion behavior. They are also capable of polarographic analysis for measurement of solution concentrations. Tissue culture facilities are also available. The specimen preparation laboratory houses equipment for preparation of samples for metallographic and histologic examination. The respiratory functions laboratory contains spirometers, flowmeters, and data acquisition and analysis equipment.
The Department of Chemical Engineering has outstanding facilities for research and instruction in biochemical engineering, electrochemical engineering, control, optimization, process design, reaction kinetics, catalysis, microemulsions, colloids and surface phenomena, separations processes and environmental engineering. There are 13 laboratories in the Lindy Claiborne Boggs Center. One of these laboratories has been designed and equipped for genetic engineering. Tulane has established the centralized Coordinated Instrumentation Facility (CIF) with the intent to operate and manage sophisticated instrumentation for academic and industrial research; the core facility is located in the Boggs Center. Instruments operated by the CIF include high-field NMR=s, high resolution GC/MS, X-ray diffractometers, electron microscopes (SEM and TEM), and induced coupled plasma (ICP). The F. M. Taylor Laboratory is a three-story building which houses pilot-plant-sized equipment for both instruction and research. The Practice School in the senior year offers an opportunity to work with commercial scale equipment at local industrial sites.

The Department of Civil and Environmental Engineering, with associated laboratories, is predominantly located in the Walter E. Blessey Hall, Civil Engineering Building. Superb laboratory facilities are offered to support undergraduate and graduate studies in the traditional areas related to civil and environmental engineering. The John K. Mayer Geoenvironmental Laboratory is equipped with all equipment necessary for both research and instruction. The McDermott Materials Testing Laboratory includes a 200 -ton capacity MTS testing machine for static and vibratory testing of large specimens. The William Benjamin Gregory Hydraulics Laboratory has four large self-contained bench systems capable of conducting experiments in Bernoulli flow, pump and weir analysis, hydrostatic pressure and stability of floating objects. A biotreatment research laboratory is housed in Blessey Hall and an additional graduate research laboratory is located in the Israel Environmental Sciences Building. The environmental engineering laboratories are equipped with the most modern equipment available for the study of water quality and waste treatment problems. Finally, state-of-the-art computer facilities provide an ability to conduct instruction and/or research in areas related to design and analysis of structures, water quality modeling, and spatial analysis (geographic information systems, remote sensing technology). Available peripherals include digitizing tablets, plotters, assorted printers and multimedia equipment.
The Department of Electrical Engineering and Computer Science (EECS) offers undergraduate and graduate programs in Computer Science, Computer Engineering, and Electrical Engineering and features several interdisciplinary programs with other departments in the university. The department is located in Stanley Thomas Hall, a four story building that was completely renovated in the academic year 1998. The renovated building exhibits two state-of-the-art electronic classrooms, a Robotics Laboratory, a 1,200 square-foot facility for Electrodynamics Systems Research, and instructional laboratories including the Pendleton Lehde Laboratory, the Electronics and Communications laboratory, and the Computer Engineering laboratories. In addition to the instructional laboratories, the faculty, the graduate, and the undergraduate students of the department are accommodated by several research laboratories in the research areas of Intelligent \& Knowledge-Based Systems, Electronic Instrumentation, Microprocessor Applications and Microcomputer Interfacing, Computer Vision, Signal \& Image Processing, Robotics, Electric Power Engineering, and Control Systems.

The EECS department operates a local area network (LAN) with a number of Sun workstations running UNIX and X windows, as well as two multiple CPU Sun SPARC servers. This LAN is accessible from X-Terminals and personal computers in the department's laboratories, and from workstations, all personal computers, and dial-up lines on the University's campus network and the Internet. Other computing facilities available to EECS students include a cluster of IBM RS/6000 systems operated by the University computing center and a personal computer laboratory operated by the School of Engineering, all of which are on the campus network.
The physical facilities of the Department of Mechanical Engineering are located in the engineering complex. The Senior Room, the Computer Lab/Classroom, the Design Fabrication Laboratory, the Mechanics Laboratory, the Materials Laboratory, the Mechanical Engineering Student Lounge, and some graduate student offices are located in the Mechanical Engineering Building. The Robotics and Control Laboratory and several graduate student offices are located in the Mechanical Engineering Graduate Laboratory Building. The Thermodynamics Laboratory, the Basic Measurements Laboratory, the Materials Testing Laboratory, and Metallurgy Laboratory are situated in annexes surrounding the Mechanical Engineering Building. The Laboratory for Mechatronics and Intelligent Sensors is located on the sixth floor of the Boggs Center. Faculty offices and additional graduate student offices are located on the fourth floor of the Boggs Center.

## Programs of Study

## DEGREES

The School of Engineering offers degrees in the following undergraduate programs, each designed to prepare the student for a particular professional goal:
Biomedical Engineering
Chemical Engineering
Civil Engineering
Computer Engineering
Computer Science
Electrical Engineering
Environmental Engineering
Individually Designed Major
Mechanical Engineering
Engineering-Master of Business Administration
BSE/MSE 5-Year Degree in Engineering
Six-year combined Engineering and Architecture Degree
All undergraduate curricula in the School of Engineering are four years in length. The computer science program leads to the Bachelor of Science in Computer Science. All other programs lead to the Bachelor of Science in Engineering (biomedical engineering, chemical engineering, civil engineering, computer engineering, electrical engineering, environmental engineering, individually designed major, and mechanical engineering). The School of Engineering reserves the right to limit the enrollment in each program to insure that the educational process is not compromised. The five-year combined BSE/MSE Degree is completed in conjunction with the departmental honors program.

## Curriculum

## Freshman Year

The freshman curriculum is common to all programs except computer engineering and computer science.

## Fall SemesterCredits

CHEM 107, 117 Chemistry I and Lab
PHYS 131 General Physics I (with lab)
MATH 121 Calculus I
ENGR 100 Introduction to Engineering and Computer Science and
CPSC 101 Software Design and Programming or

ENGL 101 Writing
or
****119 Writing Seminar (4)
Fall Semester Total: 17
Spring Semester
CHEM 108, 118 General Chemistry II and Lab

## Credits

PHYS 132 General Physic II (with lab)
MATH 122 Calculus II
ENGR 101 Introduction to Engineering and Computer Science
or
BMEN 102 Elements of BME Design
or
MCEN 102 Contemporary Issues in Mechancial Engineering Design
and
CPSC 101 Software Design and Programming or

ENGL 101 Writing
or
****119 Writing Seminar
Spring Semester Total:

## Modifications to the freshman program may be made by:

- Achievement of advanced standing through Advanced Placement Tests offered by the CEEB or International Baccalaureate.
- Submission of transcripts from other universities for equivalent courses taken prior to entering Tulane.

ROTC courses, if elected, are taken in addition to the listed freshman courses.
Each freshman is assigned a faculty adviser prior to their first semester and each is expected to consult with him or her regularly. Faculty members keep posted office hours for that purpose and are readily available for conferences.

## HUMANITIES AND SOCIAL SCIENCES COMPONENT

In order to truly complete an undergraduate experience in engineering, students must be able to place their technical education in the context of societal and cultural needs. Accordingly, course work in the humanities and social sciences is considered integral to all engineering curricula. Each curriculum requires a minimum of six courses (18 credits) of acceptable humanities and social science electives in addition to English 101 or one of the 119 writing seminars. (ENGL $101, * * * * 119$ is usually taken as a freshman). The humanities and social science electives are to be chosen to provide both a broad and in depth exposure to societal and cultural issues. They are not meant to be a collection of introductory courses, nor are they intended to focus on the development of technical skills. A list of acceptable courses is available in the Dean's Office.

While the School of Engineering does not require a foreign language, it is highly recommended that students with a talent and background in languages consider using a language for some of the course work to meet the humanities and social science requirement. Engineering has become increasingly global and a background in a foreign language and culture can add significantly to a graduate's credentials.
Students must satisfy the following requirements:
Humanities: At least one approved course (3 credits) must be selected from the humanities, which include art history, American studies, classics, communications, dance, English, foreign languages, history of architecture, Jewish studies, music, philosophy, and theater.
Social Sciences: At least one approved course (3 credits) must be taken in the social sciences, which include anthropology, economics, education, geography, history, Latin American studies, political economy, political science, psychology, sociology, and women's studies.

World Culture: Of the six courses selected to satisfy the humanities and social science requirement, one (3 credits) must be chosen from a list of courses in World Culture.
Breadth: Courses must be selected in a minimum of three different departments.
Depth: Two courses must be selected in each of two departments.
Humanities and Social Sciences electives may be taken satisfactory/unsatisfactory.

## Biomedical Engineering (BMEN)

The Department of Biomedical Engineering is located in the Lindy Claiborne Boggs Center that includes more than 16,000 square feet of Biomedical Engineering office, laboratory, and classroom space. Major items of research equipment include:

Computers - Campus wide: IBM RS/6000 cluster.
Computers - Biomedical Engineering Server: SGI Origin 2000 DS 8 processor; Various workstations: Silicon Graphics, IBM RS/6000's, Sun, DEC Alpha, various PCs and Macintosh computers.
Image Analysis: PC and Macintosh with frame grabbers, scanners, etc.
Neurophysiology: Grass stimulators, amplifiers, and polygraph recorders.
Physiology Laboratory: A physiology laboratory is equipped to perform numerous physiology experiments and demonstrations.
Solid Mechanics: Digitally controlled MTS axial/torsional universal testing system, consolemounted and portable strain gage conditioners, ultrasonic testing apparatus.
Fluid Mechanics: Brookfield cone-plate viscometer, Cahn surface tension balance, flow visualization analysis system, Electronetics pulsating bubble surfactometer, computational fluid diagnosis software.

Experimental and Computational Tissue Mechanics: Universal Cartilage Testing Device, High Resolution Imaging System, ultrasound indentation probe, biosafety cabinet, centrifuge, microscope, incubator.
Biomaterials: EG\&G PAR computerized electrochemical and polarographic measurement systems, metallographic specimen preparation equipment, Azur Environmental toxicity analyzer.
Electronics: Full suite of GPIB connected test equipment to support development of HC11 and Basic Stamp microcontrollers. LabVIEW is used for algorithm and control loop development and prototyping of implant, telemedicine, and monitoring applications.

Pulmonary Function: Spirometers, flow and pressure instrumentation, data acquisition, acoustic measurement systems.
Tissue Engineering: This facility is fully equipped for cell/tissue culture and a range of chemistry and microscopy techniques. Major equipment includes biosafety cabinets, centrifuges, microscopes, incubators, microplate washer and reader, FTIR.

New undergraduate laboratories are available for experiments associated with required courses in biomechanics (BMEN 212), medical sciences (BMEN 313/314), and bioelectronics (BMEN 373). These labs are also used in elective courses in biomechanics (BMEN 330), biomaterials (BMEN 323), and cell and tissue engineering (BMEN 340). A computer laboratory/classroom equipped with a smartboard and projector and 12 PC's, a printer and scanner are also available for undergraduates, particularly those taking BMEN 482 (required) and BMEN 361 (elective). These departmental research facilities are complemented by a machine shop and photographic dark room. In other branches of the university, advanced surface and chemical analytical facilities are accessible. Tulane's nine libraries house approximately 1.9 million volumes and has periodicals and on-line access to periodicals. These include the main university library ( 1.5 million volumes) and the Rudolph Matas Medical Library at the School of Medicine. Additional research facilities are available through the Department's ties with the LSU Medical School and LSU Dental School, both located in New Orleans.
The umbrella term "Biomedical Engineering" covers any application of engineering techniques and principles to problems and processes of biology or medicine. Such a broad class of study needs to be narrowed in order to achieve adequate depth, and the emphasis chosen by our faculty is-first and foremost-to provide students with the opportunity to acquire a rigorous engineering education. This basis then serves as a springboard to concentrated study of biomaterials, bioelectronics, bioelectricity, biomechanics and tissue engineering during the remaining undergraduate years, and will prepare you for graduate school, medical school, or a position in industry.
The Department was founded in 1977, so we are a relatively mature department in a new field-a field in which the potential for making meaningful contributions is unlimited. Our backgrounds are diverse, covering the areas of biomechanics, biomaterials, bioelectronics, bioelectricity and tissue engineering. Our undergraduate teaching program is extensive, with approximately 40 seniors graduated each year. All of us on the faculty are actively engaged in research sponsored by federal, state and/or private organizations, and we believe that this enhances our teaching abilities by keeping each of us in the forefront of knowledge in our specialties.

## DEPARTMENTAL MISSION

The faculty and staff of the Department of Biomedical Engineering strive to provide the highest quality education and research opportunities for our students.
We expect and value excellence in teaching undergraduate and graduate courses, conducting research, and training students to participate in research activities and professional practice.

We accomplish our Departmental Mission and we evince the core values of Tulane University as follows:

- Through the scholarship of discovery, we develop, integrate, and apply new ideas through innovative, interdisciplinary research approaches.
- Through the scholarship of learning, we develop the knowledge and skills necessary to participate in biomedical engineering analysis, design, and research.
- Through the scholarship of service, we share knowledge to advance the opportunities and the significance of biomedical engineering in efforts that ultimately improve health and quality of life.


## DEPARTMENTAL VISION

The Department of Biomedical Engineering is committed to being a global leader in biomedical engineering scholarship. Our faculty, staff, and students are all important parts of the team that will complete our missions of: excellence in undergraduate and graduate education; meaningful and innovative research; and service dedicated to advancing the field of Biomedical Engineering.

## PROGRAM EDUCATIONAL OBJECTIVES

To fulfill our Departmental Mission and Vision, we endeavor to achieve a set of objectives which can be classified in three broad, interrelated categories: Program Instruction, Faculty, and Facilities and Support. Our educational objectives are constructed to yield an environment where students take active control of, and exhibit pride in, their education; view the department, the School of Engineering, and Tulane University as learning-oriented communities and themselves as integral parts of those communities; develop the broad base of critical thinking abilities, technical knowledge, and engineering skills crucial to professional practice in Biomedical Engineering and related careers.

## UNDERGRADUATE INSTRUCTIONAL OBJECTIVES

We give our students strong foundations in engineering, mathematics, and the life and basic sciences, in a coherent and coordinated curriculum. We provide our students with unique opportunities to conduct focused research or design projects in areas of individual interest, and we prepare our students for a successful transition to advanced study and professional careers. Specifically, students who obtain a bachelor's degree from our department will be able to:

1. Understand and apply principles and tools of mathematics, science, and engineering to formulate and analyze problems, specializing in issues found at the interface between biological and technological systems.
2. Compose and test hypotheses, and interpret resulting data.
3. Design systems, devices and processes to meet designated specifications or open-ended objectives; evaluate and justify the resulting designs within contemporary cultural and broad societal contexts.
4. Work effectively in multidisciplinary teams.
5. Exemplify professionally and ethically responsible conduct.
6. Seek and value opportunities for extracurricular and post-graduate education and development.
7. Communicate the short- and long-term challenges and opportunities inherent in the field of Biomedical Engineering to both technical colleagues and the general public.

GRADUATE PROGRAM INSTRUCTIONAL OBJECTIVES

We enhance the academic preparation of our graduate students in engineering, mathematics, and the life and basic sciences. Our graduate students are our junior colleagues, and we furnish them with the advanced and current coursework, professional guidance, and equipment/facilities which are critical to their participation in biomedical engineering research and scholarship. We coach our students as they conduct independent research and pursue careers related to one of the major themes of biomedical engineering (e.g., bioelectronics, biomaterials, biomechanics, cell/tissue engineering, or instrumentation).

## CURRICULUM

The undergraduate program in Biomedical Engineering is built upon a rigorous engineering science foundation that is, in turn, based upon a broad curriculum of natural sciences, mathematics, electives in humanities and social sciences, and design. Although students are encouraged to concentrate their professional electives in a sub-field of interest in biomedical engineering (e.g., biomechanics, bioelectronics, bioelectricity, biomaterials, or tissue engineering) or medical sciences (for pre-med students), there are no formal "tracks" within the sequence. The undergraduate curriculum is primarily designed to prepare our undergraduates for advanced study. More than two-thirds of our BSE graduates continue on to graduate or professional training after graduation from Tulane. We have a philosophy of 'rigorous breadth' in biomedical engineering which can best be characterized by the undergraduate curriculum described below.
Tulane University BMEN Undergraduate Curriculum
Year 1
Semester One
MATH 121 Calculus I ..... (4)
CHEM107/117 General Chemistry I and Lab ..... (4)
ENGL 101 Writing(4)
PHYS 131 General Physics I and Lab ..... (4)
ENGR 100 Engineering Seminar ..... (1)
Semester Two
MATH 122 Calculus II(4)
CHEM 108/118 General Chemistry II and Lab ..... (4)
CPSC 116 Intro to Computing via C(4)
PHYS 132 General Physics II and Lab(4)
BMEN 102 Elements of BME Design(2)Year 2
Semester One
MATH 221 Calculus III ..... (4)
CELL 101/211 General Biology I and Lab ..... (4)
HUSL Human/Social Sciences Elective ..... (3)
ENGR 241 Statics ..... (3)
BMEN 201 Experts. \& Experimental Design ..... (2)
BMEN 203 Drawing \& Visualization(1)
Semester Two
MATH 224 Applied Math (Diff Eqns.)(4)
ENGR 201 Electric Circuits I ..... (3)
BMEN 260 Intro Organic \& Bio-Chemistries ..... (3)
ENGR 243 Mechanics of Materials ..... (3)
BMEN 212 BMEN Lab ..... (2)

Year 3
Semester One
BMEN 303/313 Med. Sci. for Engineers I and Lab
BMEN 373 Biomedical Electronics and Lab
HUSL Human/Social Sciences Elective
BMEN 3xx**/482 "Bridge" class or Model. Bio Sys.
ENGR 344 Fluid Mechanics
(3)

BMEN 371 BMEN Seminar
Semester Two
BMEN 304/314 Med. Sci. for Engineers II and Lab
ENGR 312 Materials Sci and Eng
HUSL Human/Social Sciences Elective
BMEN 3xx** "Bridge" class
BMEN 490 Research \& Professional Practice I
BMEN 372 BMEN Seminar
ELECTIVE Professional Elective

HUSL Human/Social Sciences Elective
HUSL Human/Social Sciences Elective
BMEN 3xx**/482 3xx, 6xx or Modeling Bio Sys.
BMEN 491 Research \& Professional Practice II
BMEN 403 Team Design I
BMEN 671 BMEN Seminar
Semester Two
ELECTIVE Professional Elective
ELECTIVE Professional Elective
HUSL Humanities/Social Sciences Elective
BMEN 3xx*/6xx*** "Bridge" class or 6xx
BMEN 404 Team Design II
BMEN 672 BMEN Seminar

## "Bridge" classes

*BMEN 323 Biomaterials (Fall)
*BMEN 361 Bioelectricity (Fall)
**BMEN 330 Biomechanics (Spring)
**BMEN 340 Cell and Tissue Engineering (Spring)
***BMEN 6XX courses are graduate courses, one of which is required in the domain of focus, generally choosing from the following:
BMEN 611 Cardiac Electrophysiology
BMEN 614 Biomedical Signal Analysis
BMEN 626 Biomaterials Research Problems and Methodology
BMEN 627 Biomaterials and Biocompatibility
BMEN 628 Surgical Applications of Biomaterials
BMEN 633 Bio Fluid Mechanics
BMEN 634 Soft Tissue Mechanics
BMEN 635 Advanced Soft Tissue Biomechanics
BMEN 636 Introduction to the Finite Element Method
BMEN 639 Advanced Finite Element Methods
BMEN 643 Advanced Topics in Cell/Tissue Engineering (Cell and Tissue Mechanics)
BMEN 645 Advanced Topics in Cell/Tissue Engineering (Brave New World)
BMEN 661 Introduction to Computational Biomechanics
BMEN 664 Bone Mechanics
BMEN 666 Cardiovascular Biomechanics
BMEN 667 Pulmonary Mechanics
BMEN 674 Data Acquisition and Control
BMEN 676 Advanced Topics in Excitable Media

## Professional Electives

The professional electives include at least two of the BMEN 300-level elective 'bridge' courses and at least one of the follow-up BMEN 600-level courses. The other professional elective courses may be any courses that meet the student's professional goals. Up to two ROTC courses may be used to meet this requirement.

Premedical students may use the professional electives in the junior year to take organic chemistry. Many premedical students prefer to take organic chemistry during the summer, however. Some medical schools require a second English course, and this can be one of the humanities electives. Most medical schools also require an additional semester of Biology with lab, and this is also considered as a professional elective.

## Humanities and Social Science Electives

In the interest of making engineers more aware of their social responsibilities and better able to consider related factors in the decision making process, coursework in humanities and social
sciences is an integral part of our program. In light of this, the curriculum requires a minimum of six courses of acceptable humanities and social science electives in addition to English 101. These courses must be chosen to provide both breadth and depth and should not be a selection of unrelated introductory courses. Courses which focus primarily on the routine exercise of personal craft are not acceptable. A list of acceptable electives is available in the Engineering Dean's Office.

While the School of Engineering does not require a foreign language, it is highly recommended that students with a talent and background in languages consider using a language for some of the coursework to meet the humanities and social sciences requirement. Engineering has become increasingly global, and a background in a foreign language and culture may be quite important to one's career.

Students must satisfy the following requirements:
A. At least one course must be selected from the humanities and at least one from the social sciences.
B. At least one course must be selected from a list of courses on World Culture.
C. To meet the breadth requirement, courses must be selected from at least three different departments.
D. To meet the depth requirement, at least two courses must be selected in each of two departments.

## Research and Design Experiences

Hallmarks of our curriculum are the research and design experiences that are coordinated through the two semester sequences in Professional Practice and Design (490, 491) and Team Design (403, 404). Every student participates in an individual research project as well as a team design project.
The team design projects, which recently have been supported by the National Science Foundation and the Joe W. and Dorothy Dorsett Brown Foundation, are tailored to the needs of individuals with disabilities who are referred to the department by several community agencies. The team designs are evaluated for safety and then presented and judged in a public design competition. The class of 2002 completed nine team projects (generally four students per team) and a list and brief description is included in the Appendix. The team design experience of working for an extended period with a handicapped client-while having the opportunity to apply engineering foundations and real world design and construction skills to assist the client-has been extremely rewarding for our students.

In addition to the team design project, each student participates in an individual year-long research project generally with a biomedical engineering faculty member or with faculty in departments of the Tulane or LSU medical schools. The list of research projects completed by the class of 2002 covers an impressive range of activities. The students thus have substantial research experience-while still undergraduates-that includes writing a comprehensive thesis describing the research performed and an oral presentation of the work to the faculty and fellow students in departmental seminar, BMEN 672.

## MINORS FOR BIOMEDICAL ENGINEERING STUDENTS

All Engineering students have the option of earning a variety of minors. Specific examples include Mathematics and Business and are described in the Undergraduate Catalog. In addition, for Biomedical Engineering majors, a minor in Mechanical Engineering, Electrical Engineering, or Exercise and Sports Science are available.
NOTE: The requirements described below are determined by the respective departments, and are subject to change and/or revision - so check with the listed department or a faculty advisor before beginning one of these sequences.
BMEN/ME: A Biomedical Engineering major wishing to complete a minor in Mechanical Engineering should check with Mechanical Engineering for current requirements.
BMEN/EE: A Biomedical Engineering major wishing to complete a minor in Electrical Engineering should check with Electrical Engineering for current requirements.
BMEN/EXSS:The Exercise and Sports Science Department's curriculum specifies that the following courses must be taken by a student wishing to receive a minor from that department: EXSS 201, 202, and 311; plus 3 additional courses chosen from EXSS 203, 310, 316, 375, 401, 402, and 419. A BMEN major can satisfy these requirements in the following ways:
EXSS 201 BMEN 303 may be substituted for this course
EXSS 202 counts as a BME Professional Elective
EXSS 311 counts as a BME Humanities / Social Sciences Elective
EXSS 203 BMEN 304/314 may be substituted for this course

EXSS 375 counts as a BMEN Professional Elective
EXSS 402 counts as a BMEN Professional Elective
EXSS 419 counts as a BMEN Humanities / Social Sciences Elective

## Minor In Biomedical Engineering

Students in other engineering departments may earn a Minor in Biomedical Engineering through completion of the following courses:
CELL 101 Cell Biology
BMEN 260 Introduction to Organic and Biochemistries
BMEN 303/313 Medical Science for Engineers I, with lab
BMEN 304/314 Medical Science for Engineers II, with lab

## And 1 course selected from:

BMEN 330 Biomechanics
BMEN 340 Cell and Tissue Engineering
BMEN 361 Bioelectricity
BMEN 323 Biomaterials (Note: requires ENGR 312 as a prerequisite)
FACULTY AND COURSE DESCRIPTIONS
Office: Suite 500, Lindy Claiborne Boggs Center
Phone: (504) 865-5897
Fax: (504) 862-8779
email: info@bmen.tulane.edu

## Professors

Kirk J. Bundy, Ph.D., Stanford University, 1975. Biomaterials, corrosion, bioadhesion, environmental science, biosensors.
Richard T. Hart, Alden J. 'Doc’ Laborde Professor and Department Chair; Ph.D., Case Western Reserve University, 1983. Mechanics of bone, finite element methods, functional adaptation, ocular biomechanics.
Donald P. Gaver, Assistant Chair, Director of Graduate Studies; Ph.D., Northwestern University, 1988. Biofluid mechanics, pulmonary mechanics, bioremediation, biocomputing.

Paul L. Nunez, Ph.D., University of California at San Diego, 1969. Electroencephalography, signal processing, neocortical dynamics.
Natalia A. Trayanova, Ph.D., Sofia University, Bulgaria, 1986. Theoretical and computational electrophysiology, normal and abnormal cardiac rhythms, cardiac pacing and defibrillation, scientific visualization.
Cedric F. Walker P.E., Director, Individually Designed Major Program; Ph.D., Duke University, 1978. Telemedicine, neural stimulation, implantable monitoring devices.

## Associate Professors

Ronald C. Anderson, Ph.D., Tulane University, 1987. Biomechanics, orthopædic materials.
David A. Rice P.E., Director of Undergraduate Studies; Ph.D., Purdue University, 1974. Physiologic modeling, cardiopulmonary mechanics, bioacoustics, instrumentation and signal processing.
Jun-Kyo Francis Suh, Ph.D., Rensselaer Polytechnic Institute, 1989. Mechanics of collagen based connective tissues, cartilage tissue engineering, repair of articular cartilage defects, brain injury, computational biomechanics.

## Assistant Professors

Kay C Dee, Ph.D., Rensselaer Polytechnic Institute, 1996. Cell/Tissue engineering, biomaterials, cell adhesion, engineering education.
Glen A. Livesay, Ph.D., University of Pittsburgh, 1996. Experimental and theoretical mechanics, soft tissue and joint mechanics, engineering education.
Eric A. Nauman, Ph.D., University of California at Berkeley, 2000. Tissue engineering of bone and nerve tissue, degenerative diseases, mechanical loading of cells, mechanics of hierarchical materials, dynamics of biological systems.

## Professor Emeritus

William C. Van Buskirk P.E., Professor and Chair Emeritus of Biomedical Engineering, Dean Emeritus of Engineering; Ph.D., Stanford University, 1970 (currently Provost at New Jersey Institute of Technology).

## COURSES IN BIOMEDICAL ENGINEERING

A course with a three-digit number, such as 101, lasts for one semester. Odd numbered courses are usually given in the first semester; even numbered courses are usually offered in the second semester. A course with a double number, such as 101-102, lasts for both semesters.
Courses with numbers from 100 to 199 are ordinarily open to freshmen; 200 to 299 are ordinarily open to sophomores; 300 to 399 are ordinarily open to juniors; 400 to 499 are ordinarily open to seniors; 600 to 699 are open to advanced undergraduate and graduate students; and 700 to 799 , to graduate students only.

## Regularly Scheduled Courses

## BMEN 102 Elements of BME Design (2)

Introduction to research and design for freshman expressing an interest in biomedical engineering. Topics include a survey of departmental research projects, discussion of form and function in living systems, and the fundamentals of the engineering design process. Student teams will have the opportunity to interact with faculty advisors to explore and present aspects of ongoing departmental research projects.

## BMEN 201 Experiments \& Experimental Design (3)

Prerequisite: BMEN 102. This course investigates measurement, error analysis and the treatment of uncertainties in biomedical engineering. Students will be provided an introduction to statistics, including probability and distributions, confidence intervals, sampling and hypothesis tests on the mean. Sources of potential bias (and how to avoid them) and various experimental designs commonly utilized in biomedical engineering will also be explored. Useful computational tools will be introduced and utilized throughout the course.
BMEN 212 BMEN Lab (2)
Prerequisite: BMEN 201; Corequisite: ENGR 243. This course builds upon ideas from BMEN 201 (Experiments and Experimental Design) and complements ENGR 243 (Mechanics of

Materials) with hands-on mechanics laboratory experience. Students will perform tests to determine structural responses to mechanical loads and subsequently analyze the data. These tests will include traditional mechanics applications (e.g. applying/wiring strain gauges to metal test specimens) as well as tests more commonly utilized in biomechanical engineering. Various analysis and software simulation tools will also be introduced.

## BMEN 260 Introduction to Organic and Bio-Chemistries (3)

Prerequisite: CHEM 108 and CHEM 118, or approval of instructor. This course introduces the main principles of Organic Chemistry and Biochemistry preparing the student for BMEN $303 / 304$. Topics include nomenclature of organic compounds and biomolecules, major reaction of organic chemistry, relationship between chemical structures and biological functions, and the reaction pathways of major metabolic processes. Students will be introduced to the threedimensional structure of organic compounds and biomolecules using molecular models and software tools.

## BMEN 303/703 Medical Science for Engineers I (3)

Prerequisites: MATH 224; BMEN 260; CELL 101, Corequisite: BMEN 313. The first of two sequenced courses intended to introduce quantitative physiology. Introductions to biochemistry and human anatomy are presented and the course places special emphasis upon the chemical basis of life; cells and cellular metabolism; histology and tissues; the endocrine, skeletal and nervous systems.

## BMEN 304/704 Medical Science for Engineers II (3)

Prerequisite: BMEN 303; Corequisite: BMEN 314. The second in a sequence intended to introduce quantitative human physiology. Special emphasis is given to the respiratory, digestive, cardiovascular, lymphatic and reproductive systems; nutrition and metabolism; water, electrolyte and acid-base balance, and human growth and development.

BMEN 313/713 Medical Science for Engineers Lab I (1)
Corequisite: BMEN 303. This course involves students in learning the principles and applications of anatomy and physiology. Dissection and exploration of preserved animals and cadavers are integral components of the lab. Computer software is used to explore the three-dimensional aspects of human anatomy. Physiological instruments will be used to demonstrate the interaction of physiological systems through electrocardiography, Spirometry, pO2 and pCO2, and for body composition analysis. Subject matter will include levels of organization, metabolism, histology, and the integumentary skeletal, muscular, neurological and endocrine systems.
BMEN 314/714 Medical Science for Engineers Lab II (1)
Corequisite: BMEN 304. Continuation of BMEN 313. Subject matter will include blood, nutrition, and metabolism; and the cardiovascular, lymphatic, digestive, respiratory, urinary, and reproductive systems.

## BMEN 323 Biomaterials (3)

Prerequisite: ENGR 312. The objective of this course is to deepen the student's knowledge of phenomena that influence the success of surgical implants used
in vivo. Building upon the introductory material covered in ENGR 312, basic concepts of materials science and engineering relevant to this topic are discussed. In addition to engineering performance issues, fundamental factors affecting the bicompatibility of implant devices will also be covered. Laboratory experiments will be utilized, in a supplemental fashion, to illustrate selected aspects of this material and to provide an introduction to procedures used to evaluate biomaterials. This course will serve as a bridge for students who wish to take more advanced graduate level biomaterials courses in the future.

## BMEN 330/730 Biomechanics (3)

Prerequisite: ENGR 243
This course introduces students to the various interdisciplinary fields in biomechanics - such as orthopaedic biomechanics, biofluid mechanics, soft tissue mechanics, and the biomechanics of human movement. Specific topics include: kinematics and energy/power during human activity; dynamics of human movement; the analysis of forces and stresses/strains in biological structures under loading; constitutive models for biological materials; and the relationship between structure and function in tissues and organs.

BMEN 340/740 Cell and Tissue Engineering (3)
Prerequisite: BMEN 260. This course addresses the complex interactions between living tissues and implant biomaterials, stressing the importance of cellular- and molecular-level phenomena in macroscopic, tissue-level events. After taking this course, students will be able to explain the roles of cells/tissues and biomaterials in coagulation and fibrinolysis, inflammation, wound healing, hypersensitivity and foreign-body responses, and carcinogenesis. Current cell and tissue engineering research topics will be incorporated into class discussions and laboratory projects.

## BMEN 361/761 Bioelectricity (3)

Prerequisite: ELEN 201 or ENGR 201. The objective of this course is to introduce the student to bioelectricity of excitable cells from a quantitative perspective. Topics include membrane transport phenomena, the ionic basis of action potentials, the Hodgkin - Huxley model, propagation of action potentials down excitable fibers, the response of cells to external stimuli, and the current flow in the medium surrounding the electrically-active cell. The course also incorporates virtual bioelectricity labs designed to familiarize the student with the concepts presented in lecture.

## BMEN 373/773 Biomedical Electronics with Lab (4)

Prerequisite: ELEN 201 or ENGR 201. Rectifiers, filters, regulators and power supplies. Analog amplifiers and active filters of interest for medical devices. Combinational and sequential digital logic design techniques and circuits. Brief overview of modulation, encoding, and interfacing. Electrical safety. Extensive weekly lab projects.

## BMEN 403-404 Team Design Project I and II (2,2)

Prerequisite: Senior standing. Techniques and experience in the solution of constrained and openended design problems. Lecture topics include all aspects of the design process, including goal setting, idea generation, prototyping, fabrication, and product and evaluation. Also included are technical presentation,k project planning and management. Included as needed are other topics such as standards, fastening and joining, motors and control, esthetics and finish. Each team will design and construct a device or system to assis an individual with a disability. These designs are presented in a public show during the second semester.
BMEN 482/682 Mathematical Modeling and Analysis of Biological Systems (4)
Prerequisite: MATH 224. The objective of this course is to teach basic mathematical modeling constructs and analysis techniques that are used for studying biological processes. Topics to be covered include ordinary differential equations, compartment systems, basics of dynamic systems, stability, statistical inference and model construction. These will be applied to study models of chemical kinetics, physiological control, AIDS transmission, population dynamics, and growth. Students will use Mathematica to develop and analyze models.

BMEN 490-491 Biomedical Research and Professional Practice I and II $(2,2)$
This course introduces the tools, techniques, and rules necessary to function professionally as a researcher or engineer. Topics include economic analysis, ethics, professional communication including writing and oral presentation, research techniques including literature searching, citation, and the structure of a scientific paper. An integral part of the course is a year-long research or design project under the direction of a faculty member or other scientist or professional. This culminates in a Senior Thesis and a presentation in Departmental Seminar.
BMEN 611 Cardiac Electrophysiology (3)
Prerequisite: BMEN 361. An engineering perspective on the electrical behavior of the heart. Topics include the normal electrical excitation of the heart, membrane ionic channels, contraction, the basics of electrocardiography, arrhythmias and mechanisms of arrhythmogenesis, sudden cardiac death, and the electrical therapies for disturbances in cardiac rhythm. Virtual labs are also included to aid the learning process.

## BMEN 627 Biomaterials and Biocompatibility (3)

Prerequisite: BMEN 323 or equivalent. Building upon the fundamental material presented in BMEN 323, this course discusses structure-property relationships for the metallic, polymeric, ceramic, and composite materials used in surgical implants. Factors involved in the design of implants and processes used in their manufacture are also presented. Various aspects of biocompatibility are discussed in terms of effects (such as corrosion and wear) that the host environment has on implant materials, effects that species released by degradation processes have on the host tissues, and test methods for the study of these effects.

## BMEN 633 Fluid Mechanics for Biomedical Engineers (3)

Prerequisites: ENGR 243, ENGR 344. This course will cover general intermediate/advanced fluid mechanics, and will provide a foundation from which to base one's studies of biofluid mechanics. Issues pertinent to the study of biofluid mechanics will be emphasized. Topics to be studied include kinematic principles, the Navier-Stokes equations, boundary conditions for viscous flows, basic solutions to steady and unsteady Navier-Stokes equations, turbulence, analysis of the vorticity equation, and interfacial phenomena. Whenever possible, problems of a biological nature will be used as examples.

## BMEN 634 Soft Tissue Mechanics (3)

Prerequisite: ENGR 243, BMEN 330. This course provides an introduction to the various approaches used in modelling soft tissues, with particular attention paid to those of the musculoskeletal system (e.g. ligament, tendon, cartilage). Particular emphasis will be placed on the theoretical and experimental consequences of the large deformation behavior of these tissues. An important objective of this class is to enable the student to develop a sense for the physical and mathematical relationships between the many types of models (and the associated experiments) currently being utilized in soft tissue mechanics.

## BMEN 635 Advanced Soft Tissue Biomechanics (3)

Prerequisite: BMEN 634, BMEN 636. The class is designed to provide students with advanced modeling topics in musculoskeletal soft tissue biomechanics. The course material will consist of an introduction to the anatomical structure of various musculoskeletal soft tissues such as ligament, tendon, and cartilage, followed by fundamentals and general principles in mechanics necessary to understand mathematical modeling of these tissues. The main focus will be placed on various viscoelastic modeling of soft tissues, such as linear, nonlinear and quasi-linear viscoelastic modelings. A viscoelastic model based on mixture theory, such as biphasic poroelastic model and biphasic poroviscoelastic model will also be introduced. The models will be studied mostly using typical simple loading conditions. They include creep, stress relaxation, and cyclic loading of such models.
BMEN 636 Introduction to the Finite Element Method (3)
Prerequisite: ENGR 330 or equivalent. Matrix structural analysis techniques as applied to frames, problems in plane strain, plane stress, and axisymmetric and 3-D structures. Development of the isoparametric family of finite elements. Use of user written and packaged software.

## BMEN 643 Adv. Topics in Cell/Tissue Engineering: Cell and Tissue Mechanics (3)

Prerequisite: BMEN 330 or 340. Inspired by the video and flipbook "Powers of Ten" by Charles and Ray Eames, this course explores biomechanical models and experiments from the length scale of a cell membrane to that of a human being, stepping from topic to topic by incremental length multiplications of powers of ten. Students learn to recognize and critically evaluate scaledependent assumptions and results; develop their intuitive understanding of scale; and expand their knowledge of biomechanics.

BMEN 645 Adv. Topics in Cell/Tissue Engineering: Brave New World (3)
Prerequisite: BMEN 640/340. This course focuses on scientific and ethical issues surrounding cell and tissue engineering themes in selected works of science fiction. Topics covered in the past have included embryo research, cloning, organbanking/organ replacement, anti-aging technologies, cosmetic tissue engineering, human/AI links, and nanotechnology. Students trace the development of ideas/technology, discover the current state-of-the-art, and project future directions of the field of cell and tissue engineering.

## BMEN 661 Introduction to Computational Biomechanics (3)

This course covers fundamentals of computational methods with the emphasis in biomechanics applications. The computational methods include finite element methods and finite difference methods at the introductory level. The course will use MATLAB as the official computational tool to implement these methods. The underlying theories of these numerical methods will be taught, and example problems will be discussed during the lecture. Example problems will include those from implant design, bone biomechanics, soft tissue biomechanics, etc. in static and dynamic conditions. The course will also discuss some special issues such as the stability/convergence criteria and the error estimation. The student will work on a term project to exercise these issues on a biomechanics problem of his/her choice.
BMEN 665 Structure-Function Relationships in Biological Tissues (3)
Prerequisites: BMEN 634 or ENGR/BMEN 631. This course provides a review of the mechanics of finitely deformable structures and thermomechanics with applications to the study of biological tissues. The focus of the course will be on the development of mathematical models describing fluid-solid interactions in biological tissues, nutrient transport, damage repair, and discontinuities. In particular, we will cover mixture theory, poroelasticity, microstructural models of cortical and cancellous bone, tendon, ligament, and other tissues, transient and steady-state nutrient transport, and continuum damage theories.
BMEN 667 Pulmonary Mechanics (3)
Prerequisites: MATH 224, BMEN 633 or equivalent. This is a survey course in which mechanical models of the pulmonary system are discussed. Topics to be addressed include mucous transport, airflow/diffusion in the pulmonary airways, ventilation/perfusion relationships, flow through collapsible airways and interfacial phenomena.
BMEN 671-672 Departmental Seminar (0)
Each week, a one-hour seminar on research within or outside the department is presented. During the Spring semester, all seniors are required to give a presentation on their project or internship. Attendance of all graduate students is required in the Fall semester.

## BMEN 674 Data Acquisition and Control (3)

Prerequisite: ELEN 303 or BMEN 373. Acquisition, digital processing, and output of signals of biomedical interest. Closed loop control applications for medical devices. Programming in the National Instruments LabVIEW environment. In-lab and final projects.
BMEN 676 Advanced Topics in Excitable Media (3)
Prerequisite: BMEN 361. This course addresses the generic behavior of excitable media such as nerve and muscle tissues, and oscillating chemical reactions. The course focuses on the generic mathematical models pertinent to excitable media and the non-linear-dynamics tools for analyzing them. Topics include: the membrane as a first order system, the FitzHugh-Nagumo model, phaseplane analysis, limit cycles and oscillatory responses of the membrane.

## BMEN 685/686 Seminar in Biofluid Mechanics (0)

A weekly seminar in biofluid mechanics, concentrating especially on fluid mechanics relevant to the pulmonary and circulatory systems. The seminar is journal club format, with weekly presentation and discussion of papers taken from the recent literature.

## BMEN 721-722 Directed Readings in Biomedical

## Engineering (1-6)

Taught on a tutorial basis, this course allows a student to make an in-depth study in an area of expertise of members of the department. Some recent and current topics include non-Newtonian fluid mechanics; the mechanics of the inner ear; the mechanics of bone; the mechanics of soft tissue; ceramics engineering; physical metallurgy; laser applications in medicine; and modeling of neural networks.

## BMEN 751 Teaching Engineering (2)

Required for entering Teaching Assistants and all incoming graduate students; suggested for students interested in pursuing academic careers. A weekly seminar on techniques and methods for effective teaching and learning in engineering. Topics covered include: syllabus assembly and evaluation, teaching methods and classroom management, grading and assignment/exam design, lecturing skills, cognitive development, classroom assessment techniques, self-assessment and evaluation.

## Less Frequently Scheduled Courses

BMEN 602 Biosystems (3)
Prerequisite: MATH 224. Fundamentals of biological control systems modeling, open and closed loop systems, transfer functions, stability, time and frequency response, analysis and synthesis of systems. Applications include modeling of physiological systems, instrumentation, and artificial organs design.

## BMEN 606 Biomedical Acoustics (3)

Prerequisite: BMEN 304, MATH 221. Introduction to sounds in the physiological and medical arena. Topics include: physics of sound propagation, sources and mechanisms of cardiac and respiratory sound production, sound transmission, auscultation and stethoscope evaluation, psychoacoustics and auditory perception, speech production and structure of the speech signal, medical ultrasound applications and safety.

## BMEN 612 Electric Fields of the Brain (3)

Introduction to neocortical physiology and anatomy. Overview of Electroencephalography (EEG). Neural current sources. Solutions of the membrane diffusion equation. Solutions of Poisson's equation in a head-like medium. Integration of time series analysis with volume conduction theory. Methods of analysis of EEG and evoked potential data. The brain's magnetic field. Linear and nonlinear models of neural interaction and their relationships to EEG and cognitive processing.

## BMEN 614 Biomedical Signal Analysis (3)

Prerequisites: CPSC 101, MATH 221, and MATH 224. Stationary random process theory. Power spectra, cross spectral density and coherence estimates. Cross correlation and correlation function coefficients. Basic statistical concepts. Statistical significance of estimates. Nonstationary and transient data. Application to multichannel electroencephalographic data. Use of IMSL software.

BMEN 615 Interactions of External Electromagnetic Fields with Humans (3)
Prerequisite: MATH 224. This course considers the environmental and medical effects of a broad spectrum of electromagnetic fields ranging from power line fields to x-rays. Quasi-static fields. Maxwell's equations. Near and far fields. Refection and transmission of electromagnetic waves at boundaries. Fields due to transmission lines and antennas. Diathermy, inductive osteogenesis, and imaging.

## BMEN 616 Neural Augmentation (3)

Prerequisite: BMEN 373. Implantable and external electrical stimulation devices and technology for the control of pain, functional electrical stimulation, and other neural prostheses are discussed. Additionally, the anatomy of the central nervous system is taught through the use of a programmed learning sequence.
BMEN 618 Electrodiagnosis (3)
Prerequisite: BMEN 373. Application of medical instrumentation in clinical diagnosis including EKG, EMG, multimodality evoked potentials, stress tests, ultrasound, and computed tomography. The lectures cover the system design of the instruments and review the conditions they are designed to detect. The lab consists of an applications demonstration in one of the local medical facilities.

## BMEN 626 Biomaterials Research Problems and <br> Methodology (3)

Prerequisite: BMEN 323. This course emphasizes a detailed consideration of selected topics which are currently the focus of biomaterials research, as well as consideration of experimental and theoretical methodology used to approach these and other biomaterials problems. The specific topics will change from year to year as the field of biomaterials develops.
BMEN 628 Surgical Applications of Biomaterials (3)
Prerequisite: BMEN 627 or equivalent. This course emphasizes specific uses of biomaterials in various branches of surgery, the specific materials that are used, and problems that may be a consequence of such use. Topics discussed include orthopædic, cardiovascular, dental, and other applications.

## BMEN 631 Continuum Mechanics (3)

Prerequisite: ENGR 243, ENGR 344. The course begins with a presentation of the kinematics of continuous media. It covers the conservation principles of mass, momentum and energy, the thermodynamics of continuous media, the formulation of constitutive equations, and the elements of linear and nonlinear elastic fluid theories. The applications discussed in detail are the modeling of the mechanical behavior of bone and skin, and the mechanical and thermal behavior of muscle tissue.

BMEN 639 Advanced Finite Element Methods (3)
Prerequisite: BMEN 636. This is the second course in finite element analysis that will expand upon the introductory course, BMEN 636. Included in the topics to be addressed are the theory and application of weighted residual methods, dynamic mode shape and time series analyses, geometric and material non-linearities, contact problems, and thermal and electric field problems. The BMEN Origin 2000 will be used for running ABAQUS and/or ABAQUS/EXPLICIT to solve all application problems.

## BMEN 640/340 Biomaterial-Tissue Interactions (3)

Prerequisite: Junior, Senior or Graduate student standing. Current Topics and experimental issues relevant to the cell-biomaterial interface and tissue engineering are explored.
BMEN 646 Nonlinear Phenomena and Chaos (3)
Prerequisite: MATH 224. Review of linear systems: Classical nonlinear theory. Nonlinear mechanical, electrical, and biological systems. Dufng and Vander Pol systems. History of chaos. How to identify chaotic vibrations. Nonlinearity and spatial scale. Taught at introductory level.

## BMEN 647 Nonlinear Dynamics (3)

Prerequisite: BMEN 646. Dynamics of physical and biological systems. Theoretical ecology and neural networks. Numerical methods for nonlinear equations. Systems with spatial extent. Stable spatial structure with temporal chaos. Statistical methods. Emphasis is placed on a short research project selected by the student.

## BMEN 664 Bone Mechanics (3)

Prerequisite: BMEN 636 and approval of instructor. The objective of the course is to provide students with an opportunity to pursue an in depth examination into current methods and results in bone mechanics research. Of particular interest is the study of the anatomy and physiology of bone

## Chemical Engineering (CENG)

Chemical engineers are concerned with the chemical and physical processes that change raw materials into useful products. They work in many industries: chemicals, drugs, environmental, explosives, food, lubricants, paint, paper, petroleum, plastics, primary metals, rubber, and soap, among others. The design and control of large scale processes in a manufacturing plant require knowledge of the handling and transporting of large quantities of chemicals, heat transfer from one substance to another, absorption of liquids and gases, evaporation, distillation, crystallization, filtration, mixing, drying, and chemical reaction.

The chemical engineering program at Tulane has a firm basis in classroom fundamentals, coupled with direct practical experience. This commitment is reflected in many ways, particularly the unique Practice School for seniors. Practice School provides on-site internships in local industrial facilities, government agencies, and hospitals, permitting students to apply knowledge to problems of current professional concern. The students work closely with faculty members and professionals from the host site, gaining experience in effective problem-solving and presentation of their findings while still under the eye of sympathetic counselors.
Chemical engineering faculty research covers areas including tissue engineering, new-generation nanochips, new catalysts for use in petroleum processing, developing designer microbes to clean up bio-environmental toxins, studying how to reduce greenhouse gases, and using polymer membranes to separate toxins from water. Faculty members often involve students in their laboratory efforts. Through technical electives and research, students may prepare for a career in biotechnology. A large percentage of Tulane’s graduating chemical engineers are immediately recruited into a wide variety of industries, while others continue to graduate studies in engineering, management, or law. A chemical engineering undergraduate degree may arguably be the best preparation for admission to Medical School.

## DEPARTMENTAL MISSION

The mission of the chemical engineering department at Tulane University is to provide the highest quality program for educating students in the principles and applications of chemical engineering. The excellence of the program is to be ensured by the high valuation of teaching, strong research activities and solid industrial ties. The program will educate students to take leadership roles in industry, academia and government.

## PROGRAM EDUCATIONAL OBJECTIVES

Our students will obtain expertise in mathematics, science and engineering principles, with particular emphasis on those that apply to chemical engineering practice.
Our graduates will be able to apply this expertise to identify and solve chemical engineering problems, design chemical engineering processes and conduct and analyze experiments, using the most up-to-date engineering tools and techniques. The students will be able to work effectively with others on such problems, and communicate their results effectively.
Our graduates will be able to carry out their work professionally and ethically, and understand the impact of their work in a global and societal context.

Our graduates will be able to function in an engineering profession which is continually evolving, will be aware of contemporary issues and will be prepared for life-long learning.

## CURRICULUM

## Sophomore Year

## Fall Semester

## Credits

CENG 211 Material and Energy Balances
CENG 212 Thermodynamics I ..... 3
CHEM 241 Organic Chemistry I ..... 3
CHEM 243 Organic Chemistry Lab I ..... 1
MATH 221 Calculus III ..... 4
Humanities or Social Science Elective ..... 3
Fall Semester Total: ..... 17
Spring Semester ..... Credits
CENG 232 Transport Phenomena I ..... 3
CHEM 242 Organic Chemistry II ..... 3
CHEM 244 Organic Chemistry Lab II ..... 1
MATH 224 Introduction to Applied Mathematics ..... 4
Humanities or Social Science Elective ..... 3
Technical Elective 1 ..... 3
Spring Semester Total: ..... 17
Junior Year
Fall Semester
Credits
CENG 311 Thermodynamics II ..... 4
CENG 323 Numerical Methods for Chemical Engrs. ..... 3
CENG 333 Transport Phenomena II ..... 3
Humanities or Social Science Elective ..... 3
Technical Elective 2 ..... 3
Fall Semester Total: ..... 16
Spring Semester
CENG 324 Unit Operations Lab I ..... 3
Credits
CENG 325 Unit Operations Lab II ..... 3
CENG 334 Separation Processes ..... 3
CENG 415 Kinetics \& Reactor Design ..... 3
CENG 450 Process Control ..... 3
Humanities or Social Science Elective ..... 3
Spring Semester Total: ..... 15
Senior Year
Fall Semester
CENG 431 Chemical Process Design ..... 3
Credits
Advanced Chemistry* ..... 4
Humanities or Social Science Elective ..... 3
Technical Elective 3 ..... 3
Advanced Technical Elective 4
Fall Semester Total: ..... 16
Spring Semester
CENG 460 Practice School I ..... 3Credits
CENG 462 Practice School II ..... 3
Advanced Chemistry* ..... 4
Humanities or Social Science Elective
Advanced Technical Elective 5 ..... 3
Spring Semester Total: ..... 16
*Advanced Chemistry course can be chosen from Physical Chemistry (CHEM 311+313,
312+314), Inorganic Chemistry (CHEM 321+323) or Biochemistry (CHEM 383+385, 384).Other courses with permission only.
Technical electives are normally engineering, science, or math courses, in consultation with the departmental advisor. Also, ROTC students may receive up to 6 credit hours for their ROTC courses.

## THE CONCENTRATION ORIENTED CURRICULUM

In addition to the required Core Chemical Engineering Courses, the Basic Science and Mathematics Sequence, and the Humanities and Social Science Elective Courses (HUSSEL), five technical electives will be required. These Technical Electives constitute a concentration in one of three areas: Biochemical Engineering, Environmental Engineering, or Business Studies. A concentration will consist of five courses in the following tracks:

## 1. Biochemical Engineering

CELL 101, CELL 205, and 3 courses chosen from:
BMEN 303/313, BMEN 304/314, BMEN 340, CENG 671, CENG 772, CELL 301, CELL 311

## 2. Environmental Engineering

CVEN 381, and 4 of the following:
CHEM 250, CENG 613, CENG 671, CVEN 348, CVEN 424, CVEN 438.

## 3. Business Studies

ACCT 203, ACCT 301, FINC 352, OBHR 331-Organizational behavior, MKTG 382-Marketing management.
(Additionally if the student also takes ECON 101 (as a HUSSEL requirement), he/she will qualify for a minor in business).
Note: Consult with the department regarding the Technical Electives.

## PREMEDICAL CURRICULUM IN CHEMICAL ENGINEERING

A premedical program via the chemical engineering curriculum provides an excellent foundation for medical studies. If the student does not proceed to medical school, there is an opportunity for a professional career in industry.
Premedical students make the following changes:
Technical Electives 1 and 2 can be replaced with Biology courses, EEOB 101. 111 and CELL 101, 111.

Premedical students should also take a second English course as one of their humanities and social science electives. Some medical schools may require it.

## MINORS \& SECOND MAJORS

A chemical engineering student may also elect to pursue a major or minor in another division of the university. Anyone who is interested should contact the appropriate department chair and work out a program of courses. This should be approved by the department chair and forwarded to the engineering dean's office. When all requirements are met, the transcript will reflect that a major or minor has been completed.

Since many chemical engineering students elect to add a minor in business or a minor or major in mathematics, these programs are as follows.

## Business Minor

An undergraduate business minor is awarded for the following coursework.
ECON 101 Microeconomics
ACCT 203 Financial Accounting

## And any four of the following:

ACCT 301 Managerial Accounting

FINC 352 Financial Management
OBHR 331 Organization Behavior
PSOM 371 Operations Management
MKTG 382 Marketing Management
Plus:
One additional course from the A. B. Freeman School of Business.
Mathematics Minor
A mathematics minor or major is awarded for the following coursework.
MATH 121, 122, 221 Calculus I, II, III
MATH 224 Introduction to Applied Math or
MATH 217 Discrete Math
MATH 309 Linear Algebra
Plus:
One additional course at the 300 level or above.

## Mathematics Major

All requirements for the minor
Plus:
MATH 305, and Two additional courses at the 300 level or above, one of which must be a 400 level course.
Students contemplating either a minor or major in mathematics should consult with the major adviser for School of Engineering students in the Department of Mathematics during the spring of the sophomore year.
If a liberal arts degree is desired, then all liberal arts, as well as engineering requirements, must be met. Also, the student must spend one year either in Paul Tulane College or Newcomb College to fulfill the residence requirement.

## FACULTY AND COURSE DESCRIPTIONS

Office: Suite 300, Lindy Claiborne Boggs Center
Phone: (504) 865-5772
Professors
Daniel De Kee, Ph.D., University of Montreal, 1977. Rheology of Synthetic and Natural Materials, Constitutive Equations, Transport Phenomena and Applied Mathematics.
Richard D. Gonzalez, Ph.D., Johns Hopkins University, 1965. Catalysis, New Materials
Vijay T. John, Engr. Sc.D., Columbia University, 1982; Chemical Engineering. Nanotechnology, Biotechnology
Daniel J. Lacks, Ph.D., Harvard University, 1992. Molecular Simulations, Applications to Biotechnology

Victor John Law, P.E., Ph.D., Tulane University, 1963. Process Design, Simulation \& Control; Transport Phenomena and Applied Mathematics.
Brian S. Mitchell, Ph.D., University of Wisconsin, Madison, 1991.High-Tech Composite Materials, Polymers
Kim C. O’Connor, Ph.D., California Institute of Technology, 1987. Bioengineering and Biotechnology, Tissue Engineering, Cancer Research

Kyriakos D. Papadopoulos, Deparment Chair, Engr. Sc.D., Columbia University, 1982. Novel Drug-Delivery Systems, Emulsion Applications

## Assistant Professor

Yunfeng Lu, Ph.D., University of New Mexico, 1998. Nanofabrication of Computer Chips
CENG 211 Material and Energy Balances (3) Lecture 3.
Basic concepts in mass and energy balances are presented in this introduction to chemical process engineering. Properties of pure materials and relevant equations of state are reviewed in illustrative examples.
CENG 212 Thermodynamics I (3) Lecture 3.
Concepts of energy, equilibrium, and reversibility are presented in the setting of the theoretical development of classical thermodynamics. Energy conversion cycles and elementary fluid mechanics are used to illustrate applied thermodynamics in chemical process technology.

CENG 232 Transport Phenomena I (3) Lecture 3.
Prerequisites: 211, 212, equivalents or approval of instructor. Principles of hydrostatics and fluid mechanics. Emphasis is on mass, energy and momentum balances. Fluid flow through pipes and other types of chemical engineering equipment are considered in detail. The fundamental operations of vector analysis and the development of basic differential equations that govern fluid flow are used to solve representative problems in which viscosity is important.

## CENG 311 Thermodynamics II (3) Lecture 3.

Basic concepts in physical and chemical equilibria. Systems of variable composition. Chemical reaction equilibria. Thermodynamic analysis of processes. Principles of statistical mechanics. Partition functions.
CENG 323 Numerical Methods for Chemical Engineers (3) Lecture 3.
Numerical methods using Matlab with some programming in either Fortran or C++. Numerical differentiation and integration. Solution of linear and nonlinear equations. Numerical solution of ordinary and partial differential equations. Optimization. Use of spreadsheets and graphical presentations. Applications are to design oriented problems.
CENG 324 Unit Operations Lab I (3) Laboratory 3.
Prerequisites: 333, 334. Bench scale laboratory experiments in Unit Operations. Report writing, safety, oral presentations, ethics and group activities are emphasized.

## CENG 325 Unit Operations Lab II (3) Laboratory 3. (40 hours per week for 3 weeks in summer.)

Prerequisites: 324. Pilot plant scale laboratory experiments in Unit Operations. Safety, report writing and group activities are emphasized in this simulated work environment.
CENG 333 Transport Phenomena II Lecture 3.
Molecular mechanisms of energy transport (heat conduction), and mass transport (diffusion). The development of nonisothermal and multicomponent equations of change for heat and mass transfer. Exact and numerical solutions to steady-state and transient heat and mass transfer problems. Convective heat and mass transfer. Introduction to radiation heat transfer. Heat and mass transfer in boundary layers. Correlations for convective heat and mass transfer. Boiling and condensation. Interphase mass transfer. The analogies between heat, mass, and momentum transfer are emphasized throughout the course.

## CENG 334 Separation Processes (3) Lecture 3.

Prerequisites: CENG 211, equivalent, or approval of instructor. Principles of separations processes, including distillation, liquid-liquid extraction, stripping, gas absorption, and adsorption processes. Single stage and multiple stage processes. Design of plate and packed separations columns. Plate and column efficiencies.

## CENG 415 Kinetics \& Reactor Design (3) Lecture 3, Laboratory 2.

Prerequisite: MATH 224. The design and analysis of chemical, biological, and polymerization reactor systems are achieved by application of the principles of chemical kinetics and equilibrium coupled with mass and energy transport. Specific areas of study include kinetics, ideal reactors, multiple reactor systems, nonideal flow and mixing, and catalysis. Two laboratory experiments are included.

## CENG 431 Chemical Process Design (3) Lecture 3.

Prerequisites: Senior standing or departmental approval. The elements of industrial design and supporting economics are presented in the context of a representative design project. Extension of the student's early background in unit operations through practical design considerations including materials of construction is accomplished. Methods are presented for capital and operating cost estimation, raw materials and utilities pricing, and assembly of investment costs, taxes, environmental and other site requirements. Realistic design constraints are included; e.g., economic factors, safety, reliability aesthetics, ethics, and social impact.

CENG 450 Chemical Process Control (3) Lecture 3, Laboratory 2.
Prerequisite: MATH 224. An introduction to linear control theory is presented in which processes are described mathematically through transfer functions and conventional three-mode controllers are specified. Frequency and time domain stability studies are made including Bode, Nyquist and root locus methods. Other topics are introduced including cascade control, modal analysis, optimal control, and multivariate system analysis. Automatic control systems are designed for a number of processes. Two laboratory experiments are included.
CENG 460, 462 Practice School (3 each) Lecture plus Practicum.
Prerequisite: Senior Standing. Students are placed in groups of three or four and are assigned to a project at a local industrial facility, hospital, or government agency. The project is one of current concern to the organization and may range from a study of an operating process to the development of a new process. The projects are open ended and the students are expected to apply the principles of good design practice involving realistic constraints such as economics, safety, reliability, aesthetics, ethics, and social impact. Students normally are assigned to a project which fulfills certain career goals. This internship, under the direction of a faculty member, utilizes engineers and other personnel at the host site. Students are required to submit interim and final written and oral reports.
CENG 481, 482 Undergraduate Independent Studies (2,2).
Under special circumstances, course credit is granted to students undertaking independent research studies. A project adviser should be identified and permission for enrollment filed with the department chair prior to registration.

## CENG 600 Chemical Engineering Research Seminar (0) Lecture 1.

Students are exposed to the important research findings, presented by invited speakers as well as by professors and advanced PhD candidates of our own department.
CENG 601 Mathematical Methods for Engineers (3) Lecture 3.
Prerequisite: MATH 224. Review of calculus and ordinary differential equations, series solutions and special functions, complex variables, partial differential equations, and integral transforms.
CENG 611 Thermodynamics and Properties of Matter (3) Lecture 3.
Prerequisite: CHEM 311. Molecular thermodynamics of multi-component systems are reviewed with particular attention to separation processes. Thermal and chemical equilibrium properties are examined for pure and mixed fluids.

## CENG 612 Graduate Transport Phenomena

Prerequisites: 232, 333, 334, and MATH 221, MATH 224 or equivalents. Mathematical formulation and solution of problems involving theoretical concepts in fluid mechanics, heat and mass transfer, thermodynamics and elementary reaction theory. Emphasis is placed upon transient transport processes and the associated partial differential equations.
CENG 613 Surface and Colloid Phenomena (3) Lecture 3.
A study of surface and colloid chemistry. Topics include characterization of particles and surfaces, stability of colloidal systems, interactions of charged particles, and electrokinetic phenomena.

## CENG 616 Heterogeneous Catalysis (3) Lecture 3.

A study of the fundamental concepts underlying catalytic processes in the petroleum processing industry and in synthetic fuels research. Topics include molecular theories of adsorption and catalysis, catalyst design and formulation, instrumental methods of catalyst characterization, transport in catalysts, shape-selective catalysis, etc. Applications discussed include catalytic cracking, reforming, hydrodesulfurization, Fischer-Tropsch synthesis, direct and indirect coal liquefaction, etc.

## CENG 625 Applied Numerical Analysis (3) Lecture 3.

Prerequisite: CPSC 101 or equivalent, MATH 224. Numerical techniques for the solution of mathematical problems in the engineering analysis of systems are presented for computer implementation. Topics include interpolation, integration, solution of systems of linear and nonlinear algebraic equations, optimization, and regression. A comparison of numerical solution methods for ordinary and partial differential equations is given. Eigenvalue and split boundary problems are included.

CENG 633 Advanced Separations Design (3) Lecture 3.
Prerequisites: CHEM 232, CHEM 333, CHEM 334 or approval of instructor. Design of separations processes based upon newer technologies. Special emphasis is placed upon membrane separations and those processes involving colloidal and surface phenomena.
CENG 655 Sol-Gel Science (3) Lecture 3.
A study of chemistry, physics, and applications of sol gel processing. Designs and fabrications of functional and nanostructured materials. Recent advances of sol-gel science in nanotechnology, microelectronics, and biomedical engineering.
CENG 671 Biochemical Engineering Fundamentals (3) Lecture 3.
The course provides an overview of biochemical engineering. Topics include enzyme-catalyzed and cell-associated reactions, engineering aspects of recombinant DNA technology, cell culture, and bioreactors.
CENG 688 Polymer Rheology (3) Lecture 3.
Non-Newtonian phenomena, material functions and generalized Newtonian fluids, rheometry, linear viscoelasticity, multiphase systems and mixing.
CENG 689 Polymer Engineering (3) Lecture 3.
Review of principles of continuum mechanics and energy transfer processes. Flow of molten polymers in various geometries. Polymer extrusion, coating, fiber spinning, film blowing and injection molding.
CENG 712 Thermodynamics of Macromolecules (3) Lecture 3.
Prerequisite: 611 or equivalent. Thermodynamics is applied to macromolecules.
CENG 715 Advanced Reactor Design (3) Lecture 3.
Coupled reaction and transport phenomena as they are involved in major reactor configurations are studied with attention to data resources and computational capabilities.

## CENG 742 Applied Materials Design (3)

Prerequisite: Consent of instructor. Fundamentals of condensed matter are elaborated upon, namely bonding, structure, physical properties, phase equilibria and thermodynamics of solids. Characterization of condensed phases as it reviewed. Manipulation of material properites for specific applications is discussed.

## CENG 752 Applied Statistical Mechanics (3)

The course covers the fundamental principles and methods of statistical mechanics. Emphasis is placed on applications to thermodynamics, kinetics, polymer science and transport phenomena.

## CENG 772 Advances in Biotechnology (3) Lecture 3.

The objectives of the course are to enhance understanding of the basic principles of biotechnology and to introduce the most current biotechnology research. Topics include gene therapy, biocomputation, molecular biochemical engineering, stem-cell technology and tissue engineering.
CENG 781-782 Advanced Independent Research $(3,3)$
Research studies performed under faculty tutelage by prior arrangement.
CENG 788 Polymer Rheology
CENG 791-794 Master’s Level Research Orientation and Methods (1,1,1,1)
CENG 891-892 Doctoral Level Research Seminar (1,1)
CENG 998 Master's Research
CENG 999 Dissertation Research

## Civil and Environmental Engineering (CVEN)

## VISION

A National Leader in Civil and Environmental Engineering Education in an environment of mutual trust, cooperation and commitment.

## DEPARTMENTAL MISSION

The primary mission of the Department of Civil and Environmental Engineering is to educate the future leaders and shapers of a profession in service to society. A second fundamental mission of the Department is the discovery, innovation and development of new technologies and methods that improve the practice of civil and environmental engineering. A third mission is service to the nation and the profession. In accomplishing these missions we will directly serve the implementation of the Tulane Strategic Plan -"To be a truly distinctive research university in America's most original city." Inherent in our mission is to instill in each graduate, at all levels, a commitment to personal integrity, lifelong learning and service to community.
Our responsibility to the undergraduates is to provide the environment, the resources and the opportunity for them to achieve excellence in their undergraduate education. In concert with our mission to educate those who will lead and shape the future of engineering in the 21st Century are the basic tenants of the accreditation process of the Accreditation Board for Engineering and Technology (ABET).

## CIVIL AND ENVIRONMENTAL ENGINEERING PROGRAM GOALS

In support of the department mission, the goals for both the Civil Engineering Program and the Environmental Engineering Program within this department are:

- To educate our students to a level of competence insuring the requisite skills for proper conception, planning, design, construction and operation of those public and private infrastructure projects that directly benefit the public welfare
- To develop in our graduates the ability to use critical thinking and creativity in insuring sustainable development for society
- To provide a total experience to our students leading to their moral, ethical, legal and professional commitment to society as a whole
- To develop leadership skills for our graduates enabling them to work cooperatively with persons in other engineering disciplines and fields of endeavor for the common good of society
- To insure that our graduates will collectively apply their education in a manner which brings distinction to Tulane University and this department
- To have a world-class faculty renowned for its commitment to academic and scholarly excellence


## VALUES

Without a general commitment to shared values, no organization can expect fulfillment of its mission. The faculty of the Department of Civil and Environmental Engineering wishes to carry out our mission in an environment espousing honesty, service, professionalism, academic excellence and trust.

## CIVIL ENGINEERING EDUCATIONAL PROGRAM OBJECTIVES

The Civil Engineering Program at Tulane University will:

- Develop civil engineers who possess confidence, creativity and competence in the performance of their professional activities.
- Provide graduates with the analytical, design, and problem-solving skills necessary for the successful practice of modern environmental engineering.
- Develop a base of fundamental knowledge in mathematics, science, and engineering that will serve as a foundation for livelong learning, and develop the information gathering and information-synthesis skills necessary for independent learning throughout the graduate’s professional career.
- Instill knowledge of, and appreciation for, the social and global context in which environmental engineering is performed.
- Develop graduates who are fully prepared and eager to provide solutions to civil engineering problems confronting society.
- Provide the graduate with a sufficient scholarly experience such that he/she will be well prepared for graduate studies in civil engineering at the highest academic levels.


## ENVIRONMENTAL ENGINEERING EDUCATIONAL PROGRAM OBJECTIVES

The Environmental Engineering Program at Tulane University will:

- Develop environmental engineers who possess confidence, creativity and competence in the performance of their professional activities.
- Provde graduates with the analytical, design, and problem-solving skills necessary for the successful practice of modern environmental engineering.
- Develop a base of fundamental knowledge in mathematics, science, and engineering that will serve as a foundation for livelong learning, and develop the information gathering and information-synthesis skills necessary for independent learning throughout the graduate’s professional career.
- Instill knowledge of, and appreciation for, the social and global context in which environmental engineering is performed.
- Develop graduates who are fully prepared and eager to provide solutions to environmental infrastructure problems confronting society.
- Provide the graduate with a sufficient scholarly experience such that he/she will be well prepared for graduate studies in environmental engineering at the highest academic levels.


## CURRICULUM - CIVIL ENGINEERING

The civil engineering curriculum is administered by the Department of Civil and Environmental Engineering and is accredited by the Accrediting Board for engineering and Technology (ABET). This curriculum offers a broad, general coverage of the entire field of civil engineering, including an environmental engineering component. The civil engineering curriculum prepares the student for entry into the practice of civil engineering and forms a basis for graduate studies and research.
The civil engineering profession is dedicated to serving the basic needs of man and society. The structures in which we live and work, the transportation systems by which we travel and the environment around us are the concerns of the civil engineer. Civil engineering education emphasizes the study of engineering principles and the application of scientific knowledge and technology for the betterment of mankind. A broad civil engineering education prepares the student to economically apply the laws, forces and materials of nature to the design, construction, maintenance and operation of works and structures. A basic civil engineering education prepares
the student for a career in design, research or management and also provides a basis for further study in business, law or graduate civil engineering.
The program culminates with civil engineering design projects requiring the synthesis of concepts and their application in comprehensive design analysis and evaluations of modern civil engineering systems. In structural design, the student analyzes and designs a multi-story reinforced concrete structure and a steel structure in accordance with current design practice. Use is made of computer applications in both analysis and design. In environmental design, the student establishes design criteria through analysis of data and design objectives. These criteria are then applied to the design of systems intended to meet specified objectives. Specific projects involve a water or wastewater treatment system or environmental restoration of a hazardous waste site. In civil engineering design, the student is engaged in a comprehensive planning and design project involving urban planning and land development. The project includes a variety of realistic constraints such as economic factors, safety, reliability, aesthetics, ethics and social impact. The projects involve the technical details of land subdivision, streets and highways, drainage and structures and foundations. The projects are designed to develop student creativity and team participation. A final written report and oral presentation are required.
Sophomore Year
Fall Semester
Credits
CVEN 209 Engineering Math and Computer Methods ..... 3
ELEN 201 Electric Circuits I ..... 3
ENGR 241 Statics ..... 3
MATH 221 Calculus III ..... 4
Elective Humanities or Social Science Elective ..... 3
Fall Semester Total: ..... 16
Spring Semester
CVEN 204 Highway Geometrics and Surveying ..... 4
ENGR 242 Dynamics ..... 3
ENGR 243 Mechanics of Materials ..... 3
MATH 224 Introduction to Applied Mathematics ..... 4
Elective Humanities or Social Science Elective ..... 3
Spring Semester Total: ..... 17
Junior Year
Fall Semester
CVEN 341 Structural Analysis I ..... 3
CVEN 371 Construction Materials ..... 2
CVEN 381 Environmental Engineering I ..... 4
ENGR 213 Thermodynamics ..... 3
ENGR 344 Fluid Mechanics ..... 3
Elective Humanities or Social Science Elective ..... $\underline{3}$
Fall Semester Total: ..... 18
Spring Semester
CVEN 342 Structural Analysis II ..... 3
CVEN 346 Hydraulic Engineering ..... 4
CVEN 348 Geoenvironmental Engineering ..... 4
CVEN 380 Structural Steel ..... 3
Elective Humanities or Social Science Elective ..... $\underline{3}$
Spring Semester Total: ..... 17
Senior Year
Fall Semester
CVEN 421 Transportation Engineering ..... 3
CVEN 443 Reinforced Concrete ..... 3
CVEN 447 Foundation Engineering ..... 3
CVEN 491 Structural Design I ..... 3
Elective* Technical Elective ..... 3
Fall Semester Total ..... 15
Spring Semester
CVEN 414 Engineering Professional Practice ..... 1
CVEN 461 Civil Engineering Design ..... 4
Elective* Technical Elective ..... 3
Elective* Technical Elective ..... 3
Elective Humanities or Social Science Elective ..... 3
Elective Humanities or Social Science Elective ..... $\underline{3}$
Spring Semester Total ..... 17
Total Credits: ..... 134
*Technical electives must be approved by the departmental faculty adviser.
ROTC students may receive up to 6 credits for their ROTC courses.

## MINORS

There are established minors in business management and mathematics and an established second major in mathematics. Other minors may be arranged on request by mutual consent of the Department of Civil and Environmental Engineering and the department in which the minor is to be taken.

## CURRICULUM - ENVIRONMENTAL ENGINEERING

The environmental engineering program is administered by the Department of Civil and Environmental Engineering. The environmental engineering curriculum was born of the need to provide professional engineers for the solution of our nation's and world's environmental problems.
The undergraduate environmental engineering curriculum is designed for students interested in the professional practice of environmental engineering as well as for those students who are interested in a teaching or research career. The areas covered include water and wastewater engineering, air pollution control engineering and water resources engineering. The students are encouraged to take elective courses in the area of environmental science, chemical engineering and public health engineering.
Capping the program are design projects requiring a synthesis of concepts studied in the curriculum with an application based on comprehensive design analysis and evaluation. The design courses at the senior level are aimed at emphasizing an integrated approach in the prevention and mitigation of environmental problems. In addition to computer modeling, the curriculum includes laboratory courses to provide experience in chemical and biological treatment processes, geoenvironmental engineering and hydraulics. The curriculum includes courses from
the Chemical Engineering Department. Courses such as Unit Operations and Biological Waste Treatment are designed to help the students to understand the fundamentals of chemical and biological processes suitable for application in environmental engineering.

## Sophomore Year

## Fall Semester

Credit
CVEN 207 Topics in Environmental Engineering 2
CENG 211 Stoichiometry 3
ENGR 241 Statics 3
CHEM 241 Organic Chemistry 3
CHEM 243 Organic Chemistry Lab 1
MATH 221 Calculus III $\underline{4}$
Fall Semester Total: 16
Spring Semester
ENGR 242 Dynamics 3
ENGR 243 Mechanics of Materials 3
CENG 232 Unit Operations I 3
CVEN 384 Biological Principles of
Environmental Engineering 3
MATH 224 Introduction to Applied Mathematics 4
Spring Semester Total: 16
Junior Year
Fall Semester
CVEN 209 Engineering Math and Computer Methods 3
CVEN 381 Environmental Engineering 4
ENGR 213 Thermodynamics 3
ELEN 201 Electric Circuits I 3
Elective Humanities or Social Science Elective $\underline{3}$
Fall Semester Total: 16
Spring Semester
CVEN 348 Geoenvironmental Engineering ..... 4
CVEN 346 Hydraulic Engineering ..... 4
CENG 334 Unit Operations III ..... 3
Elective Humanities or Social Science Elective ..... 3
Elective Humanities or Social Science Elective ..... $\underline{3}$
Spring Semester Total: ..... 17
Senior Year
Fall Semester
CVEN 424 Design of Physical and Chemical Treatment Systems ..... 4
CVEN 451 Groundwater Hydrology ..... 3
CVEN 436 Meteorology and Air Pollution ..... 3
Elective* Technical Elective ..... 3
Elective Humanities or Social Science Elective ..... $\underline{3}$
Fall Semester Total: ..... 16
Spring Semester
CVEN 414 Engineering Professional Practice ..... 1
CVEN 438 Design of Air Pollution Control Systems ..... 3
CVEN 452 Environmental Engineering Design ..... 4
CVEN 448 Biological Treatment Processes ..... 3
Elective Humanities or Social Science Elective ..... 3
Elective Humanities or Social Science Elective ..... 3
Spring Semester Total: ..... 17
Total Credits: ..... 132* Technical electives must be approved by the faculty advisors. A list of acceptable electives isavailable in the Department.
ROTC students may receive up to 6 credits for their ROTC courses.

## FACULTY AND COURSE DESCRIPTIONS

Office: Suite 206, Civil Engineering Building
Phone: (504) 865-5778
Fax: (504) 862-8941

## Professors

Robert Nolan Bruce, Jr., P.E., Ph.D., University of Illinois, 1962; Civil Engineering, Catherine and Henry Boh Professor of Civil Engineering, Structural Engineering, Reinforced and Prestressed Concrete, Behavior of Bridge Structures, Prestressed Piling and Splices, Structural Applications of Autoclaved Aerated Concrete.

John H. Grubbs, P.E., Ph.D., Rensselear Polytechnic Institute, 1986, Civil and Environmental Engineering, Water and Wastewater Engineering, Computer Aided Design, Structural Systems, Mechanical Systems.
Reda Mohamed Aly Bakeer, P.E., Ph.D., Syracuse University, 1985; Civil Engineering, Geotechnical and Geoenvironmental Engineering, Numerical Analysis and Computer Methods in Engineering, Soil-Structure Interaction, Soil Dynamics, Expert Systems.

## Associate Professors

Sanjoy Kumar Bhattacharya, P.E., Ph.D., Drexel University, 1985; Civil Engineering, Bioremediation, Hazardous Waste Management, Water and Wastewater Treatment, Industrial Waste Treatment, Biological Waste Treatment, Global Environmental Changes.

Laura J. Steinberg, Ph.D., Duke University, 1993; Environmental Engineering, Water and Wastewater Engineering, Water Quality Modeling, Statistical Modeling.

## Assistant Professors

Glen R. Boyd, PE., Ph.D., Clemson University, 1991 Environmental Systems Engineering, Water Quality, Design of Water and Wastewater Treatment Systems, Remediation of Contaminated Groundwater, Drinking Water Distribution Systems.
Anthony J. Lamanna, Ph.D., University of Wisconsin, 2002; Structural Applications of Fiber Reinforced Members, Matrix Analysis of Structures, Reinforced Concrete, Bridge Assessment and Evaluation.
Paul H. Ziehl, P.E., Ph.D., University of Texas at Austin, 2001; Structural Applications of Fiber Reinforced Polymers, Finite Element Modeling, Nondestructive Evaluation and Structural Health Monitoring, Conventional, High Performance, Prestressed and Fiber Reinforced Concrete.

CVEN 204 Highway Geometrics and Surveying (4) Lecture 3, laboratory 3.
Prerequisite: CPSC 101 or equivalent. This course is divided into three components: 1) An introduction to civil engineering design graphics using AutoCAD and computer-aided design computations using various computer software packages (EXCEL, COGO, PC-Plus, etc.); 2) An introduction to the concepts of surveying instruments and measurements; 3) An introduction to the principles of highway engineering and traffic analysis. Surveying field work is conducted in elementary surveying operations. A highway geometric design project is assigned to introduce the students to the elements of the civil engineering design process.

## CVEN 207 Introduction to Environmental Engineering (2) Lecture 2.

This course provides coverage of the broad range of topics comprising environmental engineering. Areas covered include water resources planning and management, solid waste, water and wastewater treatment processes, hazardous waste and hazardous materials management, environmental impacts, and air pollution. Students develop expertise in the use of library resources for application to environmental engineering projects. Field trips to local environmental engineering works are an integral part of the course.

## CVEN 209 Engineering Math and Computer Methods (3) Lecture 3.

Prerequisite: CPSC 101 or equivalent. Applications of numerical analysis and computer programming techniques to practical civil and environmental engineering problems. Review of the required mathematical background is presented with emphasis on numerical modeling and computer oriented solutions. Topics covered include precision and accuracy, errors, roots of equations, solution of linear algebraic equations, statistics and curve fittings, numerical integration and differentiation and solution of differential equations. Students are required to develop their own computer programs.

## CVEN 341 Structural Analysis I (3) Lecture 3.

Prerequisites: ENGR 241, ENGR 243. Development of the fundamental principles of statics and materials in relation to structures of a statically determinate nature. Types of structures and types of loads. Reactions, shears, and moments. Truss types and stability. Truss analysis. Influence lines for beams. Moving loads. Statically determinate structural members as used in bridges, buildings, and other structures. Introduction to specifications and the structural requirements of building codes. Introduction to statically indeterminate structures.

## CVEN 342 Structural Analysis II (3) Lecture 3.

Prerequisites: CVEN 341, CVEN 371, ENGR 243. Indeterminate structures. Deformations of structures and structural members. Visualization of elastic shape, radius of curvature, and curvature between moment and curvature. Moment-area theorems and corollaries. Conjugate beam analogy. Unit load method. Slope deflection. Moment distribution. Lateral load analysis. Two-cycle moment distribution. Matrix analysis. Combination of gravity load moments and shears, and wind load moments and shears on framed structures: Deflections. Computer applications.

## CVEN 346 Hydraulic Engineering (4) Lecture 3,

Laboratory 3.
Prerequisite: ENGR 344. Flow in channels, energy concepts, momentum concepts, hydraulic jump, flow under a sluice gate, frictional resistance to flow, flow measuring devices, selection and testing of rotodynamic pumps, measurement and instrumentation, dimensional analysis, hydraulics of wells, movement of ground water, hydraulic structures.

## CVEN 348 Geoenvironmental Engineering (3) Lecture 3, laboratory 1.

Prerequisites: ENGR 243, ENGR 344. Introduction to behavior and properties of soils. A brief overview of geological processes explains the formation of rocks and soils. The major topics covered are: basic engineering properties of soils, soil classification, shear strength, stress distribution in soil masses, seepage, consolidation, and slope stability analysis. The laboratory component includes experiments to classify soils, to determine their mechanical properties, and to assess their suitability as construction materials. Emphasis will be placed on environmental problems with soils.

## CVEN 371 Construction Materials (2) Lecture 1, Laboratory 3.

Prerequisite: ENGR 243. A basic consideration of forces and factors which control the strength, behavior, and stability of material in the solid state; followed by a more specific consideration of the characteristic properties of metals, concrete, asphalt, and wood. The laboratory is devoted to the testing of materials under various types of loading. Tension, compression, shear, torsion, bending, buckling, hardness, impact, creep and fatigue tests are demonstrated.
CVEN 380 Structural Steel (3) Lecture 3.
Prerequisites: CVEN 341, CVEN 371, ENGR 243. Corequisite: CVEN 342. A basic course covering the fundamental theories and principles necessary for the design of component parts of steel structures. The design of beams, columns and their connections is treated in detail with emphasis on allowable stress design. The course also includes an introduction to plastic analysis and design.

## CVEN 381 Environmental Engineering (3) Lecture 3, Laboratory 1.

Physical, chemical, and biological characteristics of water and waste water. Stoichiometry, reaction kinetics, and material balances. Movement of contaminants in the environment. Physical, chemical and biological treatment methods. The Laboratory verifies concepts presented in lectures.

CVEN 384 Biological Principles of Environmental Engineering (3) Lecture 2, Laboratory 1. Introduction to microbiology, microbial energetics, aquatic chemistry and chemical analysis. The lecture component of the course will be augmented with a laboratory experience in chromatography (GC and HPLC) and metal analysis such as atomic absorption spectrometry (AA). Special topics related to areas such as Public Health, Asbestos, Lead and Mildew and Mold will be covered.
CVEN 408 Water Quality Modeling (3) Lecture 3.
Prerequisite: MATH 224. The equations and assumptions (chemical, physical, biological, and mathematical) underlying water quality models are studied. The students apply the models to a variety of hydrologic settings, including lakes, rivers, bays, and estuaries. Loadings of water quality parameters are modeled as steady-state, step functions, and transient loadings. Contaminant fate and transport processes affecting nutrients, bacteria, sediments, and toxics are studied in the course.

## CVEN 414 Engineering Professional Practice (1) Lecture 1.

Guest and faculty speakers focus on problems and situations encountered in professional engineering practice. Ethics in engineering is interwoven throughout the course. The students are also required to give short presentations.
CVEN 421 Transportation Engineering (3) Lecture 3.
Introduction to technological, economic, and social aspects of transportation systems. Planning, design, construction, maintenance, and operation of facilities for air, water, rail, and highway transportation systems. Problems of urban transportation. Consideration of urban-transportation planning models. Analysis of traffic problems and traffic control systems. Computer modeling of transportation systems.

## CVEN 424/624 Design of Physical and Chemical Treatment Systems (4) Lecture 3, design laboratory 1.

Prerequisite: Senior standing. Design of sedimentation tanks, filtration systems, coagulation process, adsorption and ion exchange process, membrane processes, chemical oxidation, disinfection, aeration and gas transfer, and sludge treatment. Design problems are open ended; appropriate estimates of data are required.

CVEN 433 Biological Principles of Environmental Engineering (3) Lecture 3.
Prerequisite: Senior standing. Introduction to the fundamentals of biochemistry, microbiology and organic chemistry. The biochemistry component will examine degradation pathways of proteins, carbohydrates and fats. The effects of bacteria, viruses, algae and other organisms important to water, wastewater and hazardous waste treatment is discussed in the microbiology section. The organic chemistry unit will cover the physical and chemical properties of environmentally important compounds.

## CVEN 436 Meteorology and Air Pollution (3). Lecture 3.

Introduction to the basic principles of meteorology and its relation to problems associated with air pollution. The major topics include atmospheric composition and structure, atmospheric stability and dynamics, air pollution phenomena and control devices, global change and policy/regulations related to air pollution. A real-world design problem requires the use of air pollution modeling programs.

## CVEN 438 Design of Air Pollution Control Systems (3). Lecture 3.

Advanced topics related to the design of control systems of air pollutants from mobile and stationary sources. Human health effects and federal guidelines regulating exposures are addressed. Federal regulations impacting environmental emissions and occupational safety are emphasized in student problem solving. Specific design problems are required related to vapor and particulate matter control.

## CVEN 443 Reinforced Concrete (3) Lecture 3.

Prerequisites: CVEN 342, CVEN 371, ENGR 243. This course includes a study of the basic mechanics and performance of reinforced concrete with an emphasis on ultimate-strength design methods. Attention is given to the economic and scientific proportioning of those component parts which form the complete concrete structure. The design of slabs, beams, columns and foundations is treated in detail.

## CVEN 447 Foundation Engineering (3) Lecture 3.

Prerequisite: CVEN 344. Design of foundations and earth retaining structures. Major areas covered are design of shallow and deep foundations, theory of lateral earth pressure and design of retaining walls, temporary earth retaining structures and excavations. New technologies for soil and site improvement such as geosynthetics are introduced. Classwork includes a foundation design project.

## CVEN 451 Groundwater Hydrology(3) Lecture 3.

Prerequisite: CHEM 107, 108, MATH 121, 122 or equivalent. Occurrence of water in the nearsurface environment; saturate and unsaturated flow in aquifers; aquifer characterization; well hydraulics; and contaminant fate and transport.

CVEN 452/652 Environmental Engineering Design (4) Lecture 3, design laboratory 1. Prerequisite: Senior standing. Detailed design of engineered systems for environmental protection. Design problems are open-ended and require students to determine the data that are needed, obtain the data when available, or make appropriate estimates in the absence of data. Designs include water, wastewater and hazardous waste treatment facilities.

## CVEN 454 Environmental Impact Assessment (3)

## Lecture 3.

Prerequisite: Senior standing. This course prepares students to work as a member of an interdisciplinary team preparing an Environmental Impact Statement or Environmental Impact Assessment. Students are taught methods for quantifying the impact of engineering projects on water quality, air quality, soil, the noise environment, and the socio-economic environment. The evolution of the National Environmental Policy Act and its implementation are discussed. The role of public participation is emphasized. Readings include the course text and actual EIS's.

## CVEN 461 Civil Engineering Design (4) Lecture 1, Design Laboratory 3.

Prerequisite: Senior standing. A comprehensive planning and design project involving planning and land development; traffic and transportation design; and structural design. The project includes a variety of realistic constraints such as economic factors, safety, reliability, aesthetics, ethics, and social impact. The projects involve the technical details of land subdivision, streets and highways, structures and foundations. Also included are economic feasibility and project scheduling.

## CVEN 491 Structural Design 1(3) Lecture 2, Design Laboratory 3.

Prerequisites: CVEN 342, CVEN 380, CVEN 443, CVEN 447 (CVEN 443 and CVEN 447 may be taken concurrently). This course is a synthesis of analytical and design concepts which have been presented throughout the undergraduate curriculum. Student projects include the preparation of design analysis and drawings for several major structures in accordance with current design practice. Typical designs include multistory steel buildings and highway bridges. Projects include the evaluation and selection of alternative framing methods, materials and types of foundations. Inspection trips are scheduled to nearby construction projects and fabricating plants when possible.

CVEN 492 Structural Design II (3) Lecture 2, Design Laboratory 3.
Prerequisite: CVEN 491. A continuation of course CVEN 491 and also a synthesis of analytical and design concepts. Projects include the design of at least one major structure in accordance with current design practice. Typical designs include multistory reinforced concrete buildings or alternative team projects. Extensive use is made of microcomputer applications in both the analysis and design stages. Team projects, if assigned, conclude with formal oral presentations. Inspection trips are scheduled to nearby construction projects when possible.

## CVEN 601 Advanced Indeterminate Structures I(3) Lecture 3.

Prerequisite: CVEN 342. This course provides the student with the basic fundamentals necessary to analyze those types of structures which cannot be completely analyzed by the use of the laws of static equilibrium alone. Methods covered are; deflection method, strain energy, Castigliano's Theorems, theorem of three moments, slope deflection, moment distribution, column analogy, etc. The effects of varying moment of inertia, sidesway, varying end conditions, and elastic supports are to be considered for various structures.

## CVEN 602 Writing for Engineers

This course teaches students to write with clarity and polish. Organization of ideas, persuasive argumentation, and clarity of thought are emphasized and practiced with writing assignments and analyses. Applications to research papers, biographical sketches, engineering reports, and correspondence are emphasized.

## CVEN 603 Advanced Reinforced Concrete (3) Lecture 3.

Prerequisites: CVEN 342, CVEN 443. Advanced topics in mechanics and behavior of reinforced concrete. Continuous beams, one-way and two-way slabs. Limit analysis and design. Shear friction, deep beams. Introduction to prestressed concrete. Coverage includes both the ultimatestrength and working-strength design methods.
CVEN 606 Prestressed Concrete (3) Lecture 3.
Prerequisite: Approval of instructor. Mechanics and behavior of prestressed concrete structures. Behavior and analysis of precast pretensioned concrete members. Behavior and analysis of posttensioned members. Details of precast concrete connections. Continuous beams and frames, slabs, and axially loaded members. Deflections. Precast construction.

## CVEN 608 Water Quality Modeling (3) Lecture 3.

Prerequisite: MATH 224. The equations and assumptions (chemical, physical, biological, and mathematical) underlying water quality models are studied. The students apply the models to a variety of hydrologic settings, including lakes, rivers, bays, and estuaries. Loadings of water quality parameters are modeled as steady state, step functions, and transient loadings. Contaminant fate and transport processes affecting nutrients, bacteria, sediments, and toxics are studied in the course.

## CVEN 610 Environmental Statistics (3) Lecture 3.

Prerequisite: MATH 301 or equivalent. This course prepares students for independent study in statistics for application to their graduate research projects. Statistical methods of importance to environmental engineers and scientists are studied. Topics include advanced linear regression, design of experiments, sampling design, and spatial analysis. Applications to actual environmental problems are stressed, and the students are introduced to the software package SPLUS.

## CVEN 613 Advanced Soil Mechanics (3) Lecture 3.

Prerequisite: Approval of instructor. An overview of the origin, nature, fabric, structure and classification of soils is presented. The water effects on soils including: capillarity, shrinkage, swelling, permeability and the concept of effective stresses principle are covered as fundamentals to soil behavior. Stresses in soil, stress-strain relationships, stress paths, and failure criteria are discussed in detail. The course provides an emphasis on the topics of consolidation and shear strength of soils. Finally, these two topics are presented within a common framework as an introduction to Critical State Soil Mechanics.

## CVEN 614 Advanced Foundation Engineering (3)

Lecture 3.
Prerequisite: Approval of instructor. Advanced topics in foundation engineering. The first part is devoted to the design of various types of shallow footings such a~ isolated, strip, and mat foundations. The second part emphasizes the design of deep foundations including piles, piers, shafts, and caissons. Special topics such as beams on elastic foundations, micropiles, soil nailing, and foundations on expansive soils are discussed.

## CVEN 615 Soil and Site Improvement (3) Lecture 3.

Prerequisite: Approval of instructor. The study of soil and ground modification techniques. Methods to improve marginal soils and sites are presented, including: compaction, deep densification, dynamic consolidation, chemical stabilization, admixtures such as cement; asphalt and fly ash, pre-consolidation, biological stabilization, thermal stabilization, grouting, and earth reinforcement. The course also covers dewatering, wick and sand drains, electro-osmosis and other hydraulic modification techniques.

## CVEN 616 Earth Structures (3) Lecture 3.

Prerequisite: Approval of instructor. Aspects of embankments and retaining structures design. Particular attention is given to excavations and embankments in poor soil conditions. The course includes an overview of slope stability analyses and design of earth dams. Computer programs are used to solve some of the assignments and a design project is required.
CVEN 617 Matrix Analysis of Structures (3) Lecture 3.
A review of matrix algebra as it pertains to the analysis of statically indeterminate structures. A review of the slope-deflection method leading into matrix displacement analysis of 2D and 3D structures by definition, basic stiffness, and direct stiffness methods. Solution of linear and nonlinear algebraic equations. An introduction to the use of energy methods in structural analysis, geometric nonlinear analysis, elastic critical load analysis, material nonlinear analysis, and modeling techniques and applications.

CVEN 620 Ground Water Contaminant Fate and Transport (3) Lecture 3.
Prerequisite: Approval of instructor. Principles of mass transport and contaminant hydrogeology. Topics will include a review of mathematics and flow equations for flow, sources of ground water contamination, contaminant transport in saturated media, transformation, retardation and attenuation of solutes, flow and mass transport in the vadose zone, multiphase flow, inorganic and organic chemicals in ground water, monitoring and remediation strategies.
CVEN 626 Water Quality and Resources Management (3) Lecture 3.
Prerequisite: Senior standing. An overview of drinking water quality and water resources protection from source to tap is given. Topics focus on water system management issues, including regulations, watershed protection, sources of contamination, selection of treatment technologies, water quality in the distribution system, and challenges currently facing the drinking water community. Principles of environmental engineering are applied to addressing water quality concerns.

## CVEN 630 Engineering Use of Geosynthetics (3)

## Lecture 3.

Prerequisite: Approval of instructor. Use of geosynthetics in geo-environmental applications. The course introduces the concept of improving soil strength by using geotextiles and geogrids. Field applications such as reinforcing earth embankments, roads, and waste containment facilities are discussed. The course covers the use of geotextiles, geomembrane and wick drains to control water flow and seepage.

CVEN 631 Dynamics of Structures (3) Lecture 3.
Prerequisite: CVEN 342. Mathematical formulation of the differential equations of equilibrium of various structures. Numerical solution of simple systems. Closed form solution of equations of equilibrium for single and multi-degree systems. Natural frequencies and mode shapes of the structures are obtained from the solution of the eigenvalue problems. Normal mode method of analysis is introduced. An overview of soil/structure interaction will be presented.

## CVEN 634 Design of Air Pollution Control Systems (3) Lecture 3.

Prerequisite: Approval of instructor. With a brief introduction to the regulatory aspects of air pollution this course emphasizes the design approaches used for air pollution control systems. The health effects of air pollution are also discussed. Students are required to write a term paper.
CVEN 636 Environmental Restoration and Nuclear Waste Storage Facility (3) Lecture 3.
Prerequisite: Approval of instructor. A review of the behavior of underground and above the ground concrete or steel structural facilities, with case studies for long-term disposal of radioactive waste.

## CVEN 644 Industrial Waste Treatment (3) Lecture 3.

Prerequisite: Approval of instructor. The application of standard engineering techniques to specific industrial wastes. Best available treatment techniques which are discussed include waste surveys, waste reduction, neutralization, equalization, and joint treatment. Individual student reports are required in which the current state-of-the-art treatment for particular industrial wastes is presented.

## CVEN 648 Biological Treatment Processes (3) Lecture 3.

Principles of bio-remediation; limitations, advantages of combining with other processes. Case studies are integrated into the course. Students are required to write a term paper.

## CVEN 651 Groundwater Hydrology(3) Lecture 3.

Prerequisite: CHEM $107 \sim 108$, MATH 121, 122 or equivalent. Occurrence of water in the nearsurface environment; saturated and unsaturated flow in aquifers; aquifer characterization; well hydraulics; and groundwater chemistry.

## CVEN 654 Environmental Impact Assessment (3)

## Lecture 3.

Prerequisite: Senior standing. This course prepares students to work as a member of an interdisciplinary team preparing an Environmental Impact Statement or Environmental Impact Assessment. Students are taught methods for quantifying the impact of engineering projects on water quality, air quality, soil, the noise environment, and the socio-economic environment. The evolution of the National Environmental Policy Act and its implementation are discussed. The role of public participation is emphasized. Readings include the course text and actual EIS's.

## CVEN 660 Theory of Elastic Stability (3) Lecture 3.

Prerequisite: Approval of instructor. Introduction to the principles, theory and design methods that are the basis for the stability analysis of beam columns, frames, built-up columns, rings and arches.

## CVEN 673 Design of Engineering Systems (3) Lecture 3.

Prerequisite: Approval of instructor. Introduction of operations research and construction management principles. Discussion of linear, dynamic, integer, and non-linear programming and their application to civil engineering problems. Computer methods such as SIMPLEX are used to analyze operational and management problems in civil engineering projects.
CVEN 674 Management of Engineering Projects (3) Lecture 3.
Prerequisite: Approval of instructor. An introduction to advanced techniques for solving complex problems encountered in the management of large systems of men, machines, materials and capital. The analysis of networks and the use of PERT and CPM in solving project management
problems are covered. Classwork includes homework on related problems and a major design project of an actual civil engineering scheduling problem.

## CVEN 681 Advanced Steel Design (3) Lecture 3.

Prerequisite: Approval of instructor. Current load and resistance factor steel design specifications are considered and are related to the basic behavior of the structure and component parts. Both allowable-stress design and plastic design concepts are covered with primary emphasis given to limit-state design. Topics include steel properties, tension and compression members, beams, connections, and composite design.
CVEN 683 Bridge Engineering (3) Lecture 3.
The course covers topics related to bridge engineering with emphasis on modern highway bridges. The course covers the design of reinforced concrete, prestressed concrete and steel bridges. The students are required to design each of these types of highway bridges.

## The Department of Electrical Engineering and Computer Science

Office: Suite 211 Stanley Thomas Hall
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email: info@eecs.tulane.edu
Website: www.eecs.tulane.edu
Professors
Parviz Rastgoufard, Department Chair, Michigan State University, 1983; Electrical Engineering and Systems Science. Large Scale Power and Control Systems, Compuatational Intelligence in Power Systems, Electrodynamics.
Boumediene Belkhouche, Ph.D., University of Southwestern Louisiana, 1983; Computer Science. Programming Languages, Formal Semantics, Software Engineering, Bioinformatics.
Billy Paul Buckles, Ph.D., University of Alabama, 1981;Operations Research. Petri Nets, Fuzzy Databases, Genetic Algorithms.

Paul Frank Duvoisin, Ph.D., University of Wisconsin, 1969; Electrical Engineering. Electronics, Microprocessors.

Shieh-Tsing Hsieh, D.E., Tulane University, 1974; Electrical Engineering. Electromagnetics, Microwave Devices.

Frederick Eugene Petry, Ph.D., Ohio State University, 1975; Computer Science. Representation of Imprecision via Fuzzy Sets and Rough Sets in Databases, GIS, and other information systems, Genetic Algorithms.

## Associate Professors

Mark Benard, Ph.D., Yale University, 1969; Mathematics. Computer Security, Networking, Operating Systems.
Sergey V. Drakunov, Ph.D., Institute of Control Sciences, 1985; Nonlinear Control. Observers and Filters, Systems and Sliding Modes.

Johnette Hassell, Ph.D., Tulane University, 1975; Mathematics, Software Engineering, Computer Forensics.

Cris Koutsougeras, Ph.D., Case Western University, 1988; Computer Science. Neural nets, Theoretical Computer Science, Artificial Intelligence.
Andrew B. Martinez, Ph.D., Princeton University, 1982; Information Sciences and Systems, Communications, Digital Signal Processing, Sonar, and Navigation.

## Assistant Professors

Dale Joachim, Ph.D., Michigan State University, 1998; Electrical Engineering. System Identification, Speech Processing, Set-membership Theory.
Jing Peng, Ph.D., Northeastern University, 1994; Computer Science. Machine Learning, Image Retrieval, Pattern Classification.

Uvais Qidwai, Ph.D., University of Massachusetts, 2001; Electrical Engineering. Signal and Image Processing, Robotics.
Marin Simina, Ph.D., Georgia Institute of Technology, 1999; Computer Science. Artificial Intelligence, Web-based Agents, Case-based Reasoning, Cognitive Science.

Brij Singh, Ph.D., Indian Institute of Technology Delhi, 1996; Power Electronics. Power Supplies for Telecommunication Systems, Power Electronics Applications to Power Systems, Machine Control and Solar Power Based Systems.

## Computer Engineering (CPEN)

Early computers were large, temperature sensitive, unreliable and thoroughly unsuited to today's problems, problems such as spacecraft control, health care monitoring, nuclear plant regulation, robotics and telephone switching systems. The role of the computer engineer is to design and engineer computers and related hardware systems that are increasingly small, versatile, reliable, and cost effective.

Traditionally, hardware and software have been studied separately, but recent and dramatic developments have blurred distinctions between the two. The field of computing requires engineers to have backgrounds that span both hardware and software issues and the interface between the two as well as be able to interact with engineers and applied scientists from other disciplines.
Tulane's Computer Engineering program meets these needs through an integrated curriculum that includes design, theory, and applications of engineering and computer science. Traditional topics such as electronic circuits, digital logic, computer architecture, and computer systems design and testing are supplemented with studies about the principles of software development and the interaction of computer hardware and software. A senior design sequence allows students to apply their accumulated knowledge to an open-ended problem relevant to the student's personal and career objectives. The open-ended problem chosen by the student will serve as the student's thesis topic required of all Computer Engineering students for their graduation from the department.
Graduates of the Computer Engineering program elect either graduate study or immediate employment in industry, commerce, or government. Typical industrial employers include both manufacturers and users of computer systems, petrochemical industries, government agencies and laboratories, and telecommunications firms. Jobs in these industries may include designing new tools, technologies, or testing mechanisms for computers and computer peripherals, establishing standards for computer hardware and software performance, and applying artificial intelligence techniques to manufacturing or health care.
The Computer Engineering program, being one of the three interrelated programs offered by the department, substantially benefits from both Computer Science and Electrical Engineering programs. For more information, see the Computer Science and Electrical Engineering descriptions and listings.

## DEPARTMENTAL MISSION

The mission of the Computer Engineering program of the Department of Electrical Engineering and Computer Science is to train highly qualified undergraduate and graduate students who will contribute to the advancement of information technology in all aspects of our society. The faculty and students of the Computer Engineering program continuously interact with the faculty and students in the Electrical Engineering and Computer Science programs of the department and as a result shall be trained to obtain backgrounds that span both hardware and software issues and the interface between the two as well as be able to interact with engineers and applied scientists from other disciplines.

## OBJECTIVES

The educational objectives for the Computer Engineering program of the Department of Electrical Engineering and Computer Science are:

- To prepare our students for today's and future challenging problems such as information technology, spacecraft control, health care monitoring, nuclear plant regulation, robotics, and telephone switching systems.
- To train our computer engineers to design and engineer computers and related hardware and software systems that are increasingly small, versatile, reliable, and cost effective.
- To strive for state-of-the-art laboratories and facilities that are suitable for experimenting topics such as electronic circuits, digital logic, computer architecture, computer systems design, computer hardware and software interfacing, robotics, and information technology.
- To provide opportunities for our students to use the departmental industrial and governmental alliances to interact with practicing engineers and scientists in industrial, commercial, academic, and government communities.
- To emphasize the importance of verbal, written, and visual communications and requiring all of our seniors to engage in completion of a year long senior thesis in their field of interest. Our students are also encouraged to engage in interdisciplinary projects and international cultural exchange activities.
Curriculum
Freshman Year
Fall Semester Credits
CPSC 101 Software Design and Programming ..... 4
ENGR 100 Introduction to Engineering and Computer Science ..... 1
CHEM 107 General Chemistry I ..... 3
CHEM 117 General Chemistry Lab I ..... 1
MATH 121 Calculus I ..... 4
PHYS 131 General Physics I and Lab ..... 4
Fall Semester Total: ..... 17
Spring Semester
CPSC 102 Object-oriented Design and Programming ..... 4
ENGR 101 Introduction to Engineering and Computer Science ..... 1
CHEM 108 General Chemistry II ..... 3
CHEM 118 General Chemistry Lab II ..... 1
MATH 122 Calculus II ..... 4
PHYS 132 General Physics II and Lab ..... 4
Spring Semester Total: ..... 17
Sophomore Year
Fall Semester
CPEN 200 Sophomore Testing Period ..... 0
CPEN 201 Computer Organization ..... 4
ELEN 201 Electric Circuits I ..... 3
MATH 217 Discrete Mathematics ..... 3
MATH 221 Calculus III ..... 4
Elective Engineering Science ..... $\underline{3}$
Fall Semester Total: ..... 17
Spring Semester
CPEN 200 Sophomore Testing Period ..... 0
CPEN 240 Digital Logic ..... 4
CPSC 118 Data Structures ..... 4
ELEN 202 Electric Circuits II ..... 3
ENGL 101 Writing ..... 4
or
**** 119 Writing Seminar ..... 4
MATH 224 Introduction to Applied Mathematics ..... 4
Spring Semester Total: ..... 19
Junior Year
Fall Semester
CPEN 383 Computer Engineering Lab ..... 2
CPSC 355 Operating Systems Design ..... 4
ELEN 303 Electronics ..... 3
ELEN 321 Signals and Systems ..... 3
Elective Humanities or Social Science ..... 3
Fall Semester Total: ..... 15
Spring Semester
CPEN 341 Microcomputer Interfacing ..... 4
CPSC 305 Software Engineering ..... 4
MATH 301 Probability and Statistics ..... 3
Elective Humanities or Social Science ..... 3
Elective Humanities or Social Science ..... 3
Spring Semester Total: ..... 17
Senior Year
Fall Semester
CPEN 444 Computer Architecture ..... 3
CPEN 485 Senior Design Project I ..... 2
Elective Technical ..... 3
Elective Technical ..... 3
Elective Humanities or Social Science ..... $\underline{3}$
Fall Semester Total: ..... 14


## Spring Semester

CPEN 486 Senior Design Project II 3
Elective Technical 3
Elective Technical 3
Elective Humanities or Social Science 3
Elective Humanities or Social Science $\underline{3}$
Spring Semester Total: 15

## PLACEMENT IN COMPUTER SCIENCE COURSES

Students who are proficient in C or C++ should contact the Department of Electrical Engineering and Computer Science to determine placement.
Students who have taken the College Board AP examination in computer science should contact the Department of Electrical Engineering and Computer Science to determine college credits and placement.

## ENGINEERING SCIENCE ELECTIVE (3 CREDITS REQUIRED)

The student may select this elective from the basic engineering science courses offered outside of computer engineering, computer science, and electrical engineering.

## TECHNICAL ELECTIVES (12 CREDITS REQUIRED)

Technical electives permit the student to focus his or her undergraduate program on an area of special interest. As examples, acceptable focus areas include depth in computer science and engineering, depth in electrical engineering, pre-med, pre-law, or cognitive science. Each student is required to meet with his or her department adviser and plan out the full extent of the focus area for the technical electives prior to taking any of these courses. These courses must be at the 300level or above unless approved by the department.

Students completing an ROTC program receive 6 credits towards this requirement for their ROTC course work.

## MINOR IN COMPUTER ENGINEERING

The minor is available only to students in other Engineering departments. The following courses are required:
CPSC 101 (Software Design and Programming)
CPSC 102 (Object-oriented Design and Programming)
CPSC 118 (Data Structures)
CPEN 201 (Computer Organization)
CPEN 240 (Digital Logic)
MATH 217 (Discrete Mathematics)
One (1) additional Computer Engineering (CPEN) course is required at the 300 or 400 level excluding laboratory courses such as 383,485 , or 486 and independent studies courses.

## MINORS AND SECOND MAJORS FOR COMPUTER ENGINEERING STUDENTS

There are established minors in business management and in mathematics and an established second major in mathematics. Other minors or majors may be arranged on request by mutual

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consent of the Department of Electrical Engineering and Computer Science and the department in which the minor or major is to be taken.

## COURSE DESCRIPTIONS

## CPEN 201 Computer Organization (4) Lecture 3,

 laboratory 2.Prerequisite: CPSC 101. An introduction to the logical and physical organization of digital computers. This course provides a general overview of the structure and function of computer systems. Topics covered include data representation, CPU organization and control, memories, input/output devices, communications, and system software. Assembly language programming is introduced to illustrate these topics.

## CPEN 240 Digital Logic (4) Lecture 3, laboratory 2.

Prerequisite: CPEN 201. An introduction to the design and analysis of digital logic systems. The use of gates, flip-flops, counters, and other common transistor logic devices is studied. Laboratory work includes the construction and testing of logic circuits.
CPEN 341 Microcomputer Interfacing (4) Lecture 3, laboratory 2.
Prerequisite: CPEN 383 or ELEN 391. The study of the interaction of the components of a computer system and the interfacing of these components to form an operational unit. Laboratory work includes experiments with processors, memory, and I/0 devices.

## CPEN 383 Computer Engineering Laboratory (2)

Laboratory 3.
Prerequisite: CPEN 240. Experience in using the techniques of Logic Design in the design of large scale systems including digital computing oriented as well as hybrid digital-analog systems. Students are required to implement in hardware and prototype boards a real world engineering application which calls for problem solving skills beyond the standard algorithmic processes of Logic Design.

## CPEN 422 Image Processing (3) Lecture 3.

Prerequisite: CPEN 201 and MATH 221. Digital image processing techniques covering image representation, compression, enhancement, restoration, segmentation, and reconstruction. These methods are examined in both the spatial and frequency domains. Students receive hands-on experience in processing images.

CPEN 427 Speech Processing (3) Lecture 3.
Prerequisites: CPEN 201, ELEN 321. A hands-on perspective on the field of speech processing is given using the hidden Markov model (HMM) software HTK. Relevant notions in signal processing, HMMs, clustering and speech modeling are presented.

## CPEN 444 Computer Architecture and Design (3)

## Lecture 3.

Prerequisite: CPEN 240. A presentation of both theoretical and practical aspects of computer architecture. Design methods and languages are introduced and a complete design of a typical small processor and various alternative designs are considered. Approaches to ALU design emphasizing speed trade-offs are given. Topics in multiprocessing and parallel and distributed processing are also considered.
CPEN 449 Neural Nets (3) Lecture 3.
Prerequisites: advanced standing in computer science, or computer engineering, or electrical engineering or a good mathematics background and the permission of the instructor. A study of the sub-symbolic computing paradigm and a basic set of neural network models. The course covers perspectives and applications of neurocomputing to machine learning, pattern recognition, associative memory, and automatic control.

## CPEN 461 Graphics and Animation (3) Lecture 3.

Prerequisites: CPEN 201 and department permission. Algorithmic approaches towards making realistic computer graphics with mathematical modeling and simulation. The course is intended to cover the topics such as graphics basics, representation of complex shapes with simple geometrical shapes and their mathematical representation, interpolation of pixel values for the cases of motion, and size changes, output primitives, representations of motion, shadows, and 3D effects, morphing and multi-layered animation.

## CPEN 472 Computer Networks (3) Lecture 3.

Prerequisite: CPSC 355. A student of computer network architecture and design. Topics covered include the TCP/IP Internet model and specific protocols which are used at each layer of this model as well as general methods for flow and error control, error detection, encryption, and security.

## CPEN 485 CPEN 486 Senior Design Project I, II $(2,3)$ Seminar 2, laboratory 3.

Prerequisite: Senior standing in computer engineering. A two-semester sequence in which students apply their accumulated knowledge in designing and implementing a major project. Students will be graded on the basis of oral and written presentations dealing with their analysis and design as well as the quality of the project.
CPEN 497 CPEN 498 Independent Studies (1-3). Prerequisite: Approval of the department.

## CPEN 627 Speech Processing (3) Lecture 3.

Prerequisites: Graduate standing and department permission. A hands-on perspective on the field of speech processing is given using the hidden Markov model (HMM) software HTK. Relevant notions in signal processing, HMMs, clustering and speech modeling are presented.

## CPEN 640 Digital Logic (3) Lecture 3, laboratory 2.

Prerequisite: Graduate standing. An introduction to the design and analysis of digital logic systems. The use of gates, flip-flops, counters, and other common transistor logic devices is studied. Laboratory work includes the construction and testing of logic circuits.
CPEN 641 Microcomputer Interfacing (3) Lecture 3, laboratory 2.
Prerequisite: CPEN 640. The study of the interaction of the components of a computer system and the interfacing of these components to form an operational unit. Laboratory work includes experiments with processors, memory, and I/O devices.

## CPEN 644 Computer Architecture and Design (3)

Lecture 3.
Prerequisite: CPEN 640. A presentation of both theoretical and practical aspects of computer architecture. Design methods and languages are introduced and a complete design of a typical small processor and various alternative designs are considered. Approaches to ALU design emphasizing speed trade-offs are given. Topics in multiprocessing and parallel and distributed processing are also considered.
CPEN 649 Neural Nets (3) Lecture 3.
Prerequisite: Graduate standing and department permission. A study of the sub-symbolic computing paradigm and a basic set of neural network models. The course covers perspectives and applications of neurocomputing to machine learning, pattern recognition, associative memory, and automatic control.

## CPEN 661 Graphics and Animation (3) Lecture 3.

Prerequisites: Graduate standing and department permission. Algorithmic approaches towards making realistic computer graphics with mathematical modeling and simulation. The course is intended to cover the topics such as graphics basics, representation of complex shapes with simple geometrical shapes and their mathematical representation, interpolation of pixel values for the cases of motion, and size changes, output primitives, representations of motion, shadows, and 3D effects, morphing and multi-layered animation.

## CPEN 672 Computer Networks (3) Lecture 3.

Prerequisite: CPSC 655. A student of computer network architecture and design. Topics covered include the TCP/IP Internet model and specific protocols which are used at each layer of this model as well as general methods for flow and error control, error detection, encryption, and security.

## Computer Science (CPSC)

In the Computer Science program we offer a flexible curriculum that is constantly updated to reflect and use emerging technologies. The curriculum provides a balance of computer science, basic science and mathematics, breadth requirements, and electives. After a three year core study including software engineering, operating systems, computer organization, and the theory of computation, a student may choose technical electives from courses as varied as artificial intelligence, computer networks, databases, and computer architecture.

The electives portion of the program is particularly flexible and allows students to pursue courses of study which meet their personal and career objectives. Students may develop a self-defined major or minor for virtually any program in the university; predefined options are given under the section on minors and second majors.
As students have gained more access to computers and computer programming in their precollege education, it is easy to think of computer science as merely programming. While the construction of computer programs is a vital part of computer science, programming alone does not provide a sufficient basis for a lasting professional career. Thus the study of computer science goes far beyond programming and includes developing new problem solving methods, the planning, design, and testing of sophisticated, innovative computing systems, and deriving the conceptual foundations of all computing.

Some graduates go on to graduate studies in computer science or professional studies in business, law, or medicine. Others form their own companies or work for companies as varied as telecommunications, computer manufacturers, consulting firms, and petrochemical companies. Their jobs fall into a range of areas including software design, quality assurance, project management, and customer consulting, and they may serve as representatives to professional societies or international standards organizations.
The Department of Electrical Engineering and Computer Science also offers an undergraduate degree in Computer Engineering for students interested in the design and engineering of computers and related hardware systems. The Computer Engineering curriculum focuses on the design of computers and the hardware/software interface. Details of the computer engineering curriculum are found in the Computer Engineering section of this bulletin.

## DEPARTMENTAL MISSION

The mission of the Computer Science program of the Department of Electrical Engineering and Computer Science is to offer a flexible curriculum that is constantly updated to reflect and use emerging technologies. The curriculum provides a balance of computer science, basic science and mathematics, breadth requirements, and electives that ensures the training of highly qualified students for the rapidly growing information technology industry.

## OBJECTIVES

The educational objectives for the Computer Science program of the Department of Electrical Engineering and Computer Science are:

To provide quality education for our students for today's and future challenging problems requiring knowledge of software engineering, systems software, computer organization and architecture, intelligent systems, and theory.

To strive for state-of-the-art classrooms, computing facilities, and multimedia equipment that support our students in computer programming, problem solving, planning, design, and testing of sophisticated innovative computing systems, and deriving the conceptual foundations of computing.
To provide a flexible curriculum that allows students to pursue courses of study which meet their personal and career objectives.
To encourage the students to interact with the faculty of the department on research projects that are performed in the department for industry and government.
To emphasize the importance of verbal, written, and visual communications by requiring students to take appropriate courses and engage in interdisciplinary projects and international cultural and scientific activities.

## Curriculum

## Freshman Year

## Fall Semester

CPSC 101 Software Design and Programming
ENGR 100 Introduction to Engineering and Computer Science 1
MATH 121 Calculus I 4
Lab Science I 4
Elective General $\underline{3}$
Fall Semester Total: 16
Spring Semester
CPSC 102 Object-oriented Design and Programming ..... 4
ENGR 101 Introduction to Engineering and Computer Science ..... 1
MATH 122 Calculus II ..... 4
Lab Science II ..... 4
ENGL 101 Writing ..... 4or
****119 Writing Seminar ..... 4
Spring Semester Total: ..... 17
Sophomore Year
Fall Semester
CPEN 200 Sophomore Testing Period ..... 0
CPEN 201 Computer Organization ..... 4
MATH 221 Calculus III ..... 4
Elective Science ..... 3-4
Elective General ..... 3
Elective General ..... 3
Fall Semester Total: ..... 17-18
Spring Semester
CPSC 118 Data Structures ..... 4
CPEN 200 Sophomore Testing Period ..... 0
CPEN 240 Digital Logic ..... 4
MATH 217 Discrete Mathematics ..... 3
Elective Science ..... 3-4
Elective General ..... 3
Spring Semester Total: ..... 17-18
Junior Year
Fall Semester
CPSC 355 Operating Systems Design ..... 4
CPSC 362 Theory of Computation ..... 3
MATH 301 Probability and Statistics ..... 3
Elective General ..... 3
Elective General ..... 3
Fall Semester Total: ..... 16

## Spring Semester

CPSC 305 Software Engineering 4
CPSC 350 Programming Language Structures 3
Elective General 3
Elective General 3
Elective General $\underline{3}$
Spring Semester Total: 16
Senior Year
Fall Semester
CPSC or CPEN 400-level courses 6
CPSC 491 Senior Seminar 2
Elective General 3
Elective Free $\underline{3}$
Fall Semester Total: 14
Spring Semester
CPSC or CPEN 400-level courses 6
Elective Free 3
Elective Free 3
Elective Free $\underline{3}$
Spring Semester Total: 15
Placement in Computer Science Courses:

- Students who are proficient in C or C++ should contact the Department of Electrical Engineering and Computer Science to, determine placement.
- Students who have taken the College Board AP examination in computer science should contact the Department of Electrical Engineering and Computer Science to determine college credits and placement.


## SCIENCE REQUIREMENT

The computer science major requires a two-semester lab science sequence plus two additional courses in the sciences. For the lab science sequence, a student may choose any of the following:
Physics: PHYS 121-122 or 131-132
Chemistry: CHEM 107/117-108/118
Biology: CELL 101/2l1-EEOB 101/111
The remaining two science courses must be chosen from courses intended for science or engineering majors in biology, chemistry, geology, physics, experimental psychology, or the basic engineering sciences. A complete list of acceptable courses can be obtained from the Department of Electrical Engineering and Computer Science.

## ELECTIVES

Electives are divided into two categories, general and free.
The 30 credits of general electives must be chosen from courses in humanities, social sciences, arts and other disciplines that serve to broaden the student's background. Specifically, computer science and computer engineering courses may not be used for these electives, although the electives may be used for a second major or a minor in any other department including business management, mathematics, and the other engineering departments.
The 12 credits of free electives need not fall into any special category but must be approved by the student's adviser in the Department of Electrical Engineering and Computer Science. Courses specifically prohibited from being used as electives include mathematics courses below the level of calculus, University College Computer Information Systems (UCIS) courses, Information Services (UINS) courses, Telecommunications (UTEL) Courses, and Business School Information Systems (ISDS) courses.

Students completing an ROTC program receive 6 credits of free electives for their ROTC courses. General and free electives may be taken satisfactory/unsatisfactory, unless being applied to a minor or major. Other courses must be taken for a grade.

## MINOR IN COMPUTER SCIENCE

The following courses are required:

## CPSC 101 (Software Design \& Programming)

CPSC 102 (Object-Oriented Design and Programming)
CPSC 118 (Data Structures)
CPEN 201 (Computer Organization)
MATH 121-122 (Calculus I \& II)
MATH 217 (Discrete Mathematics)
Two (2) additional 3 or 4 credit Computer Science (CPSC) courses are required at the 300 or 400 level, excluding independent studies courses (CPSC 497 and 498) and seminars (CPSC 491).

## MINORS AND SECOND MAJORS FOR COMPUTER SCIENCE MAJORS

There are established minors in business management and in mathematics and an established second major in mathematics. A coordinate major in cognitive studies involves computer science, philosophy and psychology. Other minors or majors may be arranged on request by mutual consent of the Department of Electrical Engineering and Computer Science and the department in which the minor or major is to be taken.

## COURSE DESCRIPTIONS

CPSC 101 Software Design and Programming (4) Lecture 3, laboratory 1.
An introduction to software design and its implementation using a modern programming language such as C. Emphasis is on the design of algorithms using top-down modular design techniques. No previous experience with computers is assumed.
CPSC 102 Object-oriented Design and Programming (4) Lecture 3, laboratory 1.
Prerequisite: CPSC 101. An introduction to object-oriented analysis, design, and programming. Object-oriented methodology, including processes and notations, is covered. Concepts of classes, objects, inheritance, and polymorphism are discussed. Structural and behavioral modeling is emphasized throughout the course. An object-oriented language (e.g., C++) is introduced and used to implement OO designs.

## CPSC 103 Introduction to Computing (4) Lecture 3, laboratory 1.

An introduction to software design and its implementation using a programming language such as Pascal. Emphasis is on the design of algorithms using top-down modular design techniques. No previous experience with computers is assumed.
CPSC 118 Data Structures (4) Lecture 3, laboratory 1.
Prerequisite: CPSC 102. An introduction to computer data structures and their manipulation and applications. Structures studied include arrays, queues, stacks, linked lists, and binary trees. Applications covered include methods of searching and sorting. A modern programming language such as C++ is used for programming assignments.

CPSC 300 Principles of Computer Science (3) Lecture 3.
Prerequisites: CPSC 101, MATH 122. An introduction to a broad range of fundamental concepts in computer science. Topics covered includes data structures, discrete mathematics, analysis of algorithms, software engineering, and computer organization. This course is intended for students who are not majoring or minoring in computer science or computer engineering, but wish the background necessary for taking selected advanced computing courses such as artificial intelligence. Not open to computer science or computer engineering majors or minors for credit.
CPSC 305 Software Engineering (4) Lecture 3, laboratory 1.
Prerequisites: CPSC 118, CPEN 201, MATH 217. A study of the techniques of software development, use, and maintenance. Topics discussed include specification and design methods, program testing, program verification, software reliability, user-machine interfaces, and ethical, social, and legal considerations of software engineering. Substantial projects in specification and design are required.

## CPSC 350 Programming Language Structures (3)

## Lecture 3.

Prerequisites: CPSC 118, CPEN 201, MATH 217. A comparative study of issues involved in the design, implementation, and use of programming languages. The study of syntax includes methods for specifying languages using formal grammars and an introduction to parsing techniques. The study of semantics includes the definition of an abstract model of computation and its application to a specific programming language. Features that are treated in-depth include primitive types, abstract data types, control structures, and storage management. Procedural and functional languages are used throughout to illustrate similarities and differences in language design philosophy and implementation.

## CPSC 355 Operating Systems Design (4) Lecture 3, laboratory 1.

Prerequisites: CPSC 118, CPEN 201, MATH 217. A study of operating systems, with emphasis on a multi-programming environment. The course concentrates on the general principles involved in the management of resources and on the application of these principles to operating system design. Specific algorithms for functions such as thread scheduling and memory management are also studied along with an evaluation of the trade-offs involved in choosing a particular algorithm as part of a system design.

## CPSC 362 Theory of Computation (3) Lecture 3.

Prerequisites: CPSC 118, CPEN 201, MATH 217. A study of the formal concepts and notations of theoretical computer science. Topics covered include automata, formal languages and grammars, Turing machines, recursive functions, computability, and undecidability. Emphasis is on developing and presenting rigorous and formal arguments.

CPSC 413 Database Systems (3) Lecture 3.
Prerequisites: CPSC 118, CPEN 201, MATH 217. A study of database design and implementation. Basic database models (hierarchical, network, relational) are compared. Data manipulation languages for querying are studied, and issues of integrity and security are discussed. An overview of distributed databases is given.
CPSC 414 Advanced Database Systems (3) Lecture 3.
Prerequisite: CPSC 413. A study of the issues for the design and implementation of databases for complex data such as spatial and temporal data. Spatio-temporal data indexing and data mining algorithms are presented. Representations of incomplete and uncertain data for advanced databases are considered.

## CPSC 420 Design and Analysis of Algorithms (3)

## Lecture 3.

Prerequisites: CPSC 118, CPEN 201, MATH 217. A study of general approaches for designing computer algorithms and techniques of analyzing their time and space requirements. Numerous specific algorithms are analyzed, chosen from applications including searching, sorting, resource scheduling, and graph theory.

## CPSC 452 Compiler Design (3) Lecture 3.

Prerequisite: CPSC 350. A study of the principles and implementation of compilers for high-level languages. The basic components of syntactic and semantic analysis are presented: scanning, parsing, code generation. Issues in optimization and error diagnostics are also considered.
CPSC 464 Data Mining and Pattern Recognition (3) Lecture 3.
Prerequisites: CPEN 201. A study of the process concerned with discovering patterns, associations, anomalies, and statistically significant structures and events in data, with an emphasis on large observational databases. This course covers some of the principal methods used for Data Mining, with the goal of placing them in common perspective and providing a unifying overview.

## CPSC 466 Artificial Intelligence (3) Lecture 3.

Prerequisites: CPSC 319 (may be taken concurrently); [CPSC 118, CPEN 201, MATH 217] or CPSC 300; MATH 301. An overview of the field of artificial intelligence studying the basic techniques such as heuristic search, deduction, learning, problem solving, knowledge representation and special languages and systems. Application areas presented may include natural languages, machine vision, automatic programming, and speech systems.
CPSC 469 Machine Learning (3) Lecture 3.
Prerequisites: CPSC 466. A study of computer programs that automatically improve their performance through experience. This course will present the key algorithms and theory, such as concept learning, decision tree learning, statistical learning, PAC learning, instance-based learning, analytical learning, and reinforcement learning.

CPSC 491 Senior Seminar (2) Seminar 3.
A seminar which focuses on ethics and the interaction of computer science and information technology with society. Individual and group presentations, individual written papers, and group discussions are used as a means of improving oral and written communication skills.
CPSC 497, CPSC 498 Independent Studies (1-3)
Prerequisite: Approval of the department.

## CPSC 600 Principles of Computer Science (3) Lecture 3.

Prerequisite: Graduate standing. An introduction to a broad range of fundamental concepts in computer science. Topics covered inc jude data structures, discrete mathematics, analysis of algorithms, software engineering, and computer organization. This course is intended for students who are not majoring or minoring in computer science or computer engineering, but wish the background necessary for taking selected advanced computing courses such as artificial intelligence and computer graphics. Not open to computer science or computer engineering majors or minors for credit.

## CPSC 605 Software Engineering (3) Lecture 3,

laboratory 1.
Prerequisites: Graduate standing and department permission. A study of the techniques of software development, use, and maintenance. Topics discussed include specification and design methods, program testing, program verification, software reliability, user-machine interfaces, and ethical, social, and legal considerations of software engineering. Substantial projects in specification and design are required.
CPSC 613 Database Systems (3) Lecture 3.
Prerequisites: Graduate standing and department permission. A study of database design and implementation. Basic database models (hierarchical, network, relational) are compared. Data manipulation languages for querying are studied, and issues of integrity and security are discussed. An overview of distributed databases is given.
CPSC 614 Advanced Database Systems (3) Lecture 3.
Prerequisite: CPSC 613. A study of the issues for the design and implementation of databases for complex data such as spatial and temporal data. Spatio-temporal data indexing and data mining algorithms are presented. Representations of incomplete and uncertain data for advanced databases are considered.

## CPSC 620 Design and Analysis of Algorithms (3)

Lecture 3.
Prerequisites: Graduate standing and department permission. A study of general approaches for designing computer algorithms and techniques of analyzing their time and space requirements. Numerous specific algorithms are analyzed, chosen from applications including searching, sorting, resource scheduling, and graph theory.

## CPSC 651 Programming Language Structures (3)

## Lecture 3.

Prerequisites: Graduate standing and department permission. A comparative study of issues involved in the design, implementation, and use of programming languages. The study of syntax includes methods for specifying languages using formal grammars and an introduction to parsing techniques. The study of semantics includes the definition of an abstract model of computation and its application to a specific programming language. Features that are treated in-depth include primitive types, abstract data types, control structures, and storage management. Procedural and functional languages are used throughout to illustrate similarities and differences in language design philosophy and implementation.

## CPSC 652 Compiler Design (3) Lecture 3.

Prerequisite: CPSC 651. A study of the principles and implementation of compilers for high-level languages. The basic components of syntactic and semantic analysis are presented: scanning, parsing, code generation. Issues in optimization and error diagnostics are also considered.

## CPSC 655 Operating Systems Design (3) Lecture 3, laboratory 1.

Prerequisites: Graduate standing and department permission. A study of operating systems, with emphasis on a multi-programming environment. The course concentrates on the general principles involved in the management of resources and on the application of these principles to operating system design. Specific algorithms for functions such as thread scheduling and memory management are also studied along with an evaluation ofthe trade-offs involved in choosing a particular algorithm as part of a system design.

## CPSC 664 Data Mining and Pattern Recognition (3) Lecture 3.

Prerequisites: Graduate standing and department permission. A study of the process concerned with discovering patterns, associations, anomalies, and statistically significant structures and events in data, with an emphasis on large observational databases. This course covers some of the principal methods used for Data Mining, with the goal of placing them in common perspective and providing a unifying overview.
CPSC 666 Artificial Intelligence (3) Lecture 3.
Prerequisites: Graduate standing and department permission. An overview of the field of artificial intelligence studying the basic techniques such as heuristic search, deduction, learning, problem solving, knowledge representation and special languages and systems. Application areas presented may include natural languages, machine vision, automatic programming, and speech systems.

## CPSC 669 Machine Learning (3) Lecture 3.

Prerequisites: CPSC 666. A study of computer programs that automatically improve their performance through experience. This course will present key algorithms and theory, such as concept learning, decision three learning, statistical learning, PAC learning, instance-based learning, analytical learning, and reinforcement learning.
CPSC 673 Theory of Computation (3) Lecture 3.
Prerequisites: Graduate standing and department permission. A study of the formal concepts and notations of theoretical computer science. Topics covered include automata, formal languages and grammars, Turing machines, recursive functions, computability, and undecidability. Emphasis is on developing and presenting rigorous and formal arguments.
CPSC 697, CPSC 698 Independent Studies (1-3)
Prerequisites: Graduate standing and department permission.

## Electrical Engineering (ELEN)

Electrical engineering is a dynamic field, encompassing a broad range of engineering activities. Developments in electronics, microprocessors, and computers now affect nearly every aspect of human activity. Our society is heavily dependent on technology that demands more efficient electric power generation, transmission, and distribution, improved mobile, point-to-point communications, computer-controlled manufacturing, and computer-automated public services requiring more complex and intelligent software systems. This dependence naturally translates into great demands for highly trained electrical engineers. Many electrical engineering graduates pursue post graduate degrees in business, law, medicine, or engineering. Others find careers in research and development in virtually every type of industry, as well as in manufacturing, marketing, and management.
The Electrical Engineering program of the department is designed to be flexible enough to educate engineers for a rapidly changing future, yet sufficiently structured in the first three years to provide students with a thorough understanding of the scientific and engineering principles that form the foundation of electrical engineering. Concurrently with electrical engineering studies, the student receives training in the physical sciences, mathematics, and the humanities and social sciences. Throughout the program we emphasize the breadth of knowledge and the development of oral and written communication skills essential for a successful professional career.

Professional development is guided by a sequence of courses and project-oriented laboratories. The senior year is highlighted by a capstone design course that culminates in a senior thesis. The importance of communicating ideas effectively is emphasized through extensive written reports in advanced courses. Laboratory work not only develops practical skills and design techniques, but experience in project management is gained through team and individual projects in the junior and senior level laboratories. At the junior level, the student is introduced to team projects, and proposal and report writing in the laboratory. Concurrently, the student builds experience in technical writing and oral presentation in the junior seminar. The senior design course integrates the basic training with the decision-making process, including safety, reliability, economics, aesthetics, ethics, and social impact. Senior Design Projects are carried out in several facilities that support Intelligent \& Knowledge-Based Systems, Electronic Instrumentation, Microprocessor Applications and Microcomputer Interfacing, Signal \& Image Processing, Electric Power Engineering, and Control Systems.

## DEPARTMENTAL MISSION

The mission of the Electrical Engineering Program of the Department of Electrical Engineering and Computer Science is to train highly qualified undergraduate students in fulfilling the electrical engineering research and educational needs of local and national academic, government, and industrial communities.

The Program faculty and undergraduates are committed to continuously work with practicing engineers and scientists in strengthening the departmental industrial, academic, and government alliance by exploring leading-edge technologies in several fields of electrical engineering.

## OBJECTIVES

The objectives of the Program are to create the necessary educational foundation for the students to successfully build their careers once they enter the work force. The
Flexibility, Creativity, Independence and Competency features of the Program are:

- To prepare students to be flexible, high quality professionals by enabling them to successfully formulate and solve challenging problems in the general fields of electrical engineering. To complement their knowledge in the fields of electrical engineering, students shall be able to gain expertise in solving problems in a variety of specialized dynamic technical fields.
- To enhance students creativity by familiarizing them with state-of-the-art techniques, including laboratory methods and simulation software, in solving open-ended problems.
- To emphasize research independence by requiring a year long individual senior thesis and team collaboration with classmates, the faculty, and their faculty advisor.
- To enhance graduates' job competency by emphasizing the importance of project management, ethics, entrepreneurship, life-long learning, and effective verbal, visual, and written technical communication skills.


## CURRICULUM

Sophomore Year

## Fall Semester

ELEN 201 Electric Circuits I
Credits

ELEN 297 Sophomore Testing Period 0
CPEN 201 Computer Organization 4
ENGR 247 Statics and Dynamics 4
MATH 221 Calculus III 4
Elective Humanities or Social Science $\underline{3}$
Fall Semester Total: 18
Spring Semester
ELEN 202 Electric Circuits II 3
ELEN 204 Electrical Engineering Lab I 2
ELEN 220 Signals and Systems I 3
ELEN 298 Sophomore Testing Period 0
CPEN 240 Digital Logic 4
MATH 224 Introduction to Applied Mathematics 4
Elective Humanities or Social Science $\underline{3}$
Spring Semester Total: 19
Junior Year
Fall Semester
ELEN 303 Electronics 3
ELEN 321 Signals and Systems II 3
ELEN 391 Electrical Engineering Lab II 2
Elective Electrical Engineering Fundamental 3
MATH 301 Probability and Statistics 3
Elective Humanities or Social Science $\underline{3}$
Fall Semester Total: 17
Spring Semester
ELEN 312 Electrical Engineering Seminar 3
ELEN 316 Electromagnetic Waves and Techniques 3
ELEN 392 Electrical Engineering Lab III 2
Elective Electrical Engineering Fundamentals (2) 6
Elective Humanities or Social Science $\underline{3}$
Spring Semester Total: 17

## Senior Year

Fall Semester
ELEN 491 Senior Design Project I ..... 3
Electives Technical (3) ..... 9
Elective Humanities or Social Science ..... 3
Fall Semester Total: ..... 15
Spring Semester
ELEN 492 Senior Design Project II ..... 3
ELEN 4XX Elective ..... 3
ELEN 4XX Elective ..... 3
ELEN 4XX Elective ..... 3
Elective Humanities or Social Science ..... 3
Spring Semester Total: ..... 15
FUNDAMENTAL, TECHNICAL, AND OTHER ELECTIVES

The Electrical Engineering Fundamental Electives are intended as introductions to specific areas of study in electrical engineering, and they are prerequisites for many of the more advanced senior-level electives. Each student must select at least three Electrical Engineering Fundamental Electives from the following list: ELEN 311 Physical Electronics, ELEN 333 Introduction to Modern Power Engineering, ELEN 304 Advanced Electronic Systems, ELEN 332 Introduction to Communication Systems, ELEN 346 Introduction to Control Systems, and CPEN 341 Microcomputer Interfacing.
The Technical Elective requirements are intended to provide depth of study in electrical engineering. The program requires a minimum of three ELEN courses at the 400 -level. In addition, three technical electives are required which can be selected from either ELEN 300 or 400 -level courses, or from 300 or higher level courses in other branches of engineering, computer science, mathematics, or science. All technical electives outside the School of Engineering must first be approved by the student's advisor.
Students completing an ROTC program receive 6 credits of technical electives for their ROTC coursework.

## MINOR IN ELECTRICAL ENGINEERING

The following courses are required:
ELEN 201 (Electric Circuits I)
ELEN 202 (Electric Circuits II)
ELEN 303 (Electronics)
ELEN 321 (Signals \& Systems II)
MATH 221 (Calculus III)
MATH 224 (Introduction to Applied Mathematics)
Two (2) additional 3 credit ELEN courses at the 300-level or above are required, with at least of these selected from EE Fundamentals courses.

## MINORS AND SECOND MAJORS FOR ELECTRICAL ENGINEERING MAJORS

An Electrical Engineering major wishing to complete a minor in Biomedical Engineering should take the following courses:
BMEN 303 Medical Science for Engineers I, BMEN 304 Medical Science for Engineers II, BMEN 322 Materials Engineering, and BMEN 423 Biomaterials Design Laboratory.
There are established minors in business management and in mathematics and an established second major in mathematics. Other minors may be arranged on request by mutual consent of the Department of Electrical Engineering and Computer Science and the department in which the minor is to be taken.

## COURSE DESCRIPTIONS

## ELEN 201 Electric Circuits I (3) Lecture 3.

Prerequisite: MATH 122. A fundamental course dealing with electric charge, current, voltage, power, energy, and passive and active circuit elements. Response of linear circuits to steady and time varying signals by use of circuit laws, network topology, differential equations, and phasors. Frequency response, coupled circuits, power and energy in the ac steady state. Operational amplifier applications and three phase circuits.

## ELEN 202 Electric Circuits II (3) Lecture 3.

Prerequisite: ELEN 201. Co-requisite: MATH 224. A continuation of the analysis of linear circuits Second-order differential equations, state variables, Fourier series, the Laplace transform, the Fourier Transform, scaling, and two-port networks. Computer applications in circuit analysis.

## ELEN 204 Electrical Engineering Laboratory I (2) <br> Laboratory 3.

Prerequisite: Credit for or registration in ELEN 202. A series of experiments to acquaint the student with the techniques, equipment, and safety procedures for basic electrical measurements. Circuit theorems, transients, frequency responses, op amps, digital Ics, spectral analysis, and Pspice.

ELEN 220 Signals \& Systems I: Discrete and
Continuous-Time Signals (3) Lecture 3.
Prerequisites: ELEN 201, MATH 221. Fundamental concepts of continuous-time and discretetime signals with emphasis on discrete-time. Classification of signals and basic properties. Frequency-domain representation of discrete-time and continuous-time signals. The Fourier series and spectra of periodic discrete-time and continuous-time signals. The Fourier transform of discrete-time and continuous-time signals. Continuous and discrete-time filters. Basics of MATLAB. Applications in communications and signal processing.

## ELEN 303 Electronics (3) Lecture 3.

Prerequisite: ELEN 202. Introduction to electronic devices (Diode, BJT, FET, MOSFET) and basic applications. Biasing and bias-point stabilization of junction and field-effect transistors. Low frequency and high frequency linear models of transistors. Multistage amplifiers.

## ELEN 304 Advanced Electronic Systems (3) Lecture 3.

Prerequisite: ELEN 303. Feedback in amplifiers. Differential amplifiers. Operational amplifiers and applications. Tuned amplifiers. Butterworth and Chebyshev frequency characteristics. Advanced electronic devices, Modulation and detection.

## ELEN 311 Physical Electronics (3) Lecture 3.

Prerequisite: Credit for or registration in ELEN 303. Introduction to the physical principles involved in the operation of modern solid state devices including diodes and transistors, circuit models, and introduction to integrated circuits, computer simulation of design and performance of devices.

## ELEN 312 Electrical Engineering Seminar (3) Recitation 3.

Prerequisite: Junior standing in electrical engineering. Written and oral presentation of reports on topics of interest to electrical and computer engineers. Emphasis is placed on explanatory, descriptive and letter writing skills and on oral presentation of reports. Societal problems, professional ethics and aesthetic aspects of the engineering profession are discussed.

## ELEN 316 Electromagnetic Waves and Techniques (3) Lecture 3.

Prerequisites: PHYS 132, MATH 221, junior standing. Introduction of electromagnetic theory, Maxwell's equations and electromagnetic waves, Poynting Theorem, microwave techniques and devices, and distributed circuit models of transmission lines. Radiation effects and occupational safety.

ELEN 321 Signals \& Systems II: Discrete and Continuous-Time Systems (3) Lecture 3. Prerequisites: ELEN 202, MATH 221. Fundamental concepts of continuous-time and discretetime systems with emphasis on continuous-time. Classification of systems and basic properties. Solutions of n-th order differential and difference equations with engineering applications. Impulse response, frequency response, convolution, Laplace and Z-Transform. Introduction to state variable formulation. Basics of system modeling via MATLAB/SIMULINK. Applications in communications, signal processing, and control.
ELEN 332 Introduction to Communication Systems (3) Lecture 3.
Prerequisites: ELEN 220, ELEN 321. Introduction of the basic principles of analog and digital communication systems, modulation and demodulation techniques, probability and random processes, and analog and digital filter design methods.

## ELEN 333 Introduction to Modern Power Engineering (3) Lecture 3.

Prerequisite: ELEN 202. An introduction to modern power engineering. with emphasis on singlephase transformers, and energy conversion devices including induction, synchronous and dc machines. Power flow analysis, economic dispatch, short circuit analysis, power system stability, reliability and control of power systems are introduced in this course.
ELEN 346 Introduction to Control Systems (3) Lecture 3.
Prerequisite: ELEN 321. Analysis and design of single input/single output control systems. System dynamics, stability, frequency domain methods, and state-space models and state feedback. Extensive use of MATLAB and SIMULINK.

## ELEN 377 Elements of Electrical Engineering Lab (1) Laboratory biweekly.

Prerequisites: Sophomore standing in Mechanical Engineering. Laboratory component of ELEN 201 for Mechanical Engineering students. A set of experiments that explore basic circuit theory and measurements, network theorems, basic operational amplifier applications, transistor amplifier circuits, RLC circuits and characteristics, and induction motors.

## ELEN 391 Electrical Engineering Laboratory II (2)

Laboratory 3.
Prerequisites: Credit for or registration in ELEN 303 and ELEN 321. A series of experiments or projects related to the electrical engineering courses in the junior year. Electronics, Signals and Systems, Physical Electronics, and AC Motors are considered.

## ELEN 392 Electrical Engineering Laboratory III (2)

 Laboratory 3.Prerequisites: Credit for or registration in ELEN 303, ELEN 316, ELEN 321. A series of team projects related to electrical engineering courses in the junior year.

ELEN 401 Power Systems Analysis (3) Lecture 3.
Prerequisite: ELEN 333. A study of parameters and components of electric power systems. The development of equivalent circuits of systems under normal and abnormal conditions, applications of symmetrical components, power flow analysis, and power system stability are topics covered in this course.

## ELEN 404 Power System Transients and Stability (3) Lecture 3.

Prerequisite: ELEN 401. A study of steady-state and transient stability of power systems. Topics covered include switching transients, electromagnetic phenomena of importance under transient conditions, effects of lightning, protection of power systems against transients.

## ELEN 405 Power Electronics (3) Lecture 3.

Prerequisite: ELEN 304. An introduction to power semiconductor devices, their ratings and characteristics, and the analysis and design of circuits with power semiconductors and associated devices. Topics include power rectification, inversion, pulse-width modulation and pulsefrequency modulation, AC to DC power control, AC to DC power control, machine control, and protection aspects.
ELEN 412 Electronic Instrumentation (3) Lecture 3.
Prerequisite: ELEN 304. The application of analog and digital electronics to the measurement of electrical and non-electrical quantities. Transducers, filters, bridge circuits, phase detection, pseudo noise sources, radar techniques, function generation, analog and hybrid computation, noise reduction techniques, and microcomputer implementations are typical of topical coverage.

## ELEN 425 Communication Theory and Techniques (3) Lecture 3.

Prerequisite: ELEN 332. Characteristics and performance of communication systems using analog modulation, pulse modulation, and digital modulation. Comparative performance in the presence of noise. Optimal filtering. Phase-locked loops and their applications. Special requirements of commonly used transmission channels.

## ELEN 433 Digital Signal Processing I (3) Lecture 3.

Prerequisite: ELEN 321. The analysis of digital signals and systems in the time and frequency domain and the z-transform. Computer techniques are given for the design and implementation of digital filters. The use of the Fast Fourier Transform is discussed.

## ELEN 434 Digital Signal Processing II (3) Lecture 3.

Prerequisite: ELEN 433. Techniques and applications of digital signal processing. Topics include optimal and adaptive filtering and model-based spectral estimation. A wide variety of applications are used to demonstrate advanced signal processing techniques.

ELEN 442 Introduction to Digital Control Systems (3) Lecture 3.
Prerequisite: ELEN 346. Sampling theory and Sampled Data Systems. Difference equations and Z-Transform techniques. Digital equivalents. Single-Input Single-Output Controller design using root locus. Stability. State-variable techniques. Extensive use of MATLAB and SIMULINK.

## ELEN 445 Modern Control Systems (3) Lecture 3.

Prerequisite: ELEN 346. Canonical realizations of transfer functions. Concept of state, controllability, observability and Lyapunov stability. Controller/Observer design. The LQR problem and Kalman filtering. Extensive use of MATLAB and SIMULINK.
ELEN 481, ELEN 482 Senior Independent Studies (3).
Prerequisite: Senior standing in electrical engineering. Special courses for selected students who may wish to pursue an in-depth study in some area by selecting a suitable subject supervised by a member of the faculty.

## ELEN 491 ELEN 492 Senior Design Project I, II (3, 3)

## Seminar 2, Laboratory 3.

Prerequisite: Senior standing in electrical engineering. A two-semester sequence in which students apply their accumulated knowledge in designing and implementing a major project. Students will be graded on the basis of oral and written presentations dealing with their analysis and design as well as the quality of the project. A study of Engineering Economics is included in the first semester.

## ELEN 601 Power Systems Analysis (3) Lecture 3.

Prerequisite: Graduate standing and departmental permission. Study of components and systems of electric power systems and the development of equivalent circuits of systems under normal and abnormal conditions, applications of symmetrical components, power flow analysis, and power system stability are topics covered in this course. Normally, three projects are conducted in the course.

## ELEN 602 Power Systems: Optimization and Control (3) Lecture 3.

Prerequisite: Graduate standing and departmental permission. A study of current and traditional methods used in power system planning and operations. Topics covered include the following: economic dispatch, unit commitment, fuel scheduling, automatic generator control, optimum power flow, interconnected operations, production costing, power system security, and time permitting state estimation.

## ELEN 604 Power System Transients and Stability (3)

Lecture 3.
Prerequisite: ELEN 601. Steady-state and transient stability of power systems. Switching transients, electromagnetic phenomena of importance under transient conditions, effects of lightning, protection of power systems against transients.

## ELEN 605 Power Electronics (3) Lecture 3.

Prerequisite: Graduate standing and departmental permission. Overview of semiconductor switches (Power Semiconductor Devices). Generic power electronic circuits and PWM control techniques. Power supplies (SMPS). Drive applications of power electronics converters. Practical converter design considerations.

## ELEN 606 Power System Planning (3) Lecture 3.

Prerequisite: Graduate standing and departmental permission Planning of utility financing and revenue requirements, reliability requirements, operating costs, and transmission constraints. In this course reliability computations are emphasized.

## ELEN 612 Electronic Instrumentation (3) Lecture 3, laboratory assignments.

Prerequisite: Graduate standing and departmental permission. The application of analog and digital electronics to the measurement of electrical and non-electrical quantities. Transducers, filters, bridge circuits, phase detection, pseudo noise sources, radar techniques, function generation, analog and hybrid computation, noise reduction techniques, and microcomputer implementations are typical of topical coverage.

## ELEN 625 Communication Theory and Techniques (3) Lecture 3.

Prerequisite: Graduate standing and departmental permission. Characteristics and performance of communication systems using analog modulation, pulse modulation, and digital modulation. Comparative performance in the presence of noise. Optimal filtering. Phase-locked loops and their applications. Special requirements of commonly used transmission channels.

## ELEN 633 Digital Signal Processing I (3) Lecture 3.

Prerequisite: Graduate standing and departmental permission. The analysis of digital signals and systems in the time and frequency domain and the z-transform are presented. Computer techniques are given for the design and implementation of digital filters. The use of the Fast Fourier Transform is discussed.

## ELEN 634 Digital Signal Processing II (3) Lecture 3.

Prerequisite: ELEN 633. Graduate standing and departmental permission. Techniques and applications of digital signal processing are considered. Topics include optimal and adaptive filtering and model-based spectral estimation. A wide variety of applications are used to demonstrate advanced signal processing techniques.

## ELEN 642 Introduction to Digital Control Systems (3)

Lecture 3.
Prerequisite: Graduate standing and departmental permission. Sampling theory and Sampled Data Systems. Difference equations and Z-Transform techniques. Digital equivalents. Single-Input Single-Output Controller design using root locus. Stability. State-variable techniques. Extensive use of SIMIJL1NK and the MAT-LAB Control Toolbox.

## ELEN 645 Modem Control Systems (3) Lecture 3.

Prerequisite: Graduate standing and departmental permission. Canonical realizations of transfer functions. Concept of state, controllability, observability and Lyapunov stability. Controller/Observer design. The LQR problem and Kalman filtering. Extensive use of MATLAB and SIMIULINK.

## ELEN 646 Nonlinear Control (3) Lecture 3.

Prerequisite: Graduate standing and departmental permission. A self contained introduction to nonlinear feedback control design and analysis for continuous time, finite dimensional, uncertain sys tems. Differential geometric techniques are used to identify the class of nonlinear systems considered and to develop nonlinear design techniques when disturbances and unknown parameters are present. Several application examples from electric machines, power systems, robotics, spacecraft and aircraft control are included. Extensive use of MATLAB and SIMULINK.

## ELEN 661 Energy and Environment Technology for Sustainable Development (3) Lecture 3.

Prerequisite: Graduate standing and departmental permission. This course will serve students with diversified backgrounds. Topics include a survey of environment-friendly energy conversion technology, environmental technology for energy conversion, energy system planning models and simulation, global climate changes and social-economic impacts, technology transfer, and global sustainable development.

## ELEN 684 Reliability Engineering (3) Lecture 3.

Prerequisite: Graduate standing and departmental permission. Reliability terminology and measures, estimating the density functions from empirical data, probability distribution characteristics, static and dynamic reliability and maintainability models, maintainability, Markov chains, interference theory, time dependent models, design examples, reliability testing, Bayesian applications in design and testing, reliability/maintainability optimization with examples chosen in the fields of the students.

## Individually Designed Major (IDM)

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e-mail: cfw@tulane.edu
website: http://www.eng.tulane.edu/Undergrad/IDM/IDM_new.htm
School of Engineering students have 7 conventional choices for major pathways towards a Bachelor of Science in Engineering:

- Biomedical Engineering
- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Environmental Engineering
- Electrical Engineering
- Mechanical Engineering
and an 8th choice, the Individually Designed Major, for students with interdisciplinary interests that don't fit into one of these conventional choices. An IDM is not just a minor modification of a conventional major. It must include a focus that is not available within a regular departmental major.
IDM students set goals for what they want to learn, and they design an engineering curriculum that will help them to achieve those goals. An IDM is appropriate for students with a focused research or career interest that extends beyond the boundaries of the 7 conventional Engineering majors. An IDM can be used as preparation for graduate study in a non-engineering discipline, and IDM students are encouraged to plan on continuing their education beyond the B.S. degree. Possible sample IDM curricula in Neuroengineering, Engineering Management, and Biostructural Engineering have been proposed, but these should be viewed as examples and points of departure for the design process, rather than as limiting choices.
The sequence of courses that IDM students take is meant to direct them towards their postgraduation goals. Because the student chooses the courses (with advisor help), they understand how each component of the curriculum contributes to their education. In a conventional major, students take all of the required courses. In an IDM, the student and advisor select the courses to be taken within the guidelines listed below. An IDM isn't any easier to complete than a traditional major, but for highly motivated students it's very enjoyable. The specific program name chosen by the student appears on the permanent transcript, and should be descriptive of the specialization that the student seeks.

Tulane University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (SACS) to award bachelor's, master's, and doctoral degrees. This is the University's primary accreditation, and it is important because it enables our students to qualify for many forms of financial aid that are available only to students at accredited universities and colleges. The IDM program is included in this accreditation. When applying for a job or for admission to a graduate program, an IDM student will occasionally want to explain the program leading to the degree and the degree itself. However, for a student contemplating a career in public works engineering where a Professional Engineering (P.E.) license is viewed as important, then an IDM is at a disadvantage compared to a traditional major in Engineering. Because they
are unique and individualized, curricula for IDMs cannot normally be reviewed by the Accreditation Board for Engineering and Technology.
When choosing a major, either in Engineering or in another field, the student's primary concern should be finding programs that fit their interest, talents, and life goals. The University's reputation, and our graduates' record of accomplishment, defines our students' credentials after graduation.
Each proposal for an Individually Designed Major must include:
Math (e.g. MATH 121, 122, 221, $224 \geq 16$ hours
Science (e.g. PHYS 131, 132 CHEM 107, 108) $\geq 16$ hours
Engineering Topics (introductory and advanced courses in Engineering) $\geq 48$ hours
Special Option (these courses are the core
specialization of the Individually Designed Major) $\geq 24$ hours
Writing (e.g. ENGL101 or xxxx119 which satisfy the School's writing requirement)

4 hours
Humanities and Social Sciences (at least 6 courses)
These may also be integral to the core specialization of the IDM. Course selection must conform to the School's distribution requirements for Humanities and Social Sciences
$\geq 18$ hours
In addition to the distribution requirements above:

1. The selection of courses needs to show development of communication skills.
2. Because many advanced courses in Engineering require an ability to work with higher level math, all IDM students should take differential and integral calculus and differential equations. Additional work is encouraged in one or more of the subjects of probability and statistics, linear algebra, numerical analysis and advanced calculus.
3. It is expected that IDM students will take the common freshman core courses taken by all School of Engineering students, though exceptions are possible with the approval of the IDM Program Director.
A faculty committee in the School of Engineering must review and approve each proposal for an IDM. Additional details on the process for proposing an IDM, along with sample curricula, are available on the program's website.

## Engineering Science (ENSC)

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## MINOR IN ENGINEERING SCIENCE

Students in divisions outside of the School of Engineering may earn a Minor in Engineering Science through completion of the following sequence of courses. This minor is unavailable to students in the School of Engineering.

## I. Prerequisite LAS Courses

MATH 121 Calculus I 4
MATH 122 Calculus II 4
MATH 221 Calculus III 4
MATH 224 Introduction to Applied Mathematics 4 and either
CHEM 107/117
CHEM 108/118 General Chemistry I and II 4, 4
or
PHYS 131
PHYS 132 General Physics I and II $\underline{4,4}$

## II. School of Engineering Courses

## Required of all Engineering Science minors:

ENGR 100 Seminar 1
MCEN 229 Engineering Design 3
Elective 300-400 level elective in Engineering 3
Plus one course chosen from the following lists:
CPSC 103 Introduction to Computing via Pascal 3
CPSC 101 Software Design and Programming 4
MCEN 201 Computer Aided Engineering 3
BMEN 201 Experiments and Experimental Design 3
CVEN 207 Introduction to Environmental Studies 3
And three courses ( $\mathbf{9}$ credits) chosen from the following lists:
(appropriate for students who have taken PHYS 131 and PHYS 132)
ENGR 201 Electric Circuits I 3
ENGR 241 Statics 3
ENGR 242 Dynamics 3
Tulane University Undergraduate Catalogue for 2003-2005, Page 254
ENGR 243 Mechanics of Materials ..... 3
ENGR 344 Fluid Mechanics ..... 3
(appropriate for students who have taken CHEM 107/117 and CHEM 108/118)
ENGR 201 Electric Circuits I ..... 3
ENGR 213 Thermodynamics ..... 3
ENGR 312 Materials Science and Engineering ..... 3
MCEN 302 Heat Transfer ..... 3

## Engineering (ENGR)

Office:Suite 200, Lindy Claiborne Boggs Center

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## Fax: (504) 862-8747

## COURSE DESCRIPTIONS

ENGR 100, ENGR 101 Introduction to Engineering and Computer Science (1) Seminar 1. The objectives of ENGR 100 seminar are to familiarize each student with the profession and various fields of engineering and computer science, to assure that each student is confident in their choice of major, to inform each student of what will be expected of them before and after graduation, and to begin to build the skills necessary for success. The ENGR 101 seminars are designed to bring these objectives into sharp focus for each specific major program.
ENGR 201 Electric Circuits 1 (3) Lecture 3.
Prerequisites: MATH 122, PHYS 132 A fundamental course dealing with electric charge, current, voltage, power, energy, and passive and active circuit elements. Response of linear circuits to steady state and time dependent signals, differential equations, circuit laws, network analysis, frequency response, phasors, and transfer functions.
ENGR 213 Thermodynamics (3) Lecture 3.
Prerequisites: MATH 122, PHYS 131. The basic laws of thermodynamics are formulated for application to a representative series of engineering processes. The course covers thermodynamic concepts and definitions, properties of materials, work and heat, first and second laws of thermodynamics, entropy.

## ENGR 241 Statics (3) Lecture 3.

Prerequisite: PHYS 131. Statics of particles and rigid bodies. Concepts of force, moments, free body diagrams, equilibrium and friction with engineering applications.

## ENGR 242 Dynamics (3) Lecture 3.

Prerequisites: ENGR 241, MATH 122. Kinematics and kinetics of particles and rigid bodies. Energy and impulse momentum methods applied to particles and rigid bodies. Plane motion of rigid bodies and force analysis of linkages. Mechanical vibrations.
ENGR 243 Mechanics of Materials (3) Lecture 3.
Prerequisites: ENGR 241, MATH 122. Concepts of stress and strain. Generalized Hooke’s Law. Mohr's circle. Formulations for axial, shear, bending, torsion, and combined stresses applied to tension members, pinned points, symmetric and unsymmetric beams, and shafts. Euler buckling criteria for columns.

## ENGR 247 Mechanics: Statics and Dynamics (4).

Prerequisites: MATH 122, PHYS 131. This course covers primarily the statics portion of mechanics including forces and moments, equilibrium of force systems in two and three dimensions, multi-force members, friction, and the equilibrium anlysis of trusses, frames, and machines. Topics in dynamics include the kinematics and kinetics of particles and rigid bodies, work and energy, impulse and momentum.

## ENGR 312 Materials Science and Engineering (3)

## Lecture 3.

Prerequisites: CHEM 107, CHEM 108, PHYS 131, PHYS 132, MATH 221. The structure and properties of engineering materials are considered. Coverage includes basic atomic and microscopic structure, testing methods, phase relationships, and strengthening techniques. Emphasis is placed on common industrial materials. Thermodynamics and kinetics aspects of material science are discussed.

## ENGR 344 Fluid Mechanics (3) Lecture 3.

Prerequisites: ENGR 241, MATH 224. Fundamental concepts and properties of fluids. Basic equations of fluid statics and dynamics in differential and integral form using both system and control volume viewpoints. Topics and applications include dimensional analysis and similitude; ideal, viscous and compressible flows; pipe and boundary layer flow.

## ENGR 403, ENGR 404 Team Design <br> Projects I and II (2, 2).

Prerequisite: Senior standing. Techniques and experience in the solution of constrained and openended design problems. Lecture topics include all aspects of the design process, including goal setting, idea generation, prototyping, facrication, and product and evaluation. Also included are technical presentation, project planning and management. Included as needed are other topics such as standards, fastening and joining, motors and control, esthetics and finish. Each team will design and construct a device or system to assist an individual with a disability. These designs are presented in a public show during the second semester.

## ENGR 451 Engineering Economics (2) Lecture 2.

Coverage includes principles for economic decision making, economic feasibility, applications to engineering projects. Topics include the time value of money, interest, present and future worth, cash flow, rate of return, cost-benefits analysis, depreciation, inflation, and taxation.

ENGR 490, ENGR 491 Research and Professional Practice I and II (2, 2).
This course introduces the tools, techniques, and rules necessary to function professionally as a researcher or engineer. Topics include economic analysis, ethics, professional communication including writing and oral presentation, research techniques including literature searching, citation, and the structure of a scientific paper. An integral part of the course is a year-long research or design project under the direction of a faculty member or other scientist or professional. This culminates in a Senior Thesis and a presentation in Departmental Seminar.
ENGR 600 Entrepreneurship in Engineering (3) Lecture 2.
This course in examines the role, and more significantly, the decision making process of the high tech engineer/entrepreneur within the business community. The class model will include taking a novel idea through the entire business cycle, from an idea through the start-up, developing into a domestic and international company, and finally through bankruptcy.
Note: Additional upper level ENGR courses are cross-listed in the departmental listings. For example, the description of ENGR 636 Introduction to the Finite Element Method may be found cross-listed as BMEN 636 Introduction to the Finite Element Method.

## Mechanical Engineering (MCEN)

The physical facilities of the Department of Mechanical Engineering are located in the engineering complex. The Computer Lab/Classroom, the Design Fabrication Laboratory, the Mechanics Laboratory, the Materials Laboratory, the Mechanical Engineering Student Lounge, and the graduate student offices are located in the Mechanical Engineering Building. The Robotics and Control Laboratory, the Laboratory for Mechatronics, and several graduate student offices are located in the Mechanical Engineering Graduate Laboratory Building. The Thermodynamics Laboratory, the Basic Measurements Laboratory, the Materials Testing Laboratory, and Metallurgy Laboratory are situated in annexes surrounding the Mechanical Engineering Building. Faculty offices and post-doctoral fellow offices are located on the fourth floor of the Boggs Center. The Mechanical Engineering Multimedia Class Room is located on the first floor of Boggs Center.
Mechanical engineering is a broad engineering discipline with applications in every area, industry, and profession. A large part of the work of mechanical engineers is design. Accordingly, a mechanical engineer must be creative and must have a thorough understanding of several fundamental disciplines including mathematics, physics, chemistry, mechanics, and thermal sciences.

To solve the technological problems of today's society, the mechanical engineer must have a concern for economics, for the environment, and for the community. Mechanical engineering graduates work in industry, business, government, and universities as well as in the legal and medical professions. Because of the general and fundamental nature of their education, they are employed by many industries, including the aerospace, automotive, chemical, computer, electronics, mining, and petroleum; to name a few. Wherever they work, mechanical engineers are likely to be engaged in research, development, design, testing, production, operation and maintenance, marketing, or administration.

## DEPARTMENTAL MISSION

We provide high quality education in the principles and applications of mechanical engineering in an environment that is conducive to research and scholarly activity at the frontiers of science and technology. Our faculty values excellence in teaching, research, and service to the community. We teach our graduates to be technically competent and socially responsible. They acquire a solid background for professional qualification, success in graduate education, and life-long learning.

## DEPARTMENTAL EDUCATIONAL OBJECTIVES

A. To immerse each student in a rigorous academic program that emphasizes the core fundamentals of mechanical engineering, basic science and mathematics in order to form a foundation for success and lifelong learning.
B. To instill in each student a methodology for formulating and solving open-ended problems with manifold constraints which includes creatively generating, sifting through, and refining, from a number of different perspectives and in light of assumptions and idealizations, a variety of competing solutions.
C. To teach each student to use analytical, experimental, and computational tools that are necessary in the modern conduct of mechanical engineering.
D. To enrich the capacity of each student to deal ethically with others, to communicate effectively, and to appreciate the humanities and social sciences.

## CURRICULUM

The mechanical engineering curriculum is designed to provide a broad professional education. The first year, which is common to all engineering students, is devoted primarily to the basic fundamentals of mathematics, physics, and chemistry. The remaining three years provide courses which teach the student to apply these basic principles to problems of the physical world. Although the mechanical engineering curriculum is very broad, some specialization is attained in the senior year through twelve credits of technical elective courses chosen by the student.

## Sophomore Year

## Fall Semester

## Credits

MCEN 201 Computer Aided Engineering 3
MCEN 264 Materials Engineering 4
ENGR 241 Statics 3
MATH 221 Calculus III 4
Elective Humanities or Social Science $\underline{3}$
Fall Semester Total: 17
Spring Semester
MCEN 229 Engineering Design 3
ENGR 243 Mechanics of Materials 3
ENGR 242 Dynamics 3
MATH 224 Introduction to Applied Mathematics 4
Elective Humanities or Social Science $\underline{3}$
Spring Semester Total: 16

## Junior Year

Fall Semester
ENGR 213 Thermodynamics 4
MCEN 340 Machine Elements 3
ENGR 344 Fluid Mechanics 3
ELEN 201 Electric Circuits I ..... 3
ELEN 377 Elements of Electrical Engineering ..... 1
Elective Humanities or Social Science ..... $\underline{3}$
Fall Semester Total: ..... 17
Spring Semester
MCEN 302 Heat Transfer ..... 3
MCEN 304 Thermodynamics II ..... 3
MCEN 312 Linear Dynamic Systems ..... 3
MCEN 371 Mechanical Engineering Laboratory ..... 4
Elective Humanities or Social Science ..... 3
Spring Semester Total: ..... 16
Senior Year
Fall Semester
MCEN 429 Mechanical Design I ..... 4
MCEN 432 Thermal Power Plants ..... 3
Elective Technical ..... 3
Elective Technical ..... 3
Elective Humanities or Social Science ..... $\underline{3}$
Fall Semester Total: ..... 16
Spring Semester
MCEN 430 Mechanical Design II ..... 4
MCEN 467 Control Systems ..... 3
Elective Technical ..... 3
Elective Technical ..... 3
Elective Humanities or Social Science ..... 3
Spring Semester Total: ..... 16
Total: ..... 132

Technical electives may be chosen from any 600-level mechanical engineering course or, with the approval of the department chair and the course instructor, from courses offered elsewhere in the School of Engineering, the A. B. Freeman School of Business or ROTC. At least one of the four technical electives must be taken in the Department of Mechanical Engineering. A student completing an ROTC program may count 6 credits as technical electives. These requirements are described on page xx of this bulletin. Visit www.me.tulane.edu for updates.

## MINORS AND SECOND MAJORS

There are established minors in Biomedical Engineering, Business Management, Mathematics, and Robotics and Automation. There is an established second major in Mathematics. Other majors or minors may be arranged on request by mutual consent of the Department of Mechanical Engineering and the department in which the minor or major is to be taken. More details are given below (for updates visit www.me.tulane.edu).

## Biomedical Engineering Minor

A Mechanical Engineering major wishing to complete a minor in Biomedical Engineering should take the following courses:
CELL 101 Cell Biology
BMEN 260 Introduction to Organic and Biochemistries
BMEN 303/313 Medical Science for Engineers I, with lab
BMEN 304/314 Medical Science for Engineers II, with lab
One course selected from:
BMEN 330 Biomechanics
BMEN 340 Cell and Tissue Engineering
BMEN 361 Bioelectricity
BMEN 323 Biomaterials

## Business Minor

A student can obtain a minor in Business by completing a set of seven courses, three of which overlap with existing Mechanical Engineering curriculum requirements.

## Mathematics Minor

A student can obtain a minor in Mathematics by taking a total of six mathematics courses, four of which are already part of the required Mechanical Engineering curriculum and the other two can be counted as Technical Electives.

## Robotics and Intelligent Systems Minor

Mechanical Engineering students who wish to pursue the robotics and intelligent systems minor will find that some requirements will be part of their normal engineering curriculum, but that seven additional units of course work in Computer Science will be necessary. Four courses are required for the minor: Robotics System I (MCEN 671), Control Systems (MCEN 467), CPSC 466 Artificial Intelligence, and one additional elective course from an approved list. Control Systems is a required course in the Mechanical Engineering curriculum, and the other three can be used to satisfy the technical elective requirements in Mechanical Engineering. In order for a Mechanical Engineering student to have the prerequisites to take CPSC 466, the student must take CPSC 300 Foundations of Computer Science (3 credits) and CPSC 319 Symbolic Computing (1 credit). Typically, a student will take these courses in the fall semesters of the sophomore and /or junior year. (For updates visit www.me.tulane.edu)

## Mechanical Engineering Degree Combined with Master of Business Administration

A student can obtain a Mechanical Engineering degree combined with a Master of Business Administration (MBA) by satisfying program requirements and taking an additional year and a half of classes. The interested student should apply after the third year of the Mechanical Engineering program. In addition, the student should have a minimum 3.0 GPA and achieve an acceptable score on the Graduate management Admission Test (GMAT).

## Mechanical Engineering

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email: infomech@tulane.edu
Website: www.me.tulane.edu
Professors
Nicholas James Altiero, Ph.D., University of Michigan, 1974; Aerospace Engineering (Dean of Engineering), Computational Mechanics, Fracture Mechanics, Biomechanics.
Paul Michael Lynch, P.E., Ph.D., Massachusetts Institute of Technology, 1976; Mechanical Engineering Robotics, Intelligent Systems, Automation and Optimal Control, Vibrations.
Morteza Monte Mehrabadi, Ph.D., Tulane University, 1979; Mechanical Engineering (Chair), Mechanics of Granular Materials, Constitutive Modeling of Anisotropic and Structured Media, Continuum Mechanics.

Efstathios Emmanuel Michaelides, P.E., Ph.D., Brown University, 1980; Engineering Science, Coastal Erosion, Particulate Flows, Flow in Porous Media, Experimental Fluid Mechanics and Heat Transfer, Applied Thermodynamics, energy Conversion..

Robert Glenn Watts, P.E., Ph.D., Purdue University, 1965; Mechanical Engineering, Flow Instabilities, $\mathrm{CO}_{2}$ Theories of Climate Evolution, Global Carbon Cycle, the Physics of Baseball, Ecology of Deep Lakes.

## Associate Professors

Michael Charles Larson, Ph.D., Massachusetts Institute of Technology, 1992; Mechanical Engineering, Fracture Mechanics, Composite Materials, Design Methodology.
Ho-Hoon Lee, Ph.D., California Institute of Technology, 1991; Mechanical Engineering, Automatic Control, Mechatronics, Real-Time Control, Robotics and Animation.
Asher A. Rubinstein, Ph.D., Brown University, 1981; Solid Mechanics, Fracture Mechanics, Crack Propagation in Heterogeneous Media, Micromechanics of Fracture, Fiber and Particle Reinforcing in Ceramics.

David J. Sailor, Ph.D., University of California at Berkeley, 1993; Mechanical Engineering, Heat Transfer Enhancement, Global Climate Change impact Assessment, Interactions of Energy Systems and Climate, Pollutant Fate and Transport Modeling.

## Assistant Professors

Calvin Mackie, Ph.D., Georgia Institute of Technology, 1996; Mechanical Engineering, Heat Transfer, Fluid Mechanics, Hydrodynamics Stability, Solidification Processes.

## COURSE DESCRIPTIONS

MCEN 102 Contemporary Issues in Mechanical Engineering Design (2), lecture (2)
An overview of some of the challenges facing professional mechanical engineers is presented in this course. The focus is on problem solving strategies that can be used for diverse set of practical problems.
MCEN 201 Computer Aided Engineering (3) Lecture 2, laboratory 2.
Techniques of Computer aided engineering in topics of engineering analysis and design. Subjects include computer aided design (CAD), optimization (constrained and unconstrained), simulation
and solution of elementary differential equations, symbolic mathematical manipulation, applications in finite element analysis, and communication and presentation.

## MCEN 229 Engineering Design (3) Lecture 2, laboratory 3.

Prerequisites: MCEN 201, ENGR 241 Corequisite: ENGR 242. Fundamentals of the engineering design process, from the conception of an idea through the manufacture of a product, are presented in the context of a student project. While traditional machine tools and assembly techniques are discussed in the lectures, the students are encouraged to be innovative and creative when constructing individual projects. In addition, the course covers ethics in the context of professional engineering.

## MCEN 264 Materials Engineering (4) Lecture 3, laboratory 3.

Prerequisites: CHEM 108, PHYS 132 or approval of instructor. The structure and properties of engineering metals are considered. Coverage includes basic atomic structure, grain formation, testing methods, phase relationships, and strengthening techniques. Mechanical properties and manufacturing methods of the more common industrially significant materials are emphasized. The laboratory is used to illustrate material covered in the lecture. The laboratory experiments include: microscopic examination of metals, heat treating and surface hardening, and the strength of engineering materials in tension, compression, torsion, and impact loading.

## MCEN 302 Heat Transfer (3) Lecture 3.

Prerequisites: ENGR 344. Basic concepts and principles of conduction, convection and radiation in single and combinatory modes. Methods of analysis and solution.

## MCEN 304 Thermodynamics II (3) Lecture 3.

Prerequisite: ENGR 213. Further applications to steam power plants, internal combustion engines, compressors. Vapor compression and absorption refrigeration, non-reacting gas mixtures, psychrometrics, chemical reactions, chemical equilibrium, combustion.

## MCEN 312 Linear Dynamic Systems (3) Lecture 3.

Prerequisite: MATH 224. Circuit analysis including transient and steady-state phenomena. Modeling and analysis of mechanical, electrical, fluid, thermal, and combined systems using networks of idealized, lumped-parameter elements. State variables, analytic solution of state equations, and computer simulation. Transfer functions, phasors, complex impedance, poles and zeros, and frequency analysis methods. Applications of Laplace transforms and Fourier series to linear systems.

## MCEN 340 Machine Elements (3) Lecture 3.

Prerequisites: ENGR 242, ENGR 243. Application of mechanics, mechanics of materials, and finite element method to machine design. Emphasis is on selection and sizing of machine elements, e.g., threaded fasteners, etc., which are subjected to static loading or fatigue. Design of welded joints is also considered.
MCEN 371 Mechanical Engineering Laboratory (4) Lecture 2, laboratory 3.
Prerequisites: PHYS 132, ENGR 344. Experimentation, correlation of experimental data, error analysis, and presentation of technical results are covered from the viewpoint of the mechanical engineer. Several experiments that demonstrate academic concepts and principles in the areas of thermodynamics, fluid mechanics, heat transfer, control theory, and robotics are performed during the laboratory sessions. Measurement techniques include both digital and analog data acquisition and reduction.

## MCEN 429 Mechanical Design I (4) Lecture 3, laboratory 3.

Prerequisites: MCEN 229 and MCEN 340. An advanced treatment of engineering design principles with an emphasis on computer aided design (CAD) and an introduction to manufacturing processes. The laboratory simulates a "real world" environment. The students are presented with a product specification, and they must prepare a preliminary proposal, form a project team, and develop a suitable design subject to performance and economic constraints. Topics include: applied finite element analysis, quality engineering, materials selection, cost evaluation, and project and personnel management.

## MCEN 430 Mechanical Design II (4) Lecture 1, laboratory 3.

Prerequisite: MCEN 429. Engineering design in a project format. Applications drawn from industry and laboratories.

## MCEN 431 Chernobyl Catastrophe (3) Lecture 3.

Prerequisite: Senior standing. The course uses the Chernobyl Nuclear Power Plant accident as a case study to demonstrate the complex technical, political and economic issues associated with power production. Lectures are given on power demand and supply, the physics of nuclear reactors and power plants as well as the scenario and environmental impact of the accident. In addition, students are taught elements of the Soviet political, social and economic system and its effect on decision making processes relevant to power plant technology.

MCEN 432 Thermal Power Plant (3) Lecture 3.
Prerequisite: Senior standing. Overview of thermal power plant cycles, components of thermal power plants, congeneration, burners and combustors, fluidized bed reactors, nuclear energy, nuclear reactors, geothermal energy, solar energy, wind power, wave power, ocean thermal cycles.

## MCEN 465, MCEN 466 Undergraduate Research (3).

Prerequisite: Senior standing Corequisite: MCEN 615. May be elected for preparation of honors thesis upon recommendation of the faculty. May fulfill elective requirement if approved by department chair.

## MCEN 467 Control Systems (3) Lecture 3.

Prerequisite: MCEN 312. Review of basic modeling techniques for mechanical and electrical systems with respect to dynamic performance. Block diagram analysis. Feedback and compensation. Steady-State and transient behavior with computer simulation. Root locus and frequency response methods. Design of PID controllers.

## MCEN 491, MCEN 494 Special Topics (to be specified)(3).

Prerequisite: Senior standing Corequisite: MCEN 615. May be elected for a special reading course upon recommendation of the faculty. May fulfill elective requirement if approved by department chair.

## MCEN 601 Mathematical Methods for Engineers (3) Lecture 3.

Prerequisite: MATH 224. Review of calculus and ordinary differential equations, series solutions and special functions, complex variables, partial differential equations, and integral transforms.

## MCEN 607 Advanced Heat Transfer (3) Lecture 3.

Prerequisites: MCEN 302, ENGR 344, MCEN 601, or approval of instructor. Thermal modeling and analysis of conduction and convection heat and mass transfer.
MCEN 613 Advanced Mathematics for Engineers (3) Lecture 3.
Prerequisites: MATH 224 and senior standing. Various exact and approximate methods in differential equations. Regular and singular perturbation theory, variational methods, weighted residuals, local and global analysis. Applications to physical problems in heat transfer, vibrations, fluid and solid mechanics.

## MCEN 615 Departmental Seminar (0).

This weekly, one-hour research seminar includes presentations by students conducting research, faculty, and invited speakers from other institutions. Attendance of all graduate students and undergraduate students enrolled in either MCEN 491, 494, 465, or 466 is required.

## MCEN 616 Geophysical Fluid Dynamics (4) Lecture 4.

Prerequisites: MCEN 302, ENGR 344 or approval of instructor. Thermodynamic and fluid mechanical aspects of the earth's atmosphere and oceans. Local and global aspects of weather and climate and emphasis on man's influence on his environment.

## MCEN 620 Thermal Design (4) Lecture 4.

Prerequisites: MCEN 304, MCEN 302, ENGR 344 or approval of instructor. Design of components of heating, cooling, or processing systems. Performance of shell-and-tube heat exchangers, regenerators.

## MCEN 626 Computational Fluid Mechanics and Heat Transfer (3) Lecture 3.

Prerequisites: MCEN 302, ENGR 344 or approval of instructor. Development and application of finite difference methods to solve fluid flow and heat transfer problems. The methods can also be adapted to flows involving chemical reactions and mass transfer.

## MCEN 627 Advanced Thermodynamics (3) Lecture 3.

Prerequisite: MCEN 304 or approval of instructor. The laws of thermodynamics, phase equilibria, chemical potentials, and law of mass action. Application of the second law to conservation of resources. Applications of irreversible thermodynamics to transport processes and mechanics.

## MCEN 628 Statistical Thermodynamics (3) Lecture 3.

Prerequisite: MCEN 627 or approval of instructor. Principles of kinetic theory, quantum mechanics, and statistical mechanics are considered with emphasis on applications to thermodynamic systems. The laws of classical thermodynamics are considered from a microscopic viewpoint.

## MCEN 632 Thermal Power Plant (3) Lecture 3.

Prerequisite: Senior standing. Overview of thermal power plant cycles, components of thermal power plants, cogeneration, burners and combustors, fluidized bed reactors, nuclear energy, nuclear reactors, geothermal energy, solar energy, wind power, wave power, ocean thermal cycles.

## MCEN 636 Advanced Thermal Radiation (3) Lecture 3.

Prerequisite: MCEN 302 or approval of instructor. Thermal radiation in evacuated enclosures and in absorbing, emitting and scattering media. Combined conduction, convection and radiation.

## MCEN 651 Continuum Mechanics (3) Lecture 3.

Prerequisites: ENGR 243, ENGR 344 or approval of instructor. An introduction to the mechanics of continua. The stress tensor. Deformation and flow. Constitutive relations. Applications to common solids and fluids.

## MCEN 652 Advanced Fluid Mechanics (3) Lecture 3.

Prerequisite: ENGR 344 or approval of instructor. Basic concepts and conservation laws as they govern Newtonian fluids. Flow kinematics and special theorems. Viscous flows of incompressible fluids. Practical boundary layer and pipe flow solutions using classical models and techniques.

## MCEN 653 Advanced Dynamics (3) Lecture 3.

Prerequisite: ENGR 242 or approval of instructor. Particle dynamics and rigid body dynamics are reviewed. Orbital motion in an inverse-square gravitational field. Orbital trajectories and time of flight. Introduction of calculus of variations with emphasis on the principles of Lagrange and Hamilton. Motion of axially symmetric bodies.

## MCEN 660 Product Design

Prerequisite: Permission of Instructor. This course involves generating original ideas and transforming them into successful products. There is an emphasis on acquiring an intuitive, hands-on understanding of a product development methodology. Students will gain experience serving as both a team leader and a team member in designing and prototyping consumer
products. The course includes group communication, concept generation, product architecture, industrial design and prototyping.

## MCEN 665 Digital Control (3) Lecture 3.

Prerequisite: MCEN 467 or approval of instructor. Time-domain representations of linear discrete systems. Analysis of discrete-time systems: Time-domain approach, Z-transform approach. State variable technique. Stability of digital systems. Controllability and observability of digital systems. Time optimal control design. Optimal digital regulator design.

## MCEN 666 Intelligent Control (3) Lecture 3.

Prerequisite: Approval of instructor. Discrete system analysis, Z-transforms, performance criteria, controllability and observability, observers, and system identification. Autonomous systems, learning systems, hierarchical structure, sensor management, knowledge based control systems, and intelligent control architectures. Evaluation of and experimentation with laboratory system.

## MCEN 668 Modern Control and Optimization (3) Lecture 3.

Prerequisites: MCEN 312, MCEN 467 or approval of instructor. Analytical and computational techniques for optimization including dynamic programming, maximum principle, and calculus of variations. Optimization algorithms. Formulations of modern optimal control problems for engineering applications. Optimization of bang-bang and linear control systems. Controllability, observability, and state-space synthesis techniques.
MCEN 671 Robotic Systems I (3) Lecture 3.
Prerequisite: Senior or graduate standing. Overview of robotic systems and applications. Manipulator kinematics. Inverse kinematics. Differential kinematics and statics. Task and trajectory planning. Actuators and sensors.

## MCEN 672 Robotic Systems II (3) Lecture 3.

Prerequisite: Senior or graduate standing. Analysis of robot manipulator dynamics. Design of robot mechanisms. Generalized coordinate transformation, differential translation and rotation, manipulator transforms applied to robots. Jacobian of a manipulator applied to motion and force analysis. Applications of transforms to robot tools and end effectors. Robot control systems and sensors. Artificial intelligence methods applied to robot task planning. Case studies; laboratory experience.

## MCEN 678 Applied Fracture Mechanics (3) Lecture 3.

Prerequisite: Senior or graduate standing. Theoretical foundations for brittle fracture theory with a focus on practical applications. Linear elastic fracture mechanics, dynamic fracture, micromechanical fracture, fracture behavior of materials, fatigue crack initiation and propagation. The course objective is to develop a physical basis for recognizing and investigating a wide range of fracture related problems.

## MCEN 679 Fracture Mechanics (3) Lecture 3.

Prerequisite: Senior or graduate standing. This course is designed to introduce modern theories of material failure. The course emphasizes applications to new materials, such as ceramics and fiber reinforced composites, and typical practical problems dealing with light structures faced by aircraft and electronic industries. The following specific topics are covered: Basic methods of elastic stress analysis; applications to evaluations of stress concentrations and crack stress intensity factors; typical modes of fracture using basic concepts of brittle fracture, energy release rate, and other energy variation methods, including compliance method and cohesive force model. Analysis of ductile fracture includes an introduction to the ideas of the theory of perfect plasticity, yield conditions, yield surface, limit theorems, and slip line theory. Cracks in elastoplastic material are analyzed using principles of nonlinear fracture mechanics.
MCEN 681 Advanced Mechanics of Materials (3) Lecture 3.
Prerequisite: ENGR 243 or approval of instructor. Failure criteria. Torsion of a bar of non-circular cross section. Curved beams. Beams on elastic foundations. Flat plates. Stress concentrations. Contact stresses. Buckling of columns, cylindrical tubes, rings and flat plates. Energy methods.

## MCEN 682 Mechanics of Composite Materials (3) Lecture 3.

Prerequisites: MCEN 681 or approval of instructor. Behavior and structure of composite materials. Models for predicting global mechanical properties given the microstructural properties. Topics are relevant to the design, analysis, and fabrication of fibrous, particulate, and layered materials. Particular attention will be given to advanced ceramic-matrix and metal-matrix composites and to composites found in nature.

## MCEN 683 Theory of Elasticity I (3) Lecture 3.

Prerequisite: ENGR 243 or approval of instructor. Analysis of stress and strain. Basic equations of the linear theory of elasticity. Stress functions. Applications to the specific classes of problems such as plane strain, axisymmetric problems.

## MCEN 684 Mechanics of Solids (3) Lecture 3.

Prerequisites: ENGR 243, MCEN 651 and approval of instructor. Analysis of stress and strain. Conservation principles and entropy inequality . Elastic, plastic, and viscoelastic behavior of solids. Solutions of problems in elasticity.

## MCEN 685 Thermal Environmental Design (3) Lecture 3.

Prerequisite: MCEN 304 or approval of instructor. The course expands upon the basic principles of refrigeration, heating, and air conditioning. Future trends in residential climate control systems are discussed with emphasis on the design of larger, central-station systems of the commercial, institutional, and industrial types. Design includes refrigerant, steam, water, and air distribution systems as well as energy conservation considerations and techniques. Both hydronic and air-side testing and balancing of systems are included. The course draws heavily on the ASHRAE Guide.

## MCEN 688 Analytical Methods in Continuum Mechanics (3) Lecture 3.

Prerequisite: Approval of instructor. This course is an introduction to the application of certain powerful mathematical methods that are currently used in solving solid mechanics problems. The following topics are covered: kinematics of deformation; stress tensor; constitutive equations; basic differential operations on scalars, vectors and second rank tensors in curvilinear coordinates; application of the methods of analytic functions theory to two dimensional linear theory of elasticity and to two dimensional potential flow; fundamental problems of fracture mechanics.

## MCEN 689 Engineering Optics (3) Lecture 3.

Prerequisite: PHYS 132, MATH 224, ENGR 243 or approval of instructor. The lectures deal with the nature and properties of electromagnetic radiation and how these are exploited by engineers. The use of structured light has had a very significant effect on a number of engineering activities, including communications via optical fiber, laser welding and cutting (including biological materials in surgical operations), computer memory storage, and metrology. While touching on all of these, this course
"focuses" on the last, namely using light to measure the displacements and strains of materials and structures. Thus the special properties of electromagnetic radiation (e.g., wave propagation, ray tracing, interference, polarization, intensity, etc.) which make holographic, moire interferometric, shearographic, and photoelastic measurements possible, are explored extensively.

## MCEN 690 Mechanics, Materials and Processes in Microelectronics

Prerequisite: PHYS 132, MATH 224, ENGR 243 or approval of instructor. This course presents fundamentals from all aspects of electronic packaging and its associated technologies, including materials science, electronics, and mechanics. The emphasis is on the design and manufacture of increasingly dense electronic assemblies. Topics include: mechanical and thermomechanical behavior, materials, interconnection technologies (including solder technology, ball grid arrays, chip-scale and direct-chip-attach), IC packaging, and surface mount technologies. The students will make oral presentations on current research topics and tackle contemporary problems in the field.

## SPECIAL PROGRAMS

## Premedical Studies in Engineering

Physicians and engineers find themselves working together more and more in research, development, and the modeling of human systems. Graduates with an engineering background can participate in this association in one of two ways: by becoming an engineering member of a medical/engineering team (see biomedical engineering) or by using the engineering background as a basis for a medical education.
For example, the admission requirements at Tulane's School of Medicine are: a minimum of three years of college or 90 credits including two semesters of biology with lab; two semesters of inorganic chemistry with lab; two semesters of organic chemistry with lab; two semesters of general physics; and 6 credits of English.
These entrance requirements can be easily met by engineering undergraduates in one of the following ways:

- In biomedical engineering in three years, with a proper selection of electives.
- In engineering science in three years because of the high degree of flexibility.
- In chemical engineering in three years, using biology for technical electives.
- In electrical or mechanical engineering in four years, using biology as a technical elective and taking organic chemistry during one summer.
- In environmental engineering in three years using Biology for technical electives.

The engineering student entering a premedical program should study the requirements of the particular medical schools in which he or she is interested. The premedical program in engineering at Tulane can be modified to permit the student to prepare for the specific requirements of the schools that have been selected.

While the medical school entrance requirements may be met in three years, it is common that students complete the engineering degree program in four years prior to entering medical school. As a service to engineering premedical students, the School of Engineering provides the following:

1. application packets from the American Medical College Application Service.
2. application forms for the Medical College Admissions Test which is administered twice a year, usually in April and October.
3. a composite faculty appraisal (a copy will be sent to each medical school to which a student has applied), and
4. a current copy of Medical School Admission Requirements.

## Premedical Early Acceptance Program

Particularly well motivated and well qualified sophomores in the school may apply to the Tulane School of Medicine through the Premedical Early Acceptance Program. Successful candidates complete the full four years of the normal baccalaureate program but are guaranteed admission to the School of Medicine upon graduation and enjoy special opportunities for study with its faculty while still undergraduates. Students are expected to follow an academically rigorous program while maintaining a high level of academic performance throughout their college careers. Only sophomores who complete both freshman and sophomore years at Tulane are eligible.
To be considered, students must complete the following courses at Tulane during the regular academic freshman and sophomore years: biology ( 6 credits and 2 credits of laboratory); general chemistry ( 6 credits and 2 credits of laboratory); organic chemistry ( 6 credits and 2 credits of laboratory); physics (8 credits with laboratory); and a total of at least 64 undergraduate credits with a cumulative grade point average of 3.6 or better. The Medical College Admissions Test is waived for early acceptance applicants.

## Honors Program

Through the School of Engineering Honors Program, a student may earn a Bachelor of Science in Engineering or Computer Science with Latin honors. Latin honors are awarded to students who have attained a certain grade point average at the time of graduation.

## Summa Cum Laude

This honor is awarded to a student who has a grade point average of 3.800 or better at the time of graduation. A minimum of six semesters or three-quarters of the requirements for graduation must be performed at Tulane University.

## Magna Cum Laude

This honor is awarded to a student who, at the time of graduation, has a grade point average between 3.600 and 3.799. A minimum of six semesters or three-quarters of the requirements for graduation must be performed at Tulane University.

## Cum Laude

This honor is awarded to a student with a grade point average between 3.400 and 3.599 at the time of graduation. A minimum of four semesters or one-half of the requirements for graduation must be performed at Tulane University. A student who meets the grade point average requirement for magna or summa but who has between four and six semesters at Tulane will receive this honor.

## Departmental Honors

This honor is awarded to a student who submits a satisfactory thesis to the Departmental Honors Committee while maintaining a grade point average of 3.0 or better at the time of graduation. Departmental and other honors designations are not mutually exclusive, i.e., a student's diploma could read; "Magna Cum Laude, with Honors in Mechanical Engineering." In addition to recognizing the superior academic achievements of outstanding students, the departmental honors program gives candidates who desire it the opportunity to do creative work in the form of an honors project while they are still undergraduates. A student who expects to have a grade point average of 3.0 or better at the end of the junior year should contact the department chair for more information.
Note: A guide for preparing an honors thesis is available in each departmental office.

## Bachelor's/Master's Combined Degree Program

Students who choose to participate in the departmental honors program may also be eligible to continue their studies as part of the 5 -year Bachelor's / Master's Degree program. This program is designed to allow students to further develop their undergraduate honors research project into master's level work while completing an additional year of graduate course work toward the master's degree. Eligibility will be subject to departmental requirements and resource availability, and requires the timely completion of the admission process through the Graduate Division of the

School of Engineering. A student may participate in the 5-year BSE/MSE degree program only upon approval by the Graduate Division.
A letter of intent to participate in the program must be submitted to the departmental chair within the first three weeks of the senior year. The letter of intent is to include the research topic, a letter of support from the advisor, and a description of the program to be followed toward the master's degree. Candidacy to the program is contingent upon departmental resources and faculty approval based on this letter of intent. Accompanied by a letter of recommendation from the department, a complete admission application package to the Graduate Division of the School of Engineering must be filed by February 1 of the senior year for fall enrollment, and November 1 for spring enrollment. Students who do not complete the requirements for departmental honors forfeit their eligibility to participate in the 5-year combined degree program.

The combined degree will be awarded at the end of the fifth year or upon completion of the master's degree requirements should additional time be required. However, departments may elect to award the bachelor's portion of the combined degree after four years under the condition that all requirements for the bachelor's degree have been met, including satisfactory completion of the honors thesis.

Students will receive a tuition scholarship from the School of Engineering equal to 65\% of the full graduate tuition in the fifth year. They will be responsible for the remaining $35 \%$ of tuition cost and all mandatory university fees. Students are advised to request need-based aid through the Financial Aid Office for the fifth year. Financial need is most often met in the form of lowinterest student loans.

## Honor and Professional Societies

Various honor societies have been formed on the national level to recognize excellence in academic and leadership areas. Students in the School of Engineering are eligible for the following:

| Phi Eta Sigma | (Freshman) |
| :--- | :--- |
| Omicron Delta Kappa | (Leadership) |
| Tau Beta Pi | (Engineering) |
| TECHS Society | (Engineering and Computer Science) |
| Sigma Xi | (Research) |
| Alpha Eta Mu Beta | (Biomedical Engineering) |
| Omega Chi Epsilon | (Chemical Engineering) |
| Eta Kappa Nu | (Electrical Engineering) |
| Pi Tau Sigma | (Mechanical Engineering) |
| Upsilon Pi Epsilon | (Computing Sciences) |

Professional societies exist in many areas of engineering and each department has student chapters of those for that discipline. In addition, there are several student professional organizations that are open to all engineering students:

Association for Computing Machinery
National Society of Black Engineers
Society of Women Engineers

## Engineering-Architecture

A combined Engineering-Architecture Degree is also available. This degree program is normally setup through Architecture and the Department of Civil Engineering and usually requires six years to complete. (Additional information is available in the dean's office of either school.)

## Engineering-Master of Business Administration

Many students who plan a career in management realize that a technical background is desirable for certain industries. For those students, the School of Engineering and the A. B. Freeman School of Business offer a program which results in a B.S. in Engineering Science and an MBA in five years rather than the traditional six. In order to be eligible for the program, a student must have:

- completed three full years of college work.
- a cumulative grade point average at or above the MBA class average.
- a score on the Graduate Management Admission Test that is at or above the MBA class average.
Generally, the first 30 credits of course work in the MBA program are in preparation for the final year of specialization in accounting, organizational behavior, finance, information systems, international business, management, or marketing. The MBA courses serve as the special option in the Engineering Science Program. Then during the fifth year in the Freeman School, the student completes the requirements for the Master of Business Administration. Additional information is available in the Office of the Dean of Engineering.


## SECOND MAJORS AND MINORS IN THE SCHOOL OF ENGINEERING

Second majors in the School of Engineering require that you meet all requirements for that major within that department. Exceptions to this are the combination of second majors available through: Electrical Engineering, Computer Engineering, and Computer Science (see department chair). Students who satisfy the requirements of two engineering programs will receive one bachelor's degree with a double major designation. Students who satisfy all requirements for a bachelor's degree in Computer Science and an engineering program, receive separate bachelor's degrees in both Computer Science and Engineering and the Freeman School's office of Academic Programs.
Second majors from an outside division are subject to the conditions set by requirements for that major as designated by the home division or department.

## ROBOTICS AND INTELLIGENT SYSTEMS MINOR

The area of robotics, and more widely intelligent systems is becoming increasingly important. Recent developments in robotic manufacturing, computer technology, and system engineering have greatly influenced all aspects of contemporary life. It is widely agreed that the next generation of the automatic systems will exhibit autonomous behavior that is very close to human intelligence. Robots and other intelligent systems applications cover the wide range of applications in all areas of human activities: construction, manufacturing, power generation, transportation, medicine, space exploration etc. This area of studies does not fit neatly into a single conventional engineering discipline, but draws the aspects of mechanical engineering, electrical engineering, computer science and computer engineering. Our minor program allows students to focus their studies toward robotics and intelligent systems while retaining a widely recognized major.

It is expected that all students in this program will have the requisite technical background of calculus, physics, linear algebra, and computer programming course. All majors of the School of Engineering qualify in this regard. For students outside the School of Engineering, additional requirements may be imposed in order to achieve this level of background knowledge.
Decisions regarding the program, such as certification of prerequisites, substitutions of course work, and determination of transfer credit will be made by the Program director in consultation with the Robotics and Intelligent Systems faculty, and the Associate Dean of Engineering for Undergraduate Studies. The Program Director is also responsible for certifying completion of minor requirements and reporting these findings to the Engineering Dean's office.

## Requirements

The Robotics and Intelligent Systems minor requires completion of minimum of 8 courses (totaling at least 23 semester hours). The requirements are:

MATH 224 Introduction to Applied Mathematics
ELEN 220 Signals and Systems I
ELEN 321 Signals and Systems II
or
MCEN 312 Linear Dynamic Systems
ELEN 346 Introduction to Control Systems
or
MCEN 467 Control Systems
MCEN 671 Robotic System I
CPSC 466 Artificial Intelligence
CPSC 300 Principles of Computer Science
or
CPSC 118 Data Structures and

CPEN 201 Computer Organization and

MATH 217 Discrete Mathematics
Plus one course from the following list:

CPEN 449 Neural Nets
CPEN 461 Computer Graphics
CPEN 422 Image Processing
CPSC 469 Machine Learning
ELEN 642 Introduction to Digital Control
ELEN 645 Modern Control
MCEN 672 Robotic Systems II

## MAJORS OR MINORS OUTSIDE THE SCHOOL OF ENGINEERING

An engineering student may elect to pursue a major or minor in another division of the university. Anyone who is interested should contact the appropriate department chair and work out a program of courses. This should be approved by the department chair and forwarded to the engineering dean's office. When all requirements are met, the transcript will reflect that a major or minor has been completed.
Since many of the engineering students elect to add a minor in business or a minor or major in mathematics, these programs are as follows.

## Business Minor:

For students in the School of Architecture, School of Engineering, Tulane College, and Newcomb College, the following selection of seven courses leads to a minor recognized by the Freeman School:

ECON 101 Microeconomics
ACCT 203 Financial Accounting

## Any four of the following eight Freeman School courses:

ACCT 301 Managerial Accounting
FINC 352 Financial Management
ISDS 375 Business Computing
MCOM 335 Management Communications
MKTG 382 Marketing Management
OBHR 331 Organizational Behavior
PERS 321 Managerial Perspectives
PSOM 371 Operations Management

## And one Freeman elective*

* The additional elective may be chosen from any Freeman courses for which the student has taken the needed prerequisites; or an additional course from the list above. Students have the option of substituting More Than Just Business (TIDB 101 and 111) for Freeman School elective.

Students who elect to complete the requirements of a business minor must earn a grade point average of at least 2.00 in courses counting toward the business minor.

## MATHEMATICS MINOR OR MAJOR

A mathematics minor or major is awarded for the following course work:
Minor (22 credits or 6 courses)

MATH 121 Calculus I
MATH 122 Calculus II
MATH 221 Calculus III
MATH 224 Introduction to Applied Math
or
MATH 217 Discrete Math
MATH 309 Linear Algebra
Plus one additional MATH course at the $\mathbf{3 0 0}$ level or above
Major ( $\mathbf{3 1}$ credits or 9 courses)
A major in mathematics is awarded upon completion of all requirements for the minor and
MATH 305 Real Analysis I
Plus two additional courses at the 300 level or above, one of which must be a 400 level course.
Students contemplating either a minor or major in mathematics should consult with an academic advisor in the Department of Mathematics during the spring of the sophomore year.
Dual Degree
If a liberal arts degree is desired in addition to an engineering degree, then all liberal arts, as well as engineering requirements, must be met. Also, the student must spend one year either in Tulane College or Newcomb College to fulfill the residence requirement. (See Associate Deans for advice.)

## Academic Policies

HONOR SYSTEM
Examinations, quizzes, laboratory exercises, and all other scholastic assignments in the School of Engineering are conducted under the honor system. A copy of the Honor Code is available in the Engineering Dean’s Office.
The honor system is administered by the Student Honor Board, which consists of 15 students elected annually as officers of the engineering student body as a whole and also of the freshman, sophomore, junior, and senior classes in engineering. Suspected violators of the Honor Code should be reported, either by students or by instructors, to the Office of the Dean or to a member of the Honor Board. The Honor Board will investigate the charges, determine guilt or innocence, and recommend a penalty, which can range from loss of credit for an assignment to expulsion from the school. Actions of the Honor Board are reviewed by a faculty committee. A student who is convicted of an honor code violation will be placed on honor probation. (See University-wide section for further information.)

## GRADES AND GRADE POINTS

Federal law prohibits the release of grades or other confidential information to third parties, including parents and guardians, unless the student provides written authorization for release of such information to the associate dean. Such a request may be made by the student at any time.
A student's progress toward graduation is measured not only by credit earned, but also by the grade point average. The grade point average is determined by dividing the student's total number of quality points by the total number of quality hours.

| Quality | Grade | Quality Points |
| :--- | :--- | ---: |
| Excellent | A | 4.000 |
|  | $\mathrm{~A}-$ | 3.667 |
|  | $\mathrm{~B}+$ | 3.333 |
| Good | B | 3.000 |
|  | $\mathrm{~B}-$ | 2.667 |
|  | $\mathrm{C}+$ | 2.333 |
| Average | C | 2.000 |
|  | $\mathrm{C}-$ | 1.667 |
|  | $\mathrm{D}+$ | 1.333 |
| Poor | D | 1.000 |
|  | $\mathrm{D}-$ | 0.667 |
| Failing | F |  |
| Withdrawn Failing | WF |  |
| Withdrawn | W |  |
| Satisfactory | S | Not counted in GPA. |
| Unsatisfactory | U | Not counted in GPA. |
| Incomplete | I | Not counted in GPA. |
| In progress | IP | Not counted in GPA. |
|  |  | Not counted in GPA. |

An incomplete grade, I, is given at the discretion of instructors when, in their view, special circumstances prevent a student from completing work assigned during the semester and with the understanding that the remaining work can be completed within 30 days. Incomplete grades also are given when a student's absence from a final examination has been excused by the associate dean prior to or within one day following the final examination. Incomplete grades must be resolved within 30 days of the end of the semester or they are changed to F's. Extensions of this deadline must be requested by the student in writing and must be approved by the instructor and the associate dean. Extensions are approved only when a student has made an attempt to complete the missing work within the original 30-day period but, in the view of the instructor and the associate dean, has been prevented from completing the work by some special circumstance beyond their control. Extensions must be approved before the 30-day deadline expires: they are not approved retroactively.
An in-progress grade, IP, is used to show progress during the first semester of a year-long honors course. When the final semester's grade for the course is awarded, the IP is changed to reflect that grade and grade points are awarded accordingly.

## INFORMATION SPECIFIC TO THE SCHOOL OF ENGINEERING

## The Following Information Pertains Specifically to the School of Engineering:

An F in a required course must be repeated and a course with a grade of D-, D or D+ may only be repeated with the approval of the associate dean. When a course is repeated, both grades appear on the record and both are included in the grade point average. A failed course must be repeated at Tulane unless approved by the associate dean and the appropriate departmental chair. In no case will a final grade be removed from the transcript.

The grade point average required for graduation is computed by dividing the number of grade points by the number of credits in those courses offered in fulfillment of degree requirements. For this purpose only, the last passing grade in repeated courses is considered. However, the initial failure will remain on the record. Grade point averages for all other purposes are computed by dividing the number of grade points earned by the number of credits attempted. This includes WF's (withdrawn, failing) which are counted the same as F's in the GPA calculation.
It is the student's responsibility to keep informed of his or her accumulation of credits and grade points. Information may be obtained at any time from the Office of the Dean. For purposes of advising at early registration, the registrar will furnish each student with a degree audit which shows courses completed as well as those still needed for the degree.

## Satisfactory/Unsatisfactory Option

Certain courses outside of the student's major department way be taken S/U. These courses include the humanities or social science electives or any extra course taken beyond degree requirements. "S/U" courses are excluded from and do not affect grade point average determinations.

Students must declare their decision to take a course $\mathrm{S} / \mathrm{U}$ prior to the deadline given in the university calendar on a form provided by the registrar's office for that purpose. This S/U declaration is executed in the engineering dean's office and is irrevocable. There is no limit to the number of courses which may be taken $\mathrm{S} / \mathrm{U}$ in any one semester.

## Dean's List

The Dean's list consists of the names of students whose grade point averages for a given semester are as follows:

| Freshmen | 3.200 or higher |
| :--- | :--- |
| Sophomores | 3.200 or higher |
| Juniors | 3.400 or higher |
| Seniors | 3.400 or higher |

## Eligibility for Extracurricular Activity

To be eligible for participation in extracurricular activities, including being a candidate for office in student elections, a student must be regularly enrolled in the school and must meet the specific requirements for eligibility as explained below.
Eligibility for intercollegiate athletic competition is determined by the Faculty Chairman of Athletics in accordance with the rules and regulations of the University and the National Collegiate Athletic Association.
Engineering students wishing to run for either school or university offices or major appointive positions must secure the approval of one of the deans before announcing their candidacies. To qualify for office (including class offices), an undergraduate student, other than a freshman during his or her first semester in the University, must be enrolled full time and must have a 2.0 average or better. A student who is on disciplinary, honor, or scholastic probation is not eligible to seek or accept office.

## Transfer Students

Tulane's School of Engineering accepts transfer students from other institutions. Admissibility is judged primarily on the college level work and normally a 2.5 grade point average is required. The prospective student must have either graduated or be eligible to continue at all institutions attended. Applicants must submit official college transcripts from each institution, photocopies of college course descriptions from the college catalog, a high school transcript if they have completed less than three semesters of college work, and copies of SAT or ACT scores.
An applicant may receive transfer credit toward a Tulane degree only for courses that are required in the Tulane program and for which a grade of C or better was earned. This credit is given provisionally and depends on the quality of work done at this institution. The student must meet all of the published requirements for the degree, and all senior courses must be taken at Tulane.
An applicant who has attended a non-accredited college but otherwise meets the conditions for admission, may be accepted with the technical status of a freshman. Credit will later be given for applicable courses if performance in this University is acceptable, and the student's classification will be advanced accordingly.

## Interdivisional Transfers

Students enrolled in other divisions of the University may be admitted to the School of Engineering on a space-available basis upon recommendation of the student's current dean and approval by the Associate Dean of Undergraduate Studies.
The student's admissibility is determined by his or her performance in other divisions of the University. Considerable weight will be accorded grades in mathematics and the sciences. A student denied further registration in another division is not ordinarily admitted to the School of Engineering.
In general, the student brings all grades earned in the other divisions, but only courses required by one of the engineering programs can be used to satisfy requirements for graduation.
The interdivisional transfer must originate in the dean's office of the current division.

## Summer School

Engineering students may attend the Tulane Summer School for the purpose of enriching their program or of repeating courses in which performance was not satisfactory. However, those who have been excluded from the School of Engineering after provisional registration or after being on scholastic probation may attend the Summer School only with permission of the associate dean. Permission to attend the Summer School, however, is not a commitment that a student on probation will be readmitted to the School of Engineering in the fall semester. At that time admissibility will be determined from his or her cumulative record, including summer work.

Engineering students may also attend the summer school of any institution that will admit them. If they attend the summer school of another institution, they are required to request that an official transcript of their summer record be sent to the associate dean of the School of Engineering (not to the registrar) prior to registration in the fall semester. If they wish their credits at another institution to be accepted by Tulane, they must submit a summer school form (available in the Dean's Office) for approval of their choice of institution and proposed summer program by the associate dean. Summer work should be approved no later than the end of the second semester examination period. Between the end of the semester at Tulane and the opening of summer schools at other institutions, there is usually not sufficient time to secure such approval by mail. Students wishing approval of summer courses at other institutions must therefore make proper arrangements before they leave the campus after the spring semester. Credit will be given only for courses completed with a minimum grade of C or its equivalent.

## Quality-of-Work Standards

The privilege of continued attendance in any of the undergraduate divisions of the University is forfeited by any student who fails to meet the quality-of-work standards. Through adherence to these regulations, the University seeks to insure that its educational facilities are reserved for capable students who are motivated to make effective use of them. For the purpose of continued attendance, these rules (applicable to all work taken at Tulane) are based on a standard of credits of C (2.0 grade points) average work completed. Students should note, however, that the cumulative grade point average as well as the semester grade point average, will be used in determining eligibility for continuation. Furthermore, since most colleges and universities use the cumulative grade point average as a standard for judging admissibility to graduate school, students who plan to continue their formal education must be aware of and responsible for their cumulative averages.
These rules presume that each full-time student will pursue a normal academic load each semester (based on an eight semester curriculum), unless a lightened academic load is warranted in the judgment of the student's advisor or the associate dean. Therefore, the rules should be considered as only minimum standards for continuance, rather than as the criteria for meeting degree requirements.
At any point in the student's undergraduate career, lack of sufficient academic progress toward fulfilling degree requirements may result in denial of further admission. Such action would be warranted if, for example, in the opinion of the associate dean or appropriate faculty committee, degree requirements would not be met within a reasonable period of time, or if the student fails to achieve the minimum grade point average as required by the faculty.
A student who is denied permission to continue in the School of Engineering has the following options:

- Transfer to another division of Tulane. An interdivisional transfer form may be obtained from the Engineering Dean's Office. The other division's requirements must be met and it is advisable for the student to contact the appropriate associate dean's office to determine eligibility.
- Petition the deny decision if there were extenuating circumstances that caused the poor performance.
- Remain out of school for a period of time (nominally one year) and request readmission. This will normally be granted if it is clear that the student has solved the problems that led to denial. This is not a guarantee of readmission but only a commitment to review the request.
If a student is allowed to continue after being denied, the performance will be critically evaluated at the end of the next semester to determine suitability for continuation. There is no appeal from a second deny decision.
Specifically, the following rules will be observed:

1. In order to qualify for readmission for a second year, a full-time freshman must pass 24 credits of C ( 2.0 grade points) average work in an academic year (August to August, including a summer session if necessary).
2. In order to return to the University for a third year, a full-time student must pass 56 credits of C average work in the preceding two academic years (August to August).
3. Any full-time student who fails to pass 12 credits of C ( 2.0 grade points) average work in a regular semester will be placed on probation or denied permission to continue.
4. A student placed on probation in either semester normally has until the end of the following summer to remove the probation. This is accomplished by passing enough courses to increase the number of credits with a C average to 24 . As an example, if eight credits of C's are earned in the fall semester, then in the spring the student can present 16 credits of C work and remove the probation, 12 credits for the spring and four to be added to the eight from the fall. If the grade point average is below 2.0 in the semester for which the student is on probation, then the student will normally not be allowed to continue.
5. In certain instances, the associate dean may accept summer school work from other institutions to remove the probationary status. Because the grade point average is based only on work at Tulane, a deficiency in grade points cannot be remedied by work at other institutions.

Since these standards are published and explicit, the School does not regard itself as obligated to give individual warnings to students in danger of exclusion by these rules (nor to their parents) and ordinarily will not permit registration for an additional semester even though no individual warning has been given.
These rules cover retention only and do not affect the rules governing qualification for graduation.

## Requirements for Graduation

A candidate for degree must have passed all courses specified in the departmental curriculum with an overall grade point average of not less than 2.000. In addition to attaining an overall grade point average of 2.000 , the student must make a 2.000 average in the requirements for the major. A student who fails to meet the grade point requirements for graduation after all degree requirements have been completed will not be considered for a degree at that time, nor will he or she be permitted to meet further requirements except by special action of the faculty of the School of Engineering.
A minimum of 60 credits of course work at Tulane is required for degree and all 400-level and higher-level courses within the major must be completed at Tulane unless approved by the Associate Dean for Undergraduate Studies and the Department Chair.

## Conferring of Degrees

A student who has completed all of the requirements for a degree will normally have that degree conferred at the annual spring commencement. Degrees are also awarded at the close of the fall semester in December and at the close of Summer School. All engineering students expecting to receive degrees must file an application-for-degree form with the Office of the Associate Dean by the second week of the semester in which he or she expects to graduate. A candidate must be present to receive the degree unless excused by the dean. A request to receive a degree in absentia must be filed in the Office of the Dean at least two weeks before the commencement date.

## AWARDS

## Alpha Eta Mu Beta Award

This award, given by the biomedical engineering honor society, is presented to a junior for outstanding performance as a student in the biomedical engineering curriculum.

## AICHE Awards

Several awards are offered. Two are scholastic awards, one offered by the New Orleans Section to the senior in chemical -engineering with the highest scholastic average, and one by the National Society to the junior in chemical engineering who made the highest average in the freshman and sophomore years. The annual chapter award is for outstanding participation in chapter activities, particularly participation in the student paper presentation. The student chapter award is for outstanding services to the profession.

## American Institute of Chemists Award

Established to honor seniors in chemistry, chemical engineering, or biochemistry. Given in recognition of potential advancement of the chemical professions on the basis of a student's demonstrated record of leadership, ability, character, and scholastic achievement.

## ASHRAE Awards

Two awards are presented. The first, established in 1969 by the New Orleans Chapter of the American Society of Heating, Refrigeration and Air Conditioning Engineers, is awarded to a junior in mechanical engineering for excellence in the field of air conditioning and refrigeration. The second is awarded to the outstanding senior member of the ASHRAE student chapter.
ASME Award
Awarded to a member of the student ASME section. Selected by the faculty adviser for the greatest accomplishment for the student section during the year.

## Bell Northern Research Award

Established in 1984. This award is given for the best undergraduate paper reporting original research in communication, networks, databases or software engineering.

## Biomedical Engineering Society Scholarship Award

Awarded to the graduating senior with the highest scholastic average in biomedical engineering.

## Civil and Environmental Engineering Academic Achievement Award

This award is presented to the graduating senior with the highest grade point average in civil or environmental engineering.

## Nissim Nathan Cohen Memorial Award

Awarded to a graduating senior in biomedical engineering. Selected by fellow students for contributions to the class, to the School of Engineering, and to the profession of biomedical engineering.

## Computing Sciences Scholastic Awards

Several awards are presented. An award is given for the best overall academic average to both a senior computer engineering major and a senior computer science major. The third award is presented to the senior computer science/computer engineering major with the best average in computer science courses.

## James A. Cronvich Award

Established in 1983 in honor of Professor James A. Cronvich who retired in 1982 after 44 years of service to the School of Engineering. This award is given to a senior in electrical engineering who has demonstrated superior performance in laboratory work.

## Donald Derickson Scholarship Award

Established in 1979 in memory of Donald Derickson, head of Civil Engineering from 1912 until his retirement in 1946. This scholarship is awarded to an outstanding undergraduate student in civil and environmental engineering on the basis of merit.

## Frederick H. Fox Achievement Award

Established in 1959 by the American Society of Civil Engineers, Tulane Student Chapter. Presented for outstanding participation in the Tulane Student Chapter of ASCE.

## Frederick H. Fax Activities Award

Established in 1959 and given annually to a civil and environmental engineering student who has been outstanding in participation in and contributions to athletics and other extracurricular activities.

## William Benjamin Gregory Medal, Class at 1918 Award

Established in 1950 by the members of the class of 1918 in memory of Professor Gregory, who served the University for 44 years as professor of experimental engineering and hydraulics. This award is made to the senior in mechanical engineering who, in the opinion of the faculty of mechanical engineering, is most deserving.

## John Thomas Hassell Memorial Award

Established in 1983 by Professor Johnette Hassell in memory of her father. Awarded for outstanding service to the Department of Computer Science, beyond that required for courses.

## IEEE Awards

Two awards are offered, one by the New Orleans Section for the best paper presented at a student chapter meeting and one by the National Society for the most outstanding and active member of the student chapter.

## National Society of Black Engineers

There are two awards. One is awarded to the Outstanding Executive Board member and the other is to the graduating senior with the highest grade point average.

## Randall K. Nichols Award

Awarded to a chemical engineering junior who has special talents worthy of recognition and encouragement.
Omega Chi Epsilon Award
This award, presented by the chemical engineering honor society, is given to the member of the student chapter who best exemplifies the ideals of Omega Chi Epsilon.

## C. W. Ricker Award

Established in 1963 to honor the late Professor Emeritus Ricker, former head of the Department of Electrical Engineering. Awarded to the graduating senior with the highest scholastic average in the electrical engineering curriculum.

## James Marshall Robert Leadership Award

Established in 1957 by the Society of Tulane Engineers and named in honor of Dean Emeritus Robert. Additional gifts from alumni and friends after Dean Robert's death in 1964 have made possible the award of a medal and cash to a senior in engineering in recognition of scholarship, collegiate activities, and leadership.

## Leon H. Scherck Memorial Award

The oldest award presented by the School of Engineering was established in 1922 by the late Mrs. Albert H. Scherck of New Orleans in memory of her brother, Leon H. Scherck, class of 1894, for excellence in engineering. Awarded to a member of the senior class in the School of Engineering.
Society of Automotive Engineers Award
This award is in recognition of the outstanding student member of the SAE.

## Harold H. Sogin Award

Established in 1993 in memory of Dr. Harold H. Sogin who served on the faculty of Mechanical for 29 years, including 11 years as department head. Awarded to a mechanical engineering senior in recognition of superior scholarship and service.

## Francis M. Taylor Award

Established in 1971 by chemical engineering alumni to honor Professor Emeritus Taylor. Awarded to a senior in chemical engineering for outstanding citizenship, professional attitudes, and accomplishments.

## Texas Instruments Annual Award

Awarded to the senior in computer science who contributed the most to both the academic and social environment of the department.

## W. F. Tompkins, Jr. Award

Established in 1945 by General William F. Tompkins in memory of his son, William F. Tompkins, Jr., a civil engineering alumnus. The award is given to the senior student in civil and environmental engineering selected by the faculty of civil and environmental engineering as the most outstanding in scholarship and extracurricular activities.

## Upsilon Pi Epsilon

Two awards are presented by the computing sciences honor society. A junior and a senior in the computing sciences are each given an award for outstanding academic achievement.

## Daniel H. Vliet Award

Established in 1989 to honor Dr. Daniel H. Vliet who served on the faculty of Electrical Engineering for 37 years, including four years as head of the department, before his retirement in 1986. The award goes to a sophomore in the School of Engineering who has demonstrated superior performance in freshman physics.

## Faculty of the Liberal Arts and Sciences

In 1988, the Faculty of the Liberal Arts and Sciences was formed by the joining of the separate faculties of Newcomb College and the College of Arts and Sciences (now Tulane College). Today, the faculty consists of nearly 280 members serving in 22 academic departments. The students of these dedicated teachers have been nationally recognized in recent years by Rhodes, Marshall, and Goldwater awards. Individual faculty achievements in scholarship have been recognized by Guggenheim and Fulbright awards, fellowships from the National Endowment for the Humanities, the American council of Learned Societies, and the National Humanities Center, and membership in the national Academy of Sciences. Sponsored research awards from such federal agencies as the National Science Foundation, the National Institutes of Health, and the Department of Energy and from private foundations and corporations provide numerous opportunities for undergraduates to engage in research.
Following the descriptions of the individual histories and special resources provided by Newcomb and Tulane Colleges are the policies, programs of study, and curricular requirements for the undergraduates in these liberal arts and sciences colleges.

## H. Sophie Newcomb College

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## HISTORY

The H. Sophie Newcomb Memorial College for Women was founded in 1886 by Josephine Louise Le Monnier Newcomb, an entrepreneur and visionary, as the first degree-granting college for women within a university in the United States. Mrs. Newcomb’s concern was for the higher education of women "which shall look to the practical side of life as well as to literary excellence." Her several gifts and final bequest to the college were made in memory of her daughter, Harriott Sophie, who died of diphtheria in 1870 at the age of 15. All of these funds for the college she entrusted to the Administrators of the Tulane Educational Fund.
After the founding of Tulane’s medical college in 1834, the Law School and Tulane College for men were added in 1847. Newcomb College joined Tulane University as the liberal arts and sciences college for women in 1886. Originally, Newcomb College was located on Washington Avenue in the Garden District of New Orleans. In 1918, Newcomb moved to the Broadway campus adjacent to Tulane's other undergraduate colleges and schools, where it has remained.
The years from Newcomb's founding in 1886 to the present have brought many changes to the college. In the 1960s, freshman and sophomore courses for Newcomb College and Tulane College became co-educational, and by 1969 most academic departments in both colleges were unified under one chair. In 1976, coeducational housing was introduced as an option, and a single curriculum for Newcomb College and Tulane College was adopted in 1979. In 1988, the faculties of the two undergraduate liberal arts and sciences colleges, Newcomb College and Tulane College, were joined into a single Faculty of the Liberal Arts and Sciences.

## NEWCOMB COLLEGE TODAY

Newcomb College has as its mission the education of women in the liberal arts and sciences. The College is committed to the academic and personal development of all Newcomb students. Vital to the identity of Newcomb as a coordinate college for women within a research university is the participation of students and faculty in the production of new research on women and the integration of this research into the undergraduate curriculum. With its own academic advising, Honor Board, student organizations and programs, Newcomb maintains a strong sense of identity and community but also takes full advantage of the resources of the university. Newcomb and Tulane Colleges share a faculty, a common curriculum, and coeducational classes. Tulane's graduate and professional schools have a strong influence on the high quality of the research, the facilities, and the faculty guidance available to Newcomb students.

Newcomb students have the opportunity to hone their leadership skills in college organizations and through a variety of programs offered within the College. Students may participate in programs, organizations, and activities within Newcomb College and in those in the broader Tulane community. Residence hall accommodation is available in single-sex and in coeducational halls. At Newcomb, students have the best of two worlds: a small liberal arts college dedicated to personal attention and development, and a dynamic, comprehensive research university consisting of scholars at the forefront of their academic fields. The main instructional resource of Newcomb College is the superb research and teaching faculty - nearly 300 professors in the Faculty of the Liberal Arts and Sciences.

Newcomb College today is committed to the fundamental values of the liberal arts and sciences, and the curriculum required of Newcomb students reflects that commitment. Newcomb College offers its 2,000 students a rigorous, intellectually challenging liberal arts and sciences education, not only as preparation for a career or advanced study but also as a strong foundation for an enriched life. The blend of Newcomb, Tulane, and New Orleans-with its rich and varied history, traditions, and events-provides unlimited academic and cultural opportunities. The curriculum includes a broad general education in sciences and mathematics, social sciences, humanities, and fine arts, and in-depth study of one or more particular disciplines. Each student completes her program with electives chosen to fit her particular needs. Graduates earn a bachelor of arts, bachelor of science, or bachelor of fine arts degree from Newcomb College of Tulane University.
Sound academic and pre-professional advising complements the Newcomb curriculum. Many Newcomb students continue their education in graduate schools or professional schools of business, law, medicine, public health, and social work.

The six administrative departments within the College are the offices of the Associate Dean for Academic Affairs, Newcomb College Student Programs, Newcomb Center for Research on Women, Newcomb College Children’s Center, Newcomb Alumnae Affairs, and the Newcomb Art Gallery.

A special opportunity offered to both faculty and Newcomb students is the Newcomb Fellows Program sponsored by the Newcomb Foundation. The program contributes to fulfilling the mission of Newcomb College by broadening and enhancing the academic experience of Newcomb students. The Fellows Program permits students to participate actively in research, and it has been directly responsible for forging close ties between faculty in different fields and dedicated, interested Newcomb students.

The Newcomb fellows, a core faculty committed to women's education and drawn from all faculties of the university, are eligible for funding of research and course planning in support of their activities for the college. When fellows are funded through Newcomb Foundation grants for their scholarly activities, Newcomb students are involved every step of the way. Newcomb students, either individually or as a group, may also submit grant proposals to the Newcomb Foundation. Application deadlines are March 1 and November 1 each year.

## CAMPUS LIFE GRANTS

Campus Life Grants, funded by the Newcomb Foundation, are awarded for the purpose of improving campus life or student learning at Newcomb College or Tulane University.

## OFFICE OF THE ASSOCIATE DEAN FOR ACADEMIC AFFAIRS

The staff of the office of the Associate Dean consists of four academic advisors, two support staff members, and the Associate Dean. The office has responsibility for the academic advising of firstyear students, who are required to meet with their advisor at three times during the year, and meet at other times as needed. The academic advisors also meet with upperclass students, providing assistance with academic planning, interpreting College policies and procedures, and assisting students with academic decision-making and problem-solving. The office also maintains the academic records of Newcomb students and provides administrative support for Newcomb Honor Board, the student-faculty organization that adjudicates cases of alleged academic dishonesty.
The Associate Dean administers the Josephine Louise Newcomb Fellowship program, which originated in 1999. One senior is selected each year to receive this Fellowship which provides a stipend to cover expenses for a year-long independent study project of the Fellow's own design. The selection process is competitive, based upon a written proposal and an interview with the selection committee.

## NEWCOMB STUDENT PROGRAMS

Newcomb College recognizes that there are many facets to a complete education. With this spirit in mind, the Office of Newcomb Student Programs works with students to develop programs and organizations which complement their classroom experiences. Through their involvement in the Newcomb community, women students can enrich their personal growth and develop their capabilities for leadership.
Several programs are offered annually. The Newcomb Leadership Conference, open to all students by application, examines various themes of leadership from both conceptual and practical perspectives. Learning about public policy is supported by Newcomb's membership in the Public Leadership Education Network, a consortium offering seminars such as Women, Law, and Public Policy; Women and Congress; and Women and International Policy in Washington, D.C. The Women in Science organization provides camaraderie, programming, and support for its membership. It's programs provoke discussion on women's career issues as well as exploration of a variety of career paths. In addition, each year the Alberto Culver lecture series brings an accomplished business woman to campus to speak and meet with students.
Intensive Newcomb (IN) is a program sponsored by Newcomb Student Programs, the Newcomb College Center for Research on Women, and the Women's Studies Program. Intensive Newcomb is designed to foster achievement and leadership through innovative programming in an environment that is supportive of students' dreams and goals. The primary goal of the IN Program is to encourage critical thinking, intellectual curiosity, and active learning to empower women as leaders during and beyond their college years.

The Office of Newcomb Student Programs advises student organizations associated with the college. Alpha Lambda Delta is open to freshmen who attain a 3.50 GPA during their first semester or first year at Newcomb. Newcomb Assets are student leaders chosen for their campus involvement and service during their freshman year. The current members of Mortar Board, a national honor society, select rising seniors with an outstanding record of scholarship, leadership, and service. The Oak Wreath Awards recognize seniors who have demonstrated outstanding academics and campus involvement. The Daisy Chain is a group of selected Juniors who play an important role at commencement and Freshman convocation. Newcomb Senate, the student government of the college, is recognized campus-wide for its outstanding programming and attention to campus issues. Its premier program is Women's Forum, which annually features a well-known speaker on a women's issue. Also under the umbrella of Senate are the Spring Arts Festival, Campus Concerns Committee, and CONNECT activities promoting the traditions of the college. As a unit of the Associated Student Body, Newcomb Senate acts as an advocate of student perspectives on campus issues. Finally, class officers and representatives implement projects for their classes through the senate. Elections are held in the spring and fall of each year.
News about college programs and events is published via email every Friday in The Newcomb News. Information may also be obtained by emailing nsp@tulane.edu or by checking our website at www.tulane.edu/~newstupr.

## NEWCOMB COLLEGE CENTER FOR RESEARCH ON WOMEN

Brief History: In response to the social changes taking place in this country in the 1970s, Newcomb College faculty, staff, students, and alumnae joined together to establish a center that would "provide opportunities and programs focusing on personal growth, professional awareness and educational planning." More than twenty-five years later, and with an expanded mission to advance knowledge about women's lives and perspectives, the Newcomb College Center for Research on Women (NCCROW) stands as the oldest university-based women's center in the Gulf South and the only one in the region to hold membership in the National Council for Research on Women. The Center's unique position as a division of Newcomb College continues Newcomb's more than 110-year tradition as a leader in the field of women's higher education. As
one of a dozen interdisciplinary research centers at Tulane, NCCROW furthers Tulane's role as a major research university. The Center occupies Caroline Richardson Hall, formerly the Newcomb dining hall, located on the Newcomb College campus.
Mission: NCCROW's chief objective is to advance knowledge about women so as to insure that the lives, experiences, and perspectives of all women are fully valued and respected in every institution in society. Our efforts include documenting and preserving women's historical pasts, fostering the creation of scholarship about women, improving the status of women in Louisana, and promoting the inclusion of the scholarship on women throughout the educational system. The Center offers students (1) the resources of a women’s studies library and archives; (2) grants for research; (3) educational programs; and (4) computer facilities.
The Nadine Vorhoff Library serves as a special collections devoted to the history of women's education, and as the centralized repository for women's studies books and periodicals on the Tulane Campus. The library holds some 10,000 volumes concerned with women's education, the history of southern women, labor, and other topics; a Culinary Arts Collection of some 2,000 volumes; and subscriptions to over 100 women's studies periodicals. Located on the first floor in the Seltzer-Gerard Reading Room, the library is an ideal study space.

The Newcomb Archives house the records of the College and an extensive collection of materials documenting the lives of Newcomb alumnae, other women of the South, and local women's groups; a large collection of oral history tapes; and photographs, scrapbooks, letters, and other materials. These archival materials are of particular interest to students researching women's education and political participation.
Women's Studies Research Grants are available to students who are researching topics relating to women and issues of gender. The competitive grants are designed to assist with the cost of conducting original research and are generally awarded to students who are working on honors theses or independent studies research. The program has two grant periods each year and makes average awards of $\$ 300$ to about eight students annually.
Educational Programs sponsored by the Center include the highly popular Zale Writer-inResidence Program and Florie Arons Poetry Forum which bring nationally acclaimed, award winning women writers and poets to campus for writing workshops, lectures, and readings. Recent writers include Edwidge Danticat, Dorothy Allison, Octavia Butler, Lee Smith, and Maxine Kumin. Distinguished scholars Jill Ker Conway, Helen Horowitz, and Phyllis Chesler have delivered the annual Adele Ramos Salzer Lecture focusing on the higher education of women. These and other Center programs enrich the academic experience and provide students with a valuable resource for learning more about women's lives and experiences.
Sophie B. Wired Computer Cluster is a collaborative feminist infotech space providing a supportive atmosphere and connecting women to the latest in technology. A main objective of the Computer Cluster is to increase the presence of women on the Internet, as users and creators of information technology.
For more information and an up-to-date list of Center programs, stop by the Center office on the second floor of Caroline Richardson Hall, or look us up at www.tulane.edu/~wc.

## NEWCOMB CHILDREN'S CENTER

The Newcomb Children's Center is comprised of the Newcomb College Nursery School and the Newcomb Child Care Center. Each site provides developmentally suitable activities for preschool children. Low teacher/child ratios and appropriate playground and classroom facilities help give each child opportunities to develop physically, mentally, and socially.
Open to the New Orleans community since 1926, the Newcomb College Nursery School is one of the oldest preschools in the country. Its philosophy has always featured a developmental approach to meet the social, intellectual, and physical needs of young children.

Established in 1980 to help meet the child care needs of Tulane faculty, staff, and students, the Newcomb Child Care Center accepts children ranging in age from 15 months to five years. Four classrooms in a renovated house provide a homelike atmosphere for a limited enrollment of fifty students. The quality of both programs has been recognized through accreditation by the National Academy of Early Childhood Programs.

Education and psychology students use the center as an observational laboratory to learn principles of child development. Early childhood students complete a observation at the nursery school.

## ALUMNAE OFFICE

The Newcomb Alumnae Office is housed in Newcomb Hall and manages the day-to-day operations of the 21,000 member Newcomb Alumnae Association who reside in all 50 states and overseas. Anyone who attended Newcomb College for more than one semester is considered to be an alumna. The alumnae office plans 13 class reunions each year, in addition to coordinating a special 50-year reunion at commencement. The office also produces an alumnae magazine, organizes events for alumnae in New Orleans and throughout the country, supports the operation of a Town Mom program for first-year students and initiates a senior class breakfast. The office also works closely with the Office of Newcomb Student Programs and the Center for Research on Women in cooperative programming for alumnae and students, and serves as the primary alumnae liaison to the university. The office is staffed by a director and one staff member. The Newcomb Alumnae Association board of directors has members from across the nation and meets quarterly to decide how best to support the dean of the College in her mission to advance Newcomb College, as well as how to enhance relations between alumnae and the College, and to serve the needs of the Newcomb community as a whole. The Newcomb alumnae body is firmly committed to the support of the College and its mission to provide quality undergraduate education for female liberal arts and science students.

## THE NEWCOMB ART GALLERY

In operation since 1996, the Newcomb Art Gallery presents exhibitions of art throughout the academic year. Exhibitions cover a broad range of art from varying eras and locations including African sculpture, drawings from Renaissance Italy, contemporary American painting, nineteenth century photographs of New Orleans, and the sculpture of Auguste Rodin among others. A portion of the Gallery is also devoted to the display of objects relating to the artistic traditions of Newcomb College, particularly the famous Newcomb Pottery. From 1895 until 1940, Newcomb operated a studio staffed almost entirely by women who produced highly regarded art pottery as well as metalwork, embroidery, and handcrafted book bindings. These works attest to the distinctive role played by Newcomb women in the Arts \& Crafts movement in America. The pottery is highly esteemed by museums and private collectors, and the Newcomb Art Gallery boasts one of the finest collections in the country.

Exhibitions offer students the rare opportunity to experience original works of art both within and beyond their regular coursework. Students in Art History and Studio Art classes often benefit from the close observation of art works in the Gallery that may coincide with the subjects they are studying in the classroom. The Gallery also has an ongoing initiative to incorporate exhibitions into classes outside the Art Department. In the past, professors in fields such as History, English, French, Sociology and other subjects have integrated exhibitions into their curriculum in varying and innovative ways. Through this program the Newcomb Art Gallery serves as a unique source of educational enrichment for undergraduates. Internships are available for qualified undergraduates. Of course, students also come to the gallery for the pure enjoyment of art or just to savor a contemplative moment.

## THE NEWCOMB COLLEGE CAMPUS

The Newcomb College campus has been dedicated in perpetuity. Newcomb College maintains a small-college atmosphere within its campus boundaries. Its stone and brick buildings and spacious quadrangles nestle in the heart of the residential uptown section of New Orleans. Newcomb Hall, the administrative center of Newcomb College, contains classrooms and faculty offices as well as administrative offices. Newcomb Hall also houses the departments of Philosophy, Communication, Sociology, French and Italian, Spanish and Portuguese, Germanic and Slavic Languages.

Flanking Newcomb Hall on opposite sides of the Newcomb quadrangle are the Brandt V. B. Dixon Performing Arts Center, the Woldenberg Art Center at Newcomb College, and Elleonora P. McWilliams Hall.

The Woldenberg Art Center at Newcomb College houses the Newcomb Art Department, as well as classrooms, seminar rooms, studios, two auditoriums, a slide library, and the Newcomb Art Gallery.
The Newcomb Department of Music's practice rooms, studios, classrooms, offices, and auditoriums are located in the Brandt V. B. Dixon Performing Arts Center. The center includes Dixon Hall, a lecture/recital hall, and the Mary Victoria Mills Weinmann Patio-Theater, as well as rehearsal rooms for band and orchestra and the I. H. Bass Choral Hall. Complementing other performance areas are the Lupin Theatre and an experimental theatre space.
Adjacent to the Performing Arts Center is Elleonora P. Mc Williams Hall, which houses the Department of Theatre and Dance. It contains classrooms, acting and performance studios, a scene shop, a costume shop, and a multi-media library.
The Newcomb Children's Center is nearby and includes the Newcomb College Nursery School and the Newcomb Child Care Center. The Myra Clare Rogers Memorial Chapel, on the Broadway side of Newcomb Hall, houses some of the College’s Tiffany windows in its foyer and in the main chapel. The Chapel is used by religious organizations and by the College and University for educational and cultural programs.
The Newcomb College Center for Research on Women is located on the second floor of Caroline Richardson Hall. It houses the Newcomb College archives and library and the Women’s Studies Program offices.
The Newcomb Dean's Residence is a historic home dedicated in perpetuity for use by the Newcomb Dean. It is used today not only as the dean's residence but also as the site of many Newcomb receptions and events.

## HONOR SOCIETIES

The University has chapters of many honor societies. Phi Eta Sigma honors freshmen in all divisions of the University. Omicron Delta Kappa is a junior-senior honor society for students with exceptional abilities in scholarship and leadership. The Society of Sigma Xi is an honor society that stimulates scientific research. Phi Beta Kappa recognizes outstanding scholarship among graduating seniors. There are also honor societies for students with special academic and professional interests.
Newcomb College also recognizes and encourages student achievement through its three honor societies: Mortar Board, a senior honor society whose selection is based on leadership, scholarship, and service; Assets, a group of fifteen outstanding women selected at the end of their freshman year; and Alpha Lambda Delta, a scholastic honor society for freshmen attaining a 3.50 cumulative grade point average. Outstanding seniors may also be selected for Oak Wreath, an honor distinct to Newcomb College.

## AWARDS

A prize is awarded only when marked excellence is exhibited in the subject of the competition. Prizes are not awarded to students who are not in good standing.
The Alpha Epsilon Phi Award in Romance Languages is given each year by Alpha Epsilon Phi to the outstanding senior in the romance languages upon the recommendation of the faculty.
The Alpha Lambda Delta Award is awarded to the graduating Alpha Lambda Delta member who has the highest cumulative grade point average.
The Sally Reed Atkins Award is given to a serious student of German language and literature for study in Germany.
The Biology Prize is awarded to the senior majoring in biology who, in the judgment of that department, is deserving of special recognition for her interest, enthusiasm, and proficiency.

The Nan Gunter Boykin Memorial Prize is awarded annually to a member of the graduating class for excellence in dramatic literature.
The Chi Omega Freshman Award was established by the Chi Omega Alumnae Association of New Orleans in 1964. It is awarded annually on the basis of scholarship and leadership during the freshman year.
The Chi Omega Prize in History is awarded to the graduating Newcomb senior who has maintained the highest average in this subject.
The Class of 1909 Prize is awarded to that senior who during the last three years of her collegiate course at Newcomb has best combined scholarship with effective and unselfish service in student activities.
The Classical Languages Prize is awarded for excellence in Latin, Greek, or the study of ancient history, culture, or archaeology.
The Shelley Coverman Memorial Award is given in recognition of excellence in empirical social science research in women's studies.
The Carol Downes Cudd Award is given in alternating years for academic achievement demonstrating a love of learning combined with unselfish service to the College and University.
The Minnette L. Starts Dance Award is given to the outstanding Newcomb upperclass dance student upon recommendation of the faculty.
The Delta Kappa Gamma (Delta Chapter) Amy Hendricks Award is given each year to a Newcomb College senior completing a curriculum in elementary teaching whose past record, character, and personality indicate her ability to make a valuable contribution to her profession.
The Sylvia Dreyfus Memorial Award is given to a member of the senior class who has supported women's concerns on campus through outstanding leadership, active committee membership, and creative innovation of programs or elective office.
The Elsie Field Dupre Memorial Prize in Physics honors a Newcomb student for her interest, enthusiasm, and proficiency in physics.
The Raymond A. Esthus Prize is awarded annually by the Newcomb Alumnae Association to that freshman, sophomore, or junior, who, through her activities, best exemplifies and promotes the continuance of the tradition and spirit of the college.
The Ann Gill Memorial Award was established by the Beta Omicron Chapter of Kappa Kappa Gamma Fraternity in memory of Margaret Ann Gill. It is awarded to the outstanding junior for scholarship, sportsmanship, and contributions to the college.
The Rosa Cahn Hartman Prize is presented to the Newcomb student considered by the Department of Psychology to have done the best work in psychology.
The Doris K. Joffrion Award is for the Newcomb student whose performance and leadership in women's athletics has been most exceptional.
The Kappa Kappa Gamma Prize in Mathematics is awarded with the approval of the mathematics department to the student majoring in mathematics who has attained the highest average in advanced mathematics courses.
The Arden R. King Prize for Excellence in Anthropology is awarded to a senior anthropology major in Newcomb College for a record of excellence in anthropology.
The Virginia Gleaves Lazarus Memorial Award is awarded by the Department of English for the best essay written by a junior or senior.

The Mathematical Economics Prize is given to the most outstanding senior in mathematical economics.
The Newcomb Economics Prize is given to the most outstanding Newcomb student in economics.

The Ann Hero Northrup Prize in Chemistry is awarded for general excellence in that subject to the junior or senior who has accomplished most during that year. The prize, established by the late Clare M. de Milt, consists of a valuable book or collection which is presented to the library or to the Department of Chemistry on behalf of the winner.
The Nell Pomeroy O'Brien Award is given to an art history or art studio major at the end of the sophomore year.

The Alice Stirling Parkerson Memorial Award in Art is awarded to an outstanding student who in her junior year gives promise of achieving the ideals of personal integrity and dedication that characterized Alice Parkerson during her years of teaching and administration in the Department of Art of Newcomb College.
The Janice Torre Perky Memorial Award is awarded annually to a junior or senior in the theatre department who is selected by the department as being the most original or creative writer.
The Phi Mu Award in Sociology is awarded to an outstanding student in sociology upon the recommendation of the Department of Sociology.
The Pi Beta Phi Prize in Laboratory Science is for the best paper based on experimental work in a biological or physical science. It is open to junior or senior students.
The President's Award is given each year to a Newcomb student who has embodied Newcomb's ideals of scholarship and service.
The Lucy Byrne Ringe Memorial Prize is awarded to the top-ranking senior in American literature.
The Mary B. Scott Memorial Prize, endowed in 1909 by Mary B. Scott in memory of her mother, is given for the best essay showing original research in history, economics, or political science written by a junior or senior.
The Kathy Goldberg Senior Role Model Award is presented to the senior who has provided an example to her peers of excellence in scholarship, leadership, and community service throughout her years at Newcomb.

The Class of 1903 Shakespeare Prize is given for the best Shakespearean essay by a junior or senior.

The Aline MacKenzie Taylor Award is given for the best essay in intellectual history.
The Dorothy Young Memorial Award for Best Performance by a Student Actress is awarded annually.
The Elizabeth S. Watts Award in Physical Anthropology is awarded annually.
The Gifford Darling Riess Award is awarded to a graduating senior at Newcomb College who has demonstrated outstanding dedication to community service during her college years.
In addition, Newcomb College shares a large number of awards and prizes with Tulane College; they are listed in the Liberal Arts and Sciences Policies and Programs section.

# Paul Tulane College 

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## HISTORY

The Paul Tulane College, Tulane's liberal arts and sciences college for men, is one of the University's three original academic divisions and its historic undergraduate college. Of the University's six undergraduate divisions, Tulane College alone dates from the very beginnings of the University. For a century and a half, the College has been educating its students in the arts and pure sciences, those core academic disciplines that challenge students to consider the most fundamental questions of human experience, understand the natural world, and appreciate something about the human condition; to develop the ability to write and speak well, understand foreign languages and cultures, and master complex quantitative material. The arts and pure sciences are, and always have been, superb preparation for any and all careers.
In 1847 the state of Louisiana enacted the legislation that founded the College. The University of Louisiana was founded that year by the Louisiana state assembly. The already existing Medical College of Louisiana, which had been founded 13 years earlier as an independent institution, became the Medical Department of the University; the other two departments provided for in the act of founding were law, which today is the Tulane Law School, and letters and natural sciences, which today is Tulane College.
Four years after its founding, in 1851, the College formally opened as the University's "Collegiate Department," with 12 freshmen and two sophomores and a faculty of seven, who taught such subjects as chemistry and mineralogy, classical languages and literature, commerce, French language and literature, geology, Hebrew and Oriental languages, and mathematics and natural philosophy. The College awarded its first Bachelor of Arts and Science degrees in 1857. The University's campus was located at that time on Common Street in downtown New Orleans and consisted of a central, Grecian-style building, which housed the Medical Department, and matching east and west wings, which housed the Collegiate and Law Departments.
The College was closed during the 1860s and '70s as a result of the dislocations caused by the American Civil War. When it reopened in 1878, it was relocated from the complex of buildings on Common Street to the Mechanics Institute Building on Dryades Street (now University Place), around the corner from the main campus.
In 1884, as a result of the gift of millionaire philanthropist Paul Tulane, the administrators of the Tulane Educational Fund assumed responsibility for the University of Louisiana, which was privately endowed at that time and named "The Tulane University of Louisiana." At the same time, the College was named Tulane College, and the Mechanics Institute Building was named Tulane Hall. The faculty of the old Collegiate Department of the University of Louisiana continued as the faculty of Tulane College, and in October of 1884, 73 students registered in the newly named College. With the naming came important changes in the academic program as
well. Students were permitted to elect a particular course (classical, commercial, literary, mathematical, mechanical, or natural scientific), but within each course the requirements were fixed. The classes were divided into the familiar freshman, sophomore, junior, and senior designations, and the undergraduate program was set at four years.
In meetings of the Board of Administrators throughout the late 1880s, the inadequacy of the Common Street campus was regularly discussed, and in 1891 and '93, the Administrators began the purchase of the property that today is the uptown campus along St. Charles Avenue. At the same time, the Administrators resolved to reorganize Tulane College. Courses in engineering and applied science were removed from the curriculum of the College, and a separate College of Technology, now the School of Engineering, was established; concurrently, Tulane College was renamed the College of Arts and Sciences. In 1894 the College was relocated from the downtown campus on Dryades Street to Gibson Hall, originally the Arts and Sciences Building, which had been constructed specifically for the College and is now the University’s main administration building.
In the early twentieth century, the Colleges of Arts and Sciences and Technology were consolidated for a brief period into the Academical Colleges; in 1911 they were again separated into independent divisions.

In 1988 the separate faculties and curricula of the College of Arts and Sciences and the H. Sophie Newcomb Memorial College - the University's liberal arts and sciences college for women, which had been founded toward the end of the nineteenth century - were merged, and the Faculty of the Liberal Arts and Sciences (LAS) was created. Men and women now attend class together and are taught a common course of study by a single faculty. In 1989 the College's administrative offices were relocated from Gibson Hall to the Social Sciences Building, one of the oldest buildings on the uptown campus, constructed in 1901 as the original refectory, or commons. In 1993 the Administrators voted to restore the College's late-nineteenth-century name and change its formal name to "The Paul Tulane College."
In the 150 years since its founding, the College has continued to subscribe to a few basic principles: above all, a conviction about the enduring value of the liberal arts and sciences curriculum and a justifiable pride in the College's distinction, long and celebrated history, and the accomplishments of its students and alumni.

## TULANE COLLEGE TODAY

Today Tulane College enrolls some 1,600 men pursuing the degrees of Bachelor of Arts, Bachelor of Fine Arts, and Bachelor of Science. The College is served by the Faculty of the Liberal Arts and Sciences (LAS), which numbers 300 and teaches in both Tulane and Newcomb Colleges; students may major in any of more than 40 fields of concentration. Students in the two liberal arts colleges attend class together, are taught a common curriculum, and live, if they choose to, in coeducational dormitories; their everyday experiences are coeducational ones. Yet, precisely because Tulane and Newcomb Colleges remain administratively independent from each other, each retains a sense of its own history and traditions. Tulane College students therefore benefit from belonging to two communities simultaneously: a small college that maintains its own distinctive identity and provides close personal attention, and the larger university community. Moreover, Tulane College is only one of 11 divisions that make up Tulane University. In addition to the two liberal arts and sciences colleges, there are, at the undergraduate level, schools of architecture, business, and engineering. As undergraduates, Tulane College students may take a number of courses in the other undergraduate divisions and may minor in architecture, business, or engineering while majoring in a liberal arts discipline; in that way, their curriculum is supplemented and enriched by the offerings of the other undergraduate schools and colleges.
The College is organized into the Office of the Dean, the Office of the Associate Dean, and the Office of Student and Alumni Programs.

## OFFICE OF THE ASSOCIATE DEAN OF TULANE COLLEGE

Tulane College offers a wide range of services designed to complement the formal academic programs offered by the LAS Faculty and the other faculties of the University. The Office of the Associate Dean provides an extensive array of student academic support services. The Associate Dean and academic advisers are regularly available to talk with Tulane College students about their scholastic standing and offer advice on matters of an academic or personal nature. They monitor students' progress toward the degree, audit transcripts routinely to ensure that students in the College are selecting the appropriate courses and fulfilling academic requirements, and assist students in anticipating potential academic problems and determining reasonable solutions. The Office of the Associate Dean also coordinates the faculty advising program.

The Office of the Associate Dean provides administrative support for the Tulane College Honor Board, which is responsible for ensuring that the College's principles of academic integrity are upheld. The Honor Board, which consists of representatives of each of the four classes, hears the cases of Tulane College students charged with violating the College's Honor Code. The chairman and vice-chairman of the Honor Board have the particularly important responsibility of chairing the hearings.

## OFFICE OF STUDENT AND ALUMNI PROGRAMS

Tulane College Student and Alumni Programs complement both the formal curricular offerings of the Faculty of the Liberal Arts and Sciences and the College’s academic advising services. The programs have two principal objectives: to provide for student-student, student-faculty, and student-alumni interactions in informal settings; and to afford opportunities to apply and exercise the intellectual skills acquired in the classroom, and thereby demonstrate the virtues and benefits of a liberal arts education.
Tulane College cocurricular academic programs extend the boundaries of the classroom and provide opportunities for experiential learning. Programs include: The David Cameron Taylor Memorial Summer Travel and Enrichment Program, established by J. Edward Taylor '42, M.D., offering undergraduates the opportunity to travel to consult scholarly materials or undertake unusual and enriching intellectual experiences; The Dean's Coffees, offering students in the College the opportunity to meet with faculty representatives from the various academic departments to explore the liberal arts and sciences disciplines; The Katharine and Robert M. Devlin '64 Internship Program, offering undergraduates the opportunity to intern with alumni of the College or in a liberal arts-related field; and The Tulane College Summer Scholars Program, offering undergraduates the opportunity to undertake research projects under the direction of a faculty mentor.

Tulane College communications and publications programs apprise members of the College's constituencies of important activities and developments at the College and beyond. Publications include: Tulane College: A Guide for Parents and Families, an introduction to the College for members of the College’s parent body; and The Tulane Collegian, a semi-annual newsletter on the College and College events, including profiles of distinguished alumni and accomplished students.

Tulane College student and alumni activities and programs celebrate the College's history, its students and student leaders, and its alumni. Programs include: The John J. Witmeyer III '68 Dean's Colloquium, a semi-annual occasion when distinguished Tulane College alumni return to campus, hold formal "master classes," and meet with students in an informal setting and converse with them about careers and professions; Tulane College Homecoming, annual events for Tulane College students and graduates, including alumni panel discussions and networking receptions that provide students an opportunity to meet graduates in a variety of professions; The Tulane College Leadership Caucus, an organization of the presidents of the College's own student organizations and Tulane College students serving in leadership positions in University-wide organizations; and The Tulane College Senior Banquets, occasions for students in the College to meet members of the College administration and share observations about their experiences at Tulane.

A complete inventory and full description of programs is available from the Office of Student and Alumni Programs.

There is a wide range of extracurricular organizations open to Tulane College students, both within the College and in the larger University community. Those specific to Tulane College are supported by the Office of Student and Alumni Programs. The Tulane College Senate is the College's own student government organization. Each year it offers a forum on choosing a major; organizes pre-game festivities for athletic events; publishes a College newsletter; undertakes worthwhile community service projects; recognizes the accomplishments of outstanding local, national, and international figures with the Award for Distinguished Achievement in the Arts and Sciences; and honors members of the Tulane University faculty with a series of prizes. The senate also represents student opinion to the College administration.
Each of the four classes within the College also has its own officers. The class president and vice president are members of the College senate. They play an important ceremonial role at the College's spring commencement ceremony and are featured speakers at the ceremony.

Tulane College students are active in a remarkable array of extracurricular activities beyond the College. Recently, for example, Tulane College students have served as president of the Associated Student Body, the University-wide student government organization, and as president and vice-president of the Undergraduate Student Government. All had earlier served in the Tulane College Senate, and the experience gained within the College thus enabled them to move on to positions of greater responsibility within the larger University community. Similarly, a number of members of the University's football team have been Tulane College students, and Tulane College students have served on the editorial board of The Tulane Hullabaloo, the Universitywide student newspaper, and in many other University-wide organizations.

## YOUR FUTURE

Tulane College alumni number more than 19,000, the largest number of any of the University's eleven schools and colleges. Many Tulane College graduates are interested in pursuing advanced degrees at the University's own graduate and professional schools. For example, at the Tulane Medical School, widely regarded as one of the nation's finest, almost one-fifth of the entering class is made up of alumni of Tulane's undergraduate divisions, who outnumber graduates of all other colleges and universities.
The combination of rigorous academic training in basic intellectual skills and extracurricular opportunities that permit our students to acquire leadership experience enables our graduates to fare extremely well in a remarkable range of careers and professions. The College’s alumni body includes some of the nation's most distinguished figures in such fields as business, professional sports, the creative and performing arts, television and film, government and public life, higher education and scholarship, journalism and publishing, and medicine. Among Tulane College alumni are the late Hale Boggs '35, United States Congressman (Democrat, Louisiana) (1941-43 and 1947-73), House Majority Whip (1962-71), and House Majority Leader (1971-73); Dr. Michael DeBakey '30, Chancellor Emeritus, Professor of Surgery, and Chairman of the Department of Surgery (retired) at Baylor College of Medicine and one of the most distinguished heart surgeons in the world; the late Marion J. Epley, Jr. '29, President and Chairman of the Board of Texaco (retired); distinguished senior faculty members at Princeton University and the Universities of Chicago and California at Berkeley; Thomas N. James '46, M.D., Director of the World Health Organization Cardiovascular Center; Will E. Leonard, Jr. '56, Chairman (1975-76) of the International Trade Commission; United States Congressman G. Eugene Taylor '76 (Democrat, Mississippi); Henry A. Millon '47 '49, Dean of the Center for Advanced Study in the Visual Arts at the National Gallery in Washington, D.C., and Director (1974-77) of the American Academy in Rome; three winners of the Pulitzer Prize; William B. Monroe '42, Moderator and Executive Producer (retired) of Meet the Press; the late Bruce Paltrow '65, Emmy Award nominee and television and film producer, writer, and director, whose credits include The White Shadow and St. Elsewhere; Timothy J. Robbie '77, former President of the Miami Dolphins; Muhamed Sacirbey '78, former Ambassador to the United Nations from Bosnia and Herzegovina; the late Howard K. Smith, Jr. '36, Co-anchorman of The ABC Evening News and moderator of the 1960 Kennedy-Nixon debate and the 1980 Carter-Reagan "Great Debate"; and Robert O. Zeleny '52, Publisher and Editor-in-Chief (retired) of The World Book Encyclopaedia and allied products. In them, the College takes great pride.

## FACILITIES SERVING TULANE COLLEGE

The building housing the College's administrative offices was renovated so that the College could better address the needs of its students. In addition to providing study space and increased space for informal gatherings of Tulane College students and LAS Faculty members, the renovation enables the College to undertake programmatic initiatives. Among such initiatives are expanded internship/externship opportunities that provide Tulane College students with practical work experience prior to graduation. Such experience facilitates their search for full-time professional
employment when they graduate. In addition, the renovation permits the College's two principal student organizations, the College Senate and Honor Board, to maintain offices within the College building. Finally, the renovated building contains an electronic classroom that allows Tulane College students and students in other divisions of the University to make greater use of the revolutionary new electronic-information technologies that are transforming higher education.
Encircling the College's administrative offices on Tulane's historic front campus are many of the academic and administrative facilities that serve the students of Tulane College. Toward Freret Street, at the end of the quadrangle that is the University's original uptown campus, is Alcée Fortier Hall whose name honors Alcée Fortier, D.Litt., one of the College's most eminent faculty members of the late nineteenth and early twentieth centuries. With the renovation and expansion of adjoining Percival Stern Hall, Fortier became part of the University's state-of-the-art environmental sciences complex. Percival Stern currently houses the LAS Departments of Astronomy, Cell and Molecular Biology, Chemistry, Physics, and Psychology.
On the opposite side of the quadrangle from the College's administrative offices are the Mechanical Engineering Building, which houses Educational Resources and Counseling and Financial Aid, and the Richardson Building, which houses the University's computing services.

At the end of the quadrangle toward St. Charles Avenue are Dinwiddie Hall, whose name honors Albert Bledsoe Dinwiddie, AM., Ph.D., LL.D., Professor of Mathematics and Dean of the College from 1910-18 and subsequently President of the University; it houses the LAS Departments of Ecology and Evolutionary Biology and Geology; Gibson Hall, which was constructed specifically for the College in 1893-94 and now houses the LAS Department of Mathematics and the Offices of Admission, Tulane Summer School, and the University Registrar, as well as other University administrative offices; and Tilton Memorial Hall, which houses the LAS Department of Economics and the Murphy Institute of Political Economy.
Adjoining the College's administrative offices toward St. Charles Avenue are the Norman Mayer Building, which houses the LAS Departments of English and Political Science and the Tulane Honors Program, and F. Edward Hébert Hall, which houses the LAS Department of History.

## HONOR SOCIETIES

The University has chapters of many honor societies. Phi Eta Sigma honors freshmen in all divisions of the University. Omicron Delta Kappa is a junior-senior honor society for students with exceptional abilities in scholarship and leadership. The Society of Sigma Xi is an honor society that stimulates scientific research. Phi Beta Kappa recognizes outstanding scholarship among graduating seniors. There are also honor societies for students with special academic and professional interests.

## TULANE COLLEGE AWARDS

Through a number of awards and prizes, Tulane College recognizes students who, by achieving academic excellence, embody the highest goals of the institution. Prizes are awarded by the appropriate departmental and College committees and are presented at a special award ceremony at commencement time.

The William Wallace Peery Medal for Academic Excellence was established in 1964 by Mrs. Peery in memory of her husband, the late Dr. William Wallace Peery, Professor of English and Dean of the College from 1955-64. It is awarded annually to the graduating senior in a four-year program who, in the judgment of the Committee on the College, has achieved the most distinguished scholastic record. In selecting the recipient of this medal, the committee takes into consideration not only grades but also selection of courses. Preference is given to records exemplifying the educational philosophy of the College, which stresses breadth as well as depth of learning and encourages the student to work at the level of his greatest capacity.
The Buchanan Award is awarded to the outstanding sophomore in mathematics.
The Louis Bush Medal was established in 1882 by Louis Bush and is awarded for the best essay in French.

The Economics Department Senior Award is presented to an outstanding graduate of the College.

The Alcée Fortier Memorial Prize was established in 1923 by the Executive Committee of the Alumni Association. It is awarded for excellence in French.

The Gerald S. Gussack '75, M.D., Award was established in 1997 by Professor Joan W. Bennett. It is awarded to the most outstanding Tulane College senior in cell and molecular biology.
The Aaron Hartman Medal in Psychology was established in 1930 by request of Mrs. Rosa Chan Hartman in memory of her husband. It is awarded for excellence in psychology.
The Henry Award was established in 1992 and is offered to a sophomore major or minor who has demonstrated excellence in and enthusiasm for the study of French.

The Joseph J. Kyame Physics Award, established in 1990 by the physics faculty, is awarded to a senior for excellence in physics.
The Charles Oscar Maas Prize in French and Italian is awarded for the best essay in French.
The Montgomery History Prize, established in 1922 by Mr. Richard Montgomery, Jr., is awarded to a senior for excellence in history.
The Robert Wauchope Award was established in 1981 in memory of Robert Wauchope, a professor of anthropology. It is awarded for excellence in anthropology.
In addition, Tulane College shares a large number of awards and prizes with Newcomb College; they are listed in the Liberal Arts and Sciences Policies and Programs section.

## Liberal Arts \& Sciences

## ACADEMIC ADVISING

Students in Tulane College and Newcomb College have varied advising resources available to them. Prior to registration for the first semester students are assigned to an academic advisor in the Associate Dean's office. These advisors are able to answer questions that arise during the initial period of adjustment to the college environment. Academic advisors offer their students information and advice about matters such as selecting appropriate courses, maintaining satisfactory progress, and choosing a major.

Each department and program within LAS has a faculty member available each semester to provide students who have not declared majors with information about the courses, majors, and opportunities available within that department or program. These departmental advisors are available to meet with interested students at a scheduled time each week. When students declare a major, which they must do by the start of the fourth semester, they are assigned to a faculty advisor in the major department or program. The faculty advisor helps the student design a program in the chosen field of study.
The following groups have special advisors in addition to their regular faculty advisors and academic advisors: students from other countries, the director of the International Student Center; prelaw students, the prelaw advisor; premedical students, the health professions advisor; service personnel and veterans, the registrar.
The role of advisors is to give information and, when appropriate, to offer opinions or make recommendations. Students have the responsibility for making their own decisions, monitoring their progress toward the baccalaureate degree, and meeting all degree requirements.

## DEGREES

The degrees offered differ slightly in requirements but expose the student to a wide range of thought, fact, and human experience. Such a liberal education broadens a student's knowledge and awareness of each of the major areas of human understanding into which the disciplines are divided: humanities and fine arts, social sciences, and sciences and mathematics. As an outcome of a liberal education, the student is prepared for a constructive role in society and for continued learning that contributes to a productive career and a rewarding personal life.

Tulane College and Newcomb College offer the bachelor of arts (B.A.), bachelor of science (B.S.), and bachelor of fine arts (B.F.A.) degrees. Although students usually complete the requirements for one degree, some elect to complete two degrees. Additionally, joint-degree programs involving the completion of degree requirements in either Tulane or Newcomb and another college or school also are available. Some of these programs allow a student to begin work toward a professional degree in the fourth year of college.

The degrees awarded by the colleges depend on the major program(s) completed by the student. Candidates completing a major program in the humanities or the social sciences receive the B.A. degree and those completing a major program in the fine arts (art, music, and theater) receive either the B.A. or the B.F.A. degree. The B.S. degree is awarded to candidates completing major programs in the sciences and in mathematical economics. Candidates completing major programs in anthropology, earth science/geology, economics, mathematics, and psychology receive either the B.A. or the B.S. degree.

## REQUIREMENTS FOR DEGREES

The credits presented for the degree must satisfy the proficiency, distribution, writing, and major requirements described under "Curriculum" in this section. Each candidate for the bachelor of arts, bachelor of science, or bachelor of fine arts degree is required to have completed 120 credits of academic work and to have achieved a 2.000 cumulative grade-point average at Tulane and in the major. At least 66 of the 120 credits must be earned in courses above the 100 level. To qualify for two baccalaureate degrees from either of the liberal arts and sciences colleges, a student must complete a minimum of 150 credits, at least 82 of which must be above the 100 level, and satisfy all requirements for each degree and each major. A candidate also must file a degree application for each degree at least two semesters prior to the anticipated date of graduation.
Students who are not exempted by advanced placement must complete the first-year writing proficiency requirement by the end of the second semester of enrollment in the College. Students who have not completed the requirement and who are not enrolled in an appropriate first year writing course in the second semester may not early register for the following semester and may not return to the College until this requirement has been fulfilled. Unless exempted from the foreign language proficiency requirement, students should register for an appropriate foreign language course in the first semester and remain enrolled each semester until they have fulfilled the proficiency requirement. Students must complete the foreign language proficiency requirement by the end of the fifth semester of enrollment in the College. Students who have not completed the requirement and who are not enrolled in a 203-level course (or equivalent such as H204 or 205) in the fifth semester of enrollment will not be permitted to register for the following semester. They may not enroll in the College until this requirement has been fulfilled. Students who are not exempted by advanced placement must complete the mathematics proficiency requirement by the end of the fifth semester of enrollment in the College. Students who have not completed the requirement and who are not enrolled in a course approved for completion of the mathematics proficiency requirement in the fifth semester of enrollment will not be permitted to register for the following semester and may not enroll again in the College until the requirement has been completed. These policies apply to all students, including those who contemplate leaving for any reason prior to graduation.
The recommended semester program consists of four or five courses totaling 15-18 credits.
A candidate for a degree from either of the colleges must have completed the last 27 credits of course work in residence in the College and a minimum of 60 credits at Tulane University. Students who participate in a Tulane University study abroad program or in the Washington Semester program through Tulane in the senior year are considered to be meeting the senior residency requirement, as they are earning Tulane grades and credits.

Students may count a maximum of twelve credits of summer work at Tulane, or up to six credits of summer work from other institutions, as part of their last 27 credits that must be completed in residence.

Once a semester, each student receives a computerized degree audit showing all completed courses and indicating the general degree requirements and major requirements that remain to be fulfilled before graduation. Students should discuss their degree audits with their advisors and report errors to the associate dean's office as soon as possible. Each student is responsible for knowing the exact degree requirements as stated in the Liberal Arts and Sciences section of this catalog and for enrolling in appropriate courses to satisfy those requirements.

## ADVANCED STANDING AND EXEMPTION

Whereas the University awards placement or credit to students who have earned sufficiently high scores on AP or IB exams, students not in the programs also may have special expertise in a subject area and may already be proficient in English or in a foreign language. Consequently, these departments offer proficiency examinations. Students who demonstrate proficiency in English receive credit appropriate to the course from which they are exempt. Students who prove proficiency in a foreign language through a sufficiently high score on the College Board Achievement Test, or on the departmentally administered proficiency exam, are exempted from the language requirement, with no credit awarded. Exemption and credit may be given in other departments on a individual basis.

## PROFICIENCY COMPONENT

The Liberal Arts and Sciences curriculum is built on a solid framework of the fundamental literacies of our time: spoken and written English, a foreign language, and mathematics or a comparable skill. Students may meet these requirements entirely or in part by advanced placement credit, departmental tests, or successful completion of university course work. Courses taken to satisfy the proficiency component do not count toward the distribution component.

## English

Proficiency in English may be satisfied with a passing grade in an approved first-year writing proficiency course, by an Advanced Placement score of 4 or 5, or by a score of 5, 6, or 7 on the higher-level International Baccalaureate English exam. Freshmen who have an AP score of 4 or 5 receive four credits and are not required to take further work in English. Freshmen who have not taken the AP examination but have a verbal SAT of 670 or better or a verbal ACT score of 29 or better and excellent secondary school grades in English are invited to take an English department proficiency examination during orientation. Those who score the equivalent of $\mathrm{B}+$ or better receive four credits and are not required to take further work in English.
Credit earned in UENG 099 or UENG 100 will not satisfy the proficiency requirement and may not be applied toward a Newcomb or Tulane College degree.

## Foreign Language

Proficiency in a foreign language may be satisfied with a passing grade at the 203 level by an AP score of 4 or 5 , by an SAT II Subject Test score of 640 or above, or by the equivalent score on a Tulane-administered test. To receive credit in foreign language courses, a student must be placed by the appropriate department in an initial course. Only the department chair or designate may change a student's placement. After placement or the successful completion of a proficiency-level course, a student cannot earn credit in a lower-level course in the same language.

## Mathematics or Comparable Subject

For candidates seeking the B.A. or B.F.A. degree, proficiency in this requirement may be satisfied by passing one course in mathematics, or symbolic logic (Philosophy 121); by an advanced placement score of at least 4 on either the Mathematics AB or BC test. Mathematics 119 may not be counted toward the mathematics proficiency requirement.

For candidates for the bachelor of science degree, six credits of mathematics are required, excluding symbolic logic and Mathematics 115, 119, and 140. However, the combination of Mathematics 115 and 116 (subject to the restrictions listed in Mathematics Introductory Courses) may count as one course toward this requirement. The second mathematics course may be used in partial fulfillment of the sciences and mathematics distribution requirement. Students in the B.S. program may satisfy all or part of the requirement with the appropriate AP score(s). A score of 4 or 5 on the Advanced Placement AB exam or a score of 3 on the BC exam earns credit for Math 121. A score of 4 or 5 on the BC exam earns credit for MATH 121 and 122. Alternatively, students who earn an acceptable score on the departmental examination will receive four credits. Because some Liberal Arts and Sciences departments may recommend particular mathematics courses to supplement their majors, students are advised to consult their prospective major department's listing in this catalog.

## DISTRIBUTION COMPONENT

The academic disciplines of the Liberal Arts and Sciences are divided into three groups: humanities and fine arts, social sciences, and sciences and mathematics. To ensure that a student receives a liberal education with exposure to a broad range of knowledge, each student must complete courses distributed across the disciplines. Of the nine courses, one must be chosen from a list of courses in Foundations of Western Culture, and one must be chosen from a list of courses in Non-Western and Latin American Cultures. Courses taken to satisfy major requirements also may satisfy the distribution component.

## Humanities and Fine Arts

Three courses (at least 9 credits) must be selected from at least two different disciplines, including at least one course (at least 3 credits) in the fine arts (art, dance, music, theater) and one course (at least 3 credits) in the humanities: Asian languages, classics, classical languages, communication, English, French, Germanic languages, Italian, Jewish studies, linguistics, philosophy, Portuguese, Slavic languages, Spanish. One and two-credit courses in dance and/or in applied music totaling at least three credits may count as a fine arts course.

## Social Sciences

Three courses (at least 9 credits) [B.F.A. majors: two courses (at least 6 credits)] must be selected from at least two different disciplines: anthropology, economics, history, Latin American studies, political economy, political science, sociology, women's studies.

## Sciences and Mathematics

Three courses carrying at least 3 credits each [B.F.A. majors: two courses carrying at least 3 credits each] selected from at least two different disciplines: astronomy, cell and molecular biology, ecology and evolutionary biology, chemistry, geology, mathematics, physics, psychology. At least one of these courses must be a laboratory course from the approved list.

## WRITING REQUIREMENT

The Writing Requirement may be satisfied with a passing grade in at least one approved Writing Course beyond the proficiency requirement in English. Only courses on the approved list of writing courses may satisfy this requirement.

## MAJOR COMPONENT

A major field of study gives each student the opportunity to explore a single area of inquiry in depth and to gain the self-confidence derived from mastery of a subject. Major programs are listed below and must be selected no later than the beginning of a student's fourth semester of college study.

Students may elect to complete more than one major. They must complete all courses for each major and a total of at least 18 different courses in the two majors. Students declaring a second major must submit their programs of study to the associate dean for approval. At least half of the coursework required for majors must be completed at Tulane University.
Special programs such as premedical, prelaw, teacher certification, and ROTC are not major programs. Special program requirements or options are undertaken in addition to or in conjunction with the major program.

## MAJOR PROGRAMS

African and African Diaspora Studies
American Studies
Anthropology
Art History
Art Studio
Biological Chemistry
Cell and Molecular Biology
Chemistry
Classical Studies
Greek
Latin
Communication
Dance
Earth Science
Ecology and Evolutionary Biology
Economics
English
English Writing
Environmental Geoscience
French
Geology
German Cultural Studies

German Language and Literature<br>History<br>Italian<br>Italian Studies<br>Jewish Studies<br>Latin American Studies<br>Linguistics<br>Literature<br>Mathematical Economics<br>Mathematics<br>Medieval Studies<br>Music<br>Music Performance or Composition<br>Musical Theatre<br>Neuroscience<br>Philosophy<br>Law, Morality, and Society<br>Language, Mind, and Knowledge<br>Physics<br>Political Economy Concentrations<br>Law, Economics, and Policy<br>Moral and Historical Perspectives<br>International Perspectives<br>Political Science<br>American Politics and Policy<br>International Relations<br>Portuguese<br>Psychology<br>Religious Studies<br>Russian<br>Russian Studies<br>Sociology<br>Spanish<br>Theatre<br>Women's Studies

## COORDINATE MAJOR PROGRAMS

Some coordinate major programs also are available. These interdepartmental majors require that a major from the preceding list also be completed. Students must complete all courses for each major and a total of at least 18 different courses in the two majors.

## Asian Studies

Cognitive Studies
Environmental Studies Concentrations
Environmental Policy
Environmental Science
International Development

## SELF-DESIGNED MAJORS

A student with a 3.000 cumulative grade-point average may construct a major program by grouping courses from different academic departments. Such self-designed majors must include at least 10 courses, more than half of which must be at the 300 level or above; no more than two courses below the 300 level may be taken in any one department. A student wishing approval of a self-designed major must prepare a proposal including the title of the major, courses, rationale, and appropriate departmental approval. This proposal must be submitted for review to the Committee on Academic Requirements before the end of the student's sixth semester. As these proposals often require revision and resubmission, they should be submitted earlier than this deadline.

## MINOR COMPONENT

The liberal arts and sciences colleges allow students to complete one or two minors. The minor is optional and designed to give structure to the study of a secondary field of interest chosen by the student. Students must complete at least 24 credits in the major which do not overlap with the minor. Students who elect to complete the requirements for a minor must earn a grade-point average of at least 2.000 in courses counting toward that minor. No courses counting toward the student's first minor will count toward the student's second minor.
Individual departments may have additional restrictions on major-minor overlap. Students should consult the department listings for additional information.

## Minor Programs

African and African Diaspora Studies
Architectural Studies
Art History
Art Studio
Brazilian Studies
Business
Cell and Molecular Biology
Chemistry
Classical Studies
Greek
Latin
Ancient Culture
Computer Science
Cultural Studies
Dance
Earth Science
Ecology and Evolutionary Biology
Economics
Engineering Science
English
Environmental Geoscience
Environmental Studies
Film Studies
French
Geology
German
History
International Development
Italian
Italian Studies
Jewish Studies
Latin American Studies
Mathematics
Music
Pharmacology
Philosophy
Physics
Political Science
Portuguese
Psychology
Religious Studies
Russian
Sociology

Urban Sociology
Spanish
Theatre
Women's Studies

## SUPPLEMENTARY PROGRAM CREDITS

Newcomb and Tulane College students may apply toward their degree a maximum of 15 Supplementary Program Credits (SPC). The SPC component comprises courses taken in Tulane's professional schools, University College, ROTC, Exercise and Sport Sciences, Less Commonly Taught Languages (LCTL), and courses taken through the New Orleans Consortium. Courses taken at other colleges or universities through divisions or programs comparable to those listed here for which transfer credit is requested, are subject to the SPC limitation. A maximum of 9 SPC may be taken in courses offered exclusively through University College. Supplementary Program Credits may not be used to satisfy the proficiency or distribution components of the curriculum.

## JOINT-DEGREE PROGRAMS

Tulane College and Newcomb College offer a number of joint-degree programs. Like the standard programs, these joint-degree programs provide a liberal education in the arts and sciences; however, they also provide special competency in, or more pre-professional education for, a particular professional field.

## Joint-Degree Programs with Architecture or Engineering

Students may pursue concurrently bachelor's degrees in the School of Architecture or in the School of Engineering and in either of the liberal arts and sciences colleges but will be in residence in only one college at a time. To receive degrees from either of the Colleges of Architecture or Engineering, a student must complete 96 credits in courses described in the Liberal Arts and Sciences section of the catalog and fulfill all proficiency, distribution, and major requirements. Courses taken as supplementary program credits may not be included in these 96 credits, and at least 30 credits counting for the major in the colleges must be independent of credits used to satisfy requirements in the other degree program.
To be eligible for these programs, students must obtain approval from their associate dean by the sixth semester of enrollment. Although the senior-year residency requirement is waived for those entering the program, students are required to complete a minimum of two consecutive semesters (30 credits) in residence in Tulane College or Newcomb College. Joint-degree candidates must receive both degrees concurrently, and the degree in liberal arts and sciences will not be awarded until the requirements for the second degree have been met. Students who do not complete a second degree in one of the other schools must meet all requirements for a degree from the liberal arts and sciences colleges.

## Joint-Degree Programs in Business, Law, Medicine, and Public Health and Tropical Medicine

Tulane College and Newcomb College allow qualified students who have completed three years of undergraduate work to begin studies in the Tulane Schools of Business, Law, Medicine, or Public Health and Tropical Medicine. A student who completes the junior year in residence in either of the colleges (not on the Junior Year Abroad Program) and then begins study in one of these schools may receive the bachelor of arts, bachelor of science, or bachelor of fine arts degree from the liberal arts and sciences college after satisfactorily completing one year of full-time professional study.
To enter one of these programs, students are required to be accepted by the professional school and to obtain approval from the associate dean by the end of the sixth semester of study. Jointdegree candidates are required to complete 90 credits during three years of study in the liberal arts and sciences colleges before starting work in the professional school. Because the fourth year of
study will consist of supplementary program credits (SPC) completed in the professional school, no SPC may be counted among the 90 credits that must be completed by the end of the third year of undergraduate study. Candidates must meet all proficiency, distribution, and major requirements for their degree programs in the liberal arts and sciences colleges. Students in jointdegree programs must have completed 120 credits by the close of their fourth year of study in order to receive a degree from either of the liberal arts and sciences colleges. Students who fail to do so will be required to attend Tulane Summer School to make up their credit deficiency before beginning their second year in the professional school.
Transfer students must complete two years of undergraduate work at Tulane to be eligible for a joint-degree program. All students must file an application for degree at least two semesters prior to the anticipated date of graduation. Joint-degree candidates for May graduation may have to defer graduation until August if grades from the professional school are not available in time for degree certification in May.
Every course taken during the first year in the Schools of Business, Law, Medicine, or Public Health and Tropical Medicine must be passed, and the student's performance in the first year's work in the professional school must be of sufficient quality for advancement to the second year. A student who fails to meet this requirement may become a candidate for a degree in one of the liberal arts and sciences colleges after satisfactorily completing the second year in the Schools of Business, Law, Medicine, or Public Health and Tropical Medicine.

If a student in a joint-degree program is a candidate for honors, the grade-point average used to determine the eligibility includes the applicable work done in the professional school.

## CONCURRENT ENROLLMENT

College credits earned by Tulane students when they were enrolled in high school will be considered for transfer to Tulane only when these credits were earned in courses composed primarily of degree-seeking college students and listed in a college catalog. Courses sponsored by a college or university but taught at high schools by high school teachers in a class composed primarily of high school students will not be considered for Tulane credit even if a college transcript is issued for these courses. In order for transfer credit to be awarded for courses completed by a student prior to matriculation in college, the student must have earned a grade of B- or higher.

## PREMEDICAL AND PREPROFESSIONAL HEALTH PROGRAMS

While students are completing the regular baccalaureate curriculum of their choice, they may work concurrently to complete the courses required to enter programs in the health professions, including dentistry, medicine, optometry, osteopathy, podiatry, and veterinary medicine. Preparation for such programs normally includes two semesters each of biology (with laboratory), general chemistry (with laboratory), organic chemistry (with laboratory), and physics (with laboratory). Many schools have additional entrance requirements including mathematics and upper-level science courses. Because of variations in course requirements imposed by these professions, students should request specific information from schools in their fields of interest or from the health professions advisor.
Students interested in one of these professions may pursue a baccalaureate degree in any discipline. However, they should plan a course of study to meet the basic requirements of the professional school in the first three years. Students considering a career in a medically-related field should begin consulting the health professions advisor early in their undergraduate career to discuss available options in their choice of and preparation for a future profession.

## CREATIVE PREMEDICAL SCHOLARS PROGRAM

Particularly well-motivated and well-qualified sophomores in either college may apply to the School of Medicine through the Creative Premedical Scholars Program. Successful candidates complete the full four years of the normal baccalaureate program but are guaranteed admission to the School of Medicine upon graduation and enjoy special opportunities for study with its faculty while still undergraduates. Students are expected to follow an academically rigorous program while maintaining a high level of academic performance throughout their college careers. Only sophomores who complete both freshman and sophomore years at Tulane are eligible.

To be considered, students must complete two semesters (with laboratory) for each of the following: biology, general chemistry, organic chemistry, and physics. These courses must be completed at Tulane during the regular academic freshman and sophomore years with a cumulative grade-point average of 3.600 or better. Students with Advanced Placement (AP) credit in Biology should discuss their status with the Health Professions advisor.

## PRELAW PROGRAM

There is no standard prelaw curriculum that must be followed to qualify for admission into law school. A well-rounded, liberal arts and sciences education is the best preparation for the study of law, because such an education ensures exposure to a wide variety of ideas and leads to an understanding of the various social, political, economic, and cultural forces that have shaped laws and the societies they govern. Students should develop analytical reasoning and communication skills. Proficiency in writing is essential. Students considering law school are encouraged to begin consulting with the prelaw advisor early in their undergraduate career.

## PRELAW ACCEPTANCE PROGRAM

Particularly well-motivated and well-qualified juniors in either college may apply to Tulane Law School through the Prelaw Acceptance Program. Prelaw Acceptance Program candidates complete the full four years of the normal baccalaureate program, but are guaranteed admission to the Law School upon graduation. Students are expected to follow an academically rigorous program while maintaining a high level of academic performance throughout their college careers. Only students who complete all four years of college at Tulane (with the exception of the junior year abroad through Tulane) are eligible. (This program should not be confused with the 33 program, in which Tulane students are accepted to the Law School during the junior year and permitted to enroll at the Law School during what would otherwise be the student's senior year, receiving the baccalaureate degree after the first year of law school and the law degree after two additional years of law school.)
To be considered, students must provide a Tulane transcript showing normal progress (at least 30 credits per year) for at least five regular, full-time semesters of Tulane coursework, and evidence of in-depth study in at least one area. Students must present a cumulative grade-point average of at least 3.40 and a score on the Law School Admission Test (LSAT) of at least 161. Applications should be submitted between October 1st of the junior year and February 1st of the senior year. The LSAT may be taken anytime between June after the sophomore year and December of the senior year. The earliest point at which the Law School will offer admission occurs after the fall semester of the junior year.

## INTERNSHIPS FOR ACADEMIC CREDIT

Some departments offer internships for academic credit as part of the major. An internship combines a relevant academic component with experiential learning. The academic component may, for example, consist of a term paper, a number of short papers, or discussions of a number of books. Internships ordinarily are open only to those students completing a major in the department that will award the credit. Students participating in internships register for Internship Studies (course numbers 456, 457) within the appropriate department after having made initial arrangements with a professor who will sponsor the internship. Registration is completed in the academic department sponsoring the internship on TUTOR.

A student may not take a salaried position outside the university while earning credit for an internship, except where such an arrangement is required by the cooperating organization for insurance purposes. If a student must take a salaried position for this reason, a letter to this effect from the cooperating organization must be filed with the chair of the sponsoring department prior to the end of the add period.
Only one internship may be completed each semester. Students may earn a maximum of six credits for internships. The sponsoring professor will assign a grade for the internship at the close of the semester after evaluating its academic and experiential aspects. Internships offered through LAS departments are open only to juniors and seniors in good standing.
An alternative internship experience is offered to Newcomb and Tulane College students through the offices of the associate deans of the colleges. This internship was created to accommodate students seeking internships with organizations which require that interns earn credit for their experience. INTR 199 carries one credit, which will apply toward the degree but will not apply toward any proficiency, distribution, major, or minor requirement. Only one credit of INTR 199 may be applied toward the degree. INTR 199 must be taken on a satisfactory/unsatisfactory (S/U) basis and will count as one of the three allowable S/U courses. Students who have completed fewer than 30 credits may not register for this course. Students desiring to register for INTR 199 must receive approval in the associate dean's office before registering for the course.

## INDEPENDENT STUDIES

Many departments offer to a limited number of students creative opportunities for independent study under the direction of a faculty member. The work may take the form of directed readings, laboratory or library research, or original composition. Instead of traditional class attendance, the student substitutes conferences, as needed, with the director.

## SERVICE LEARNING

Courses that offer a service learning experience are available through various departments. In service learning, the student completes a community service activity that is tied closely to the academic content of the course. Some courses will require a service activity of 20 to 40 hours; others will offer students the option of an extra course credit for completing 40 hours of community service and an extra paper or project. Students complete a reflection component, such as a weekly journal or regular discussions of their community service experiences. Community sites for service learning include city schools, nursing homes, medical facilities, and other service and treatment centers. Students may apply a maximum of two credits of service learning toward their degree. More information can be obtained from the website of the Office of Service Learning at http://www.tulane.edu/ServLrng/main.html

## BACHELOR OF SCIENCE IN MANAGEMENT

The following requirements are specific to the A. B. Freeman School of Business. The Bachelor of Science in Management is a four-year program that involves two years in Tulane College or in Newcomb College and two years in the A. B. Freeman School of Business. Majors available in the B.S. in Management Program include accounting, finance, general business, information systems, legal studies in business, or marketing. Freeman School students may also petition to earn a double major or minor in the liberal arts and sciences. During the freshman and sophomore years, students in the liberal arts and sciences colleges who are interested in this program should complete a total of 19 academic courses, or a minimum of 62 credits.
The proficiency component includes four credits in an approved first-year writing proficiency course (English 101 or equivalent), 12 credits in one foreign language (through 203 level or equivalent), and six to eight credits in mathematics (111 or 114 and either 115 or 121). The distribution component is composed of three credits in humanities, three credits in fine arts, three credits in Psychology 100, 101 or 102, four credits of a laboratory science course, and twelve credits in social science: two social science electives, Economics 101 and 102 (or 103 and 104). From among the courses meeting the humanities, fine arts and social sciences distribution requirements and the liberal arts electives, one must be chosen from a list of courses in Foundations of Western Culture, and one must be chosen from a list of courses in Non-Western and Latin American Cultures.

During the sophomore year, prospective students for this program also must complete Financial Accounting 203, which is counted by the liberal arts and sciences colleges as supplementary program credit. Students who obtain equivalencies in proficiency courses will be required to substitute courses within the distribution component, according to the requirements for the B.A. and B.S. degrees in the liberal arts and sciences. Prospective business students are strongly discouraged from taking courses on a satisfactory-unsatisfactory basis. University College courses that begin with a "U," Exercise and Sport Sciences courses, Physical Education, and Education courses with the exception of EDUC 200, will not be accepted (as free electives or toward degree requirements) for the Bachelor of Science in Management.
During the sophomore year, preferably by the end of the fall semester, the student must file a BSM Admission Data Form and an Interdivisional Transfer to the BSM program. The Business School will accept students who are in good standing and have a minimum of a 2.00 cumulative grade-point average and a 2.00 Freeman prerequisite grade-point average. Freeman prerequisites are Accounting 203, Mathematics 111 or 114, Mathematics 115 or 121, Economics 101 and 102 (or 103 and 104), Psychology 100, 101 or 102.

## GRADUATE WORK

Undergraduates in either of the liberal arts and sciences colleges with a grade-point average of at least 3.33 in their major program may register, normally in the senior year, for up to six credits of 600- or 700-level courses not listed in this catalog, for credit toward a baccalaureate degree. Written recommendation of the course instructor, advisor, chair of the major department, the Dean of the College, and approval of the Dean of the Graduate School are required.

Graduate credit for such work, if passed with B or better on the Graduate School grading scale, may be awarded if the student is admitted to the Graduate School of Tulane. Recommendation from the chair of the graduate department and approval of the Dean of the Graduate School must be obtained by the student.

## PROVISIONAL GRADUATE CREDIT

A senior who completes all baccalaureate requirements before the end of the senior year and intends to enter the Graduate School of Tulane may apply for provisional graduate credit in up to, but not more than, 12 credits of both 600- and 700-level courses. These courses must be approved by the graduate department beyond the credits needed for the baccalaureate. Graduate credit for such work, if passed with B or better, will be awarded when the student is admitted to full graduate status in the Graduate School, upon recommendation of the graduate department chair and approval of the dean. These provisions do not apply to transfer of credits to or from other graduate institutions.
The University reserves the right to change any of its rules, courses, regulations, and charges without notice and to make such changes applicable to students already registered as well as to new students. Although all possible aid and direction should be sought from and given by faculty advisors, academic advisors, and deans, each student must accept full responsibility for knowledge of and compliance with the policies of Tulane College and Newcomb College and for the fulfillment of requirements for the course of study selected.

## 4+1 PROGRAMS

The Graduate School has developed " $4+1$ " programs in which Tulane students can obtain a master's degree within one year of completing the bachelor’s degree. Students who pursue this option take courses in the fifth year at a substantially reduced tuition rate. The " $4+1$ " program offers students in the liberal arts and sciences the opportunity to enhance and broaden their undergraduate experience, help them become more competitive for admission into graduate programs at other universities, and increase their potential in the job market. Fields of study in which these programs are offered include anthropology, applied sociology, art history, classics,
earth and environmental sciences, economics, environmental biology, environmental science, English, history, neuroscience, philosophy, political science, psychology, and Spanish and Portuguese.

## HONOR CODE

The Honor Code is administered by honor boards and the Student Academic Judiciary Committee, both composed of students and faculty. The honor boards convene to hear cases when a violation of the Honor Code is alleged. The board considers the evidence, determines guilt or innocence, and recommends penalties, ranging from probation to expulsion from the university. An Honor Board conviction becomes part of a student's permanent record.

## COURSE LOADS

The normal academic course load for all students is $15-18$ credits per semester. The student who completes 15-18 credits each semester can meet degree requirements in four years, graduating with 120 credits. The minimum course load is 12 academic credits per semester. Students must have registered for a minimum of 12 credits by the last day to add classes. Failure to do so will result in cancellation of registration. An exception to this regulation is made for seniors who, in their final semester, need fewer than 12 credits to graduate.
In any given semester, when registration opens for the next semester, students who have at least a 3.500 cumulative grade-point average may register for as many as 21 credits. After the close of a semester, students who have earned a grade-point average of 3.000 or better on 15 credits or more during that semester may register for as many as 21 credits. After the close of a semester, students who have earned a cumulative grade-point average of 3.500 may register for as many as 24 credits.
Students with a course load of fewer than 14 credits should realize that they cannot qualify for Dean's List, they risk falling behind their class level, and there is no reduction in tuition for course loads of 12 or more credits.

## CLASS STATUS

Class status is determined by the total number of earned credit hours; credit hours for currently enrolled courses are not included. Credit for coursework taken at another institution is included only after the transfer credit approval process is complete.

| Freshman | $0-24$ Earned Credit Hours |
| :--- | :--- |
| Sophomore | $25-56$ Earned Credit Hours |
| Junior | $57-86$ Earned Credit Hours |
| Senior | 87 or more Earned Credit Hours |

## CROSS REGISTRATION

Students in Newcomb and Tulane College may register for courses within the Arts and Sciences division of Loyola University, provided that the same course has not been offered at Tulane within the past year. Students must be registered for at least 9 credits of course work at Tulane in the semester of Loyola registration and may not use the Loyola credits to satisfy proficiency requirements. Additional restrictions also apply. Interested students should contact their associate dean's office.

## AUDITING COURSES

A student registered for a full-time course load (at least 12 credits) may audit an additional course without credit after completing formal registration and obtaining approval of the instructor for the course. Although credit is not granted for audited courses, such courses are considered part of the student's semester course load and are recorded on the student's permanent record. An audit
enrollment that results in an overload is not permitted unless the student is qualified for such an overload. An auditor who is absent excessively will be dropped without record.

## CLASS ATTENDANCE

Instructors are not authorized to excuse absences that extend calendar holidays. Only the student's dean may excuse such absences. A student who has excessive absences or ceases to attend a course without an official withdrawal will, at the instructor's request anytime during the semester and with the approval of the associate dean, be withdrawn from the course and receive a grade of WF. The instructor must have sent a notice of excessive absences before requesting that a student receive a WF grade.

## GRADES

University-wide information is given on p . xx . The following information pertains specifically to the liberal arts and sciences colleges.
WF Withdrawn failing; counts in grade-point average as a failing grade and earns no quality points
S Satisfactory; not counted in grade-point average but counted in earned hours
U Unsatisfactory; not counted in grade-point average and not counted in earned hours.
UW Unofficial withdrawal; counts in grade-point average as a failing grade and earns no quality points
Grades of WF are assigned by administrators and are computed in the grade-point average as if they were Fs. With the approval of the student's associate dean, an instructor may have a student who has excessive absences involuntarily dropped from a course with a WF grade after written warning at any time during the semester. In cases where students are suspended or expelled during the semester, W or WF grades may be assigned at the discretion of the instructors and the student's dean. A grade of W or WF also may be assigned for disciplinary penalties in connection with an honor-code or conduct-code violation. A student who ceases to attend a class but has not withdrawn officially will receive a UW. After the last day to drop without record and before the last day to drop a course, students who drop courses voluntarily will have W noted on their transcripts for each course dropped.

## SATISFACTORYIUNSATISFACTORY OPTION

Students who have completed 30 credits of college work and are in good standing may elect to take one course on a satisfactory-unsatisfactory ( $\mathrm{S} / \mathrm{U}$ ) basis per semester. They may count no more than three such courses toward degree requirements. The S/U option may not be used to satisfy proficiency, writing, laboratory, major, or minor requirements. The last date for designating or revoking the $\mathrm{S} / \mathrm{U}$ option is the deadline for dropping courses.
A student electing this option gets the academic credit for the course without affecting the gradepoint average as long as the work is at the C- level or above. A grade of $U$ is not counted in the grade-point average but carries no credit for the course. Students are cautioned that because a grade of S is not counted in the grade-point average, it will not count for the Dean's List, honors, or toward the 2.000 average required for graduation. Students registering for courses on a nongraded basis in other Tulane colleges or schools must register for the courses under the S/U option.

## DEAN'S LIST

The Dean's List is prepared after each semester and recognizes students who have earned a distinguished record in all of their subjects throughout the semester. A 3.500 average is required for freshmen and sophomores and a 3.667 for juniors and seniors. To qualify for the Dean's List,
a student must have been enrolled in 14 credits of letter-graded work, excluding courses taken on a satisfactory-unsatisfactory basis.

## QUALITY OF WORK REQUIREMENTS

## Continuation Requirements

Students who meet the minimum semester requirement of 12 passed credits, maintain at least a 2.000 cumulative grade-point average, and also earn the required number of credits to advance from one semester to the next are considered to be making progress toward the baccalaureate degree. Policies that apply to those students who do not meet these scholastic standards are described below. Students experiencing academic difficulty are advised to give particular attention to the appropriate paragraphs of the explanation of the quality-of-work rules that are summarized in the tables that follow the description.
At the close of the spring semester of the freshman year, students must have earned at least 12 passed credits with a cumulative grade point average of 1.500 , if they have been enrolled for one full-time semester, or 24 credits with a cumulative grade-point average of 1.750 , if they have been enrolled for two full-time semesters. At the close of the spring semester of the sophomore year, students must have earned at least 36 passed credits with a cumulative grade-point average of 1.830, if they have been enrolled for three full-time semesters, or at least 48 credits with a cumulative grade-point average of 1.900 , if they have been enrolled for four full-time semesters. At the close of the spring semester of the junior year, students must have earned at least 60 passed credits, if they have been enrolled for five full-time semesters, or 72 credits, if they have been enrolled for 6 full-time semesters, with a cumulative grade-point average of at least 2.000 . At the close of the following spring semester, students must have earned a grade-point average of at least 2.000 and must have earned at least 84 passed credits, if they have been enrolled for seven semesters, or 96 credits, if they have been enrolled for eight semesters. Standards for additional terms are given in the table below.

Students who have not met the continuation requirements at the close of a spring semester will be placed on academic probation. They may correct their academic deficiencies by attending one or more sessions of Tulane Summer School. Students on academic probation who do not enroll in Tulane Summer School or enroll there but do not correct their academic deficiencies will be placed on a probationary leave of absence for the following fall semester. In the spring semester of that academic year, they will be eligible to return to Tulane College or Newcomb College and will be continued on probation. Students on academic probation who have previously been placed on a one-semester probationary leave of absence and who do not correct their academic deficiencies by the close of Tulane Summer School will be dismissed from Tulane College or Newcomb College. Students may register for no more than 18 credits in Tulane Summer School during a single year.

Students who enroll in fewer than 12 credit hours without permission in the fall semester must make up that deficiency in credit hours during the following spring semester. If they do not do so, or if students enroll in fewer than 12 credit hours without permission in the spring semester, they will be placed on academic probation at the close of the spring semester. Normally, only students in the final semester of the senior year may, with the permission of the associate dean's office, enroll in fewer than 12 credit hours for that semester.

The requirements and conditions for meeting the continuation standards will apply to students completing full-time course loads and to those students who are allowed, in exceptional circumstances, to complete a part-time load in any fall or spring semester. Freshmen who, in exceptional circumstances, have had permission for part-time study and have not completed one full-time semester will be required to have a minimum grade-point average of 1.500 at the close of the spring semester.
Those students who have earned transfer, advanced placement, summer school, or any part-time credit at Tulane University should note that for every 12 such credits earned, the GPA requirement for continuation in good standing will be advanced the equivalent of one semester.

## Academic Probation and Continuation Standards Determined by:

| Full-Time <br> Semesters <br> Completed <br> at Tulane | Eligibility to <br> Continue in <br> Academic Good <br> Standing in the | Minimum <br> Cumulative <br> Credits Passed <br> at Tulane | Minimum <br> Cumulative <br> GPA <br> at Tulane |
| :--- | :--- | :--- | :--- |
| 1 | 2nd semester | 12 | 1.500 |
| 2 | 3rd semester | 24 | 1.750 |
| 3 | 4th semester | 36 | 1.830 |
| 4 | 5th semester | 48 | 1.900 |
| 5 | 6th semester | 60 | 2.000 |
| 6 | 7th semester | 72 | 2.000 |
| 7 | 8th semester | 84 | 2.000 |
| 8 | 9th semester | 96 | 2.000 |
| 9 | 10th semester | 108 | 2.000 |
| 10 | 11th semester | 120 | 2.000 |

*by close of spring semester
Note: Students are expected to graduate at the end of their eighth semester, having earned the requisite number of credits in the appropriate courses.

## PROBATION AND DISMISSAL FROM THE COLLEGE

Students who are placed on academic probation or probationary leave of absence or disciplinary or honor code probation are not in good standing and are ineligible to obtain a letter of good standing, study at another division of Tulane University or another institution and transfer the credit back to Newcomb or Tulane College. Students who have been academically dismissed from the College are not allowed to reenroll in the College. Academic dismissal is noted permanently on the student's transcript.

## SUMMER SCHOOL ATTENDANCE

Students may attend Tulane Summer School for the purpose of enriching their academic program or accelerating their graduation. Students on academic probation at the close of spring semester must attend Tulane Summer School if they are to return to academic good standing and be eligible to enroll in the fall semester; however, attendance at Tulane Summer School is no commitment that such students will be permitted to continue in the fall when admissibility is determined from cumulative records, including summer work (see Quality of Work Requirements above).

Full credit is given, without special approvals, for Tulane Summer School courses bearing numbers listed in the Liberal Arts and Sciences section of this catalog. Other Tulane Summer School courses may be taken within the 15 -credit limit for supplementary program credits. Candidates for a degree may count 12 credits of summer work at Tulane among the 27 credits that must be earned in residence. Students should consult with their academic advisers regarding the proposed Summer School program during the period of registration in the spring. Academic advisers are available throughout the summer in the associate dean's offices.
Newcomb and Tulane College students may register for no more than 18 credits in Tulane Summer School during a single year. Students who earn a GPA of 3.000 on 15-18 credits completed in Tulane Summer School but fail to meet the continuation standards at the close of the summer, may petition the Committee on Academic Requirements (CAR) for continuation of their probationary status in the Fall semester. The final decision on the academic status of these students will be made by CAR.

Students in academic good standing may attend the summer school of any regionally accredited institution. If they wish to be certain their credits at another institution transfer to Tulane, they must obtain prior approval of their choice of institution and proposed summer program no later than the end of the final-examination period in spring semester. Students attending summer school at another institution are required to have an official transcript of their summer record sent to the Registrar's office prior to registration in the fall. Grades earned at other institutions are not computed in the student's grade-point average; therefore, a student cannot make up a grade-point deficiency at Tulane by attendance at another institution. Students may apply up to 6 credits of approved coursework from another institution toward the senior residency requirement

## TRANSFER CREDIT

Continuing or returning students in academic good standing are eligible to earn credit in transfer from other regionally accredited 4-year institutions in the United States. To be eligible for transfer credit from study-abroad programs, students must have at least a 2.700 cumulative grade point average at Tulane. Transfer credit is given only for courses approved by the appropriate departments and completed with a minimum grade of C - or its equivalent. Students should obtain prior approval of their choice of institution and proposed program if they wish to be certain their credits will be accepted. Credit for acceptable work is transferred at the value or amount of credit shown on the official transcript from the other college. Grades earned at another institution are not transferred and are not computed in the student's cumulative grade-point average. Credits taken on a P/F or S/U basis do not transfer unless the transcript states that P or S is equivalent to C- or better. Students are required to have an official transcript sent to the Registrar's office prior to their return. To be allowed to return to Tulane College or Newcomb College, students must satisfactorily complete their academic program and leave the other institution in good standing.

## REPEATED COURSES

Students may repeat courses in which they have earned an F or WF. If a failed course is a required course, it must be repeated for a passing grade. The initial failure remains on the record and continues to count in the student's cumulative grade-point average. If a course is failed, repeated, and failed again, only the initial failure ( F but not WF) is calculated in the grade-point average; however, all subsequent failures remain on the transcript.
A course that is repeated after having been completed with a passing grade will appear again on the student's record. The repeated course is not counted among total credits required for graduation and does not affect the grade-point average.

## COMMENCEMENT POLICIES AND PROCEDURES

A student expecting to receive a degree in May must register as a candidate for graduation in the associate dean's office by October 1. A student expecting to receive a degree at any other time should consult the associate dean's office for appropriate information. Commencement ceremonies are held only in May; August and December graduates may, however, participate in ceremonies held the following May. All May graduates are expected to attend commencement unless the awarding of the degree in absentia has been approved by the associate dean.

## GRADUATION WITH UNIVERSITY HONORS

To be eligible for university honors, a student must have completed a minimum of 60 credits ( 75 credits for dual degree candidates) while enrolled at Tulane University; this may include enrollment in Tulane's Junior Year Abroad and semester-abroad programs and Washington Semester. Only Tulane credits are computed in the cumulative grade-point average for honors candidates. A student completing two degrees may be awarded university honors for both degrees. Eligibility for honors for each degree will be determined by grades earned in all course work counting toward the respective degree.
A student who at the time of graduation has achieved a cumulative grade-point average of at least 3.400 is awarded the degree cum laude.

A student who at the time of graduation has achieved a cumulative grade-point average of at least 3.600, has completed the Honors Program, and has fulfilled the requirements for departmental honors is awarded the degree magna cum laude.
A student who at the time of graduation has achieved a cumulative grade-point average of at least 3.800, has completed the Honors Program, and has fulfilled the requirements for departmental honors is awarded the degree summa cum laude.

## GRADUATION WITH DEPARTMENTAL HONORS

To be eligible for departmental honors, a student must earn in courses taken at Tulane a cumulative grade-point average of at least 3.400 and a grade-point average of at least 3.500 in courses counting toward the major, must complete an honors thesis or project, and must fulfill all of the department's other requirements for honors.

During spring of the junior year, a student who expects to graduate with departmental honors should consult with the department chair or honors advisor and should verify eligibility with an academic advisor in the dean's office. Students select a thesis director and register for Honors Thesis at the beginning of the first semester of their senior year. By mid-semester, the student must submit a prospectus that has been approved and signed by the thesis director and a second reader. A first progress report, approved and signed by the thesis director and the second reader at the end of the first semester, indicates whether the thesis is to be continued or terminated. A second progress report is due in the middle of the second semester and a complete draft of the thesis is due a month before the projected date of graduation. Two weeks before graduation the thesis must be completed; the oral examination is held after all other requirements have been met. Students expecting to graduate in December should meet with their department chair or honors advisor one year prior to graduation to determine eligibility for departmental honors.

## AWARDS SHARED BY TULANE COLLEGE AND NEWCOMB COLLEGE

The American Chemical Society Prizes were established in 1930 by the Louisiana section of the American Chemical Society and are awarded for excellence in chemistry.
The American Institute of Chemists Award is given for excellence in chemistry.
The Ann Royal Arthur Memorial Award in German was established in 1987 in memory of Professor Ann Arthur of the Department of Germanic and Slavic Languages. It is awarded to a student who has demonstrated a commitment to the study of German.
The Stuart S. Bamforth Prize for Excellence in Environmental Studies.
The Sidney Beyer Prize for Excellence in American History was established in 1976 by Joel Beyer in memory of his father and is awarded to a superior student of American History.
The Purvis E. Boyette Memorial Freshman Essay Award was established in 1988 in memory of Professor Purvis E. Boyette of the Department of English.
The Brazilian-American Cultural Institute Award for Excellence in Portuguese is given by the Portuguese government, on recommendation of the faculty, to a student who has excelled in the study of Portuguese.
The Glendy Burke Medals were established in 1848 (oratory) and 1879 (mathematics) by Glendy Burke. They are awarded for excellence in the fields of speech and mathematics.
The Fred R. Cagle Memorial Prize was established in 1981 in memory of the former chairman of the Department of Zoology. It is awarded for excellence in biology.

The Chairman's Award is given to a graduating senior who is outstanding in geology or earth science.

The Class of 1914 Prize in Art was established in 1918 by the Art Class of 1914 and is awarded for the best portfolio of drawings of animals.
The Department of Classical Studies Prize in Ancient Religion.
The Classical Studies Prize awarded for excellence in Latin, Greek, or the study of ancient history, culture or archeology.
The Premio Clavileno is awarded for excellence in Spanish.
The Alice Raymond Scudder Coates Scholarship in Art is awarded to either a Tulane College or Newcomb College student in any area of concentration in art.
The Rusty Collier Memorial Award in Studio Art is awarded to an art major.
The Charles Till Davis Prize for Excellence in European History.

The Charles E. Dunbar, Jr. Fellowships in Political Science are awarded each year to two political science majors who have demonstrated academic excellence and an interest in public affairs.

## The Marjorie Clark Ferguson Memorial Award in Painting.

The France-Amerique Award is given for exceptional achievement in the study of the French language.

The French Government Prize is given by the French government, on recommendation of the faculty, to a student who has excelled in the study of French.

The Arnold Gerall Award in Neuroscience.
The German Government Prize is given by the German government, on recommendation of the faculty, for excellence in German.
The Juanita Gonzalez Prize in Ceramics is awarded to the outstanding undergraduate ceramist in the Department of Art.
The Bodo Gotzkowsky Award for Research and Travel in Germany.
The Shirley Weil Greengus Memorial Award for Achievement in Political Science is awarded to the senior majoring in political science who has the highest scholastic average in the major.

The Ruth G. Hanaw Prize in Drawing is awarded to a freshman art student who shows outstanding ability in drawing.
The Henry Award recognizes outstanding achievement in the study of French.
The José Hernandez Award in Spanish-American Literature, established in 1985, is awarded to a graduating senior for excellence in Hispanic studies. The student must have excelled in at least one advanced course in Spanish-American literature.
The Anne Butler Hess Award, established in 1964 by Mrs. Robert D. Hess in memory of her daughter, is awarded to the graduating senior who has shown the greatest proficiency in philosophy.
The Italian Government Prize is given by the Italian government, on recommendation of the faculty, to a student who has excelled in the study of Italian.
The Japan-Tulane Friendship Award was established in 1987 by Jack Aron and Japan Air Lines for the best dissertation, thesis, or research paper on Japanese affairs.

## The T. Krumpelmann Award for Achievement in German.

The Ephraim Lisitzky Memorial Award, established in 1989, is granted to a student of exceptional achievement in the study of Hebrew language and Jewish history, culture, and religion.
The Merck Index Awards are awarded for excellence in Chemistry.
The Dan W. Mullin Memorial Award, established in 1970 by Mr. Albert Salzer, is awarded for excellence in technical theater production.

The Charles H. Murphy Prize in Political Economy was established by the Murphy Institute to recognize an outstanding student majoring in political economy.
The Mary L. S. Neill Prize is awarded for excellence in watercolor painting by a student in the Department of Art on recommendation of the faculty.

The New Orleans Geological Society Memorial Foundation Scholarships are awarded annually to the outstanding freshman, sophomore, junior, and senior geology or earth science majors, upon recommendation of the faculty of the Department of Geology.
The Ashton Phelps Award in Communication Studies is given on recommendation of the faculty for excellence in communication studies.
The Pi Sigma Alpha Award, established in 1963 by the Tulane chapter of Pi Sigma Alpha, is awarded annually to the senior who has done most to stimulate scholarship and intelligent interest in the subject of government.
The Isoline Rodd and John Smith Kendall Award was established by Mr. Lance C. Kendall and Mrs. Elizabeth Kendall Thompson in memory of Professor John Smith Kendall, an alumnus of Tulane University and a member of the faculty for 26 years, and his wife, Isoline Rodd Kendall, a graduate of Newcomb College. It is awarded to a student of the Tulane College or Newcomb College who has excelled both academically and in extracurricular accomplishments.
The ROTC Awards encompass many prizes and honors, including the President's Cup, for ROTC work.

The Russian Book Prize is presented by the Department of Germanic and Slavic Languages for excellence in Russian.

The Sigma Gamma Epsilon Prize, established in memory of W. A. Tarr by the national geology honor society, is awarded for scholarship and service in the Department of Geology.
The R. A. Steinmayer Award was established in 1957 by the Tulane geological alumni in honor of R. A. Steinmayer, emeritus professor of geology, for the outstanding graduating student in geology.
The Henry Stern Prize in Art History is awarded to the student who produces the best paper in the field of art history.
The S. Walter Stern 1905 Memorial Medal was established in 1945 with a bequest from Mr. S. Walter Stern, former member of the Tulane Board of Administrators and member of the Class of 1905. It is awarded for the best essay on an aspect of U.S. government.The Henry Clay Stier Award in English, established in 1959 by the relatives and friends of Henry Clay Stier, is awarded to the senior in the Department of English who has the highest four-year average.

The George H. Terriberry Classical Prize, established in 1924 by Mr. George H. Terriberry, is awarded to the outstanding senior in the Department of Classical Languages.

The Tri Beta/Erik G. Ellgaard Memorial Award for the outstanding thesis in Cell and Molecular Biology.
The Judah Touro Medal, established in 1856, is awarded for excellence in ancient history, Greek, Hebrew, or Latin.
The Harold E. Vokes Award was established in 1992 by the faculty of the Department of Geology in honor of Harold E. Vokes, professor emeritus of geology, for the outstanding graduating senior in geology.

## Courses of Instruction and Faculty

African and African Diaspora Studies

Office:105 F. Edward Hébert Hall
Phone: (504) 862-3550
Fax: (504) 862-8677
Email: www.adst@tulane.edu
Website: www.tulane.edu/~adst/
Program Administrator
Felipe Smith, English (Director)

## Faculty Associates

Rosanne Adderley, History
Omoniyi Afolabi, African and African Diaspora Studies, Spanish and Portuguese
Jane Carter, Classical Studies
Michael Cunningham, African and African Diaspora Studies, Psychology
Gaurav Desai, African and African Diaspora Studies, English
Raymond Diamond, Law School
Christopher Dunn, African and African Diaspora Studies, Spanish and Portuguese
Pamela Franco, Art History
Rebecca Mark, English
Adeline Masquelier, Anthropology
Gayle Murchison, Music
Olanike-Ola Orie, Anthropology
Stacy Overstreet, Psychology
Steven Pierce, History
Supriya Nair, English
John Patton, Communication
Lawrence Powell, History
Benjamin Reiss, English
Randy Sparks, History
N. Frank Ukadike, African and African Diaspora Studies, Communication

Richard Watts, French and Italian
Demetrius Williams, Classical Studies
Justin Wolfe, History

The program in African and African Diaspora studies offers students an interdisciplinary course of study that may lead to either a major or a minor. Both the major and the minor are designed to enable students a considerable degree of freedom in the choice of electives, and they both offer ample avenues for students interested in pursuing independent research and/or internship experiences. The program is particularly interested in encouraging the study of less commonly taught languages such as Yoruba, Kiswahili, Arabic, and Haitian Creole. The program also encourages student to pursue study abroad opportunities in Africa and its Diaspora and advises them in all matters pertaining to such study. The option to write an honors thesis is available to students who are in the University's Honors Program as well as to those who seek honors with the ADST program.

## MAJOR

Ten courses (minimum of 30 credits) are required for the major. The major consists of the following:
I. ADST 200 Introduction to African and African Diaspora Studies
II. One of the following courses in history or culture:

ANTH 311 Cultures of Sub-Saharan Africa
HISB 312 West African Culture and Society
HISB 313 Southern Africa
HISU 369 African-American History to 1865

## III. Senior capstone seminar

## ADST 481 or 482 Special Topics in African and African Diaspora Studies

IV. Seven additional elective courses

Students must ensure that at least three of the electives ( 9 credits) are at the 400 level or higher and no more than three electives ( 9 credits) are at the 100 or 200 levels. Furthermore, students must choose elective courses from both the humanities as well as the social and behavioral sciences and must fulfill a distribution component of at least two courses ( 6 credits) in African studies and two courses (six credits) in African Diaspora studies.

## MINOR

Six courses (minimum of 18 credits) are required for the minor which includes African and African Diaspora Studies 200 plus five additional electives. Students must ensure that at least three of the electives ( 9 credits) are at the 300 level or higher. Furthermore, students must choose elective courses from both the humanities as well as the social and behavioral sciences and must fulfill a distribution component of at least one course (3 credits) in African Studies and one course (3 credits) in African Diaspora Studies.

## ADST 200 Introduction to African and African Diaspora Studies (3)

Staff. This course will serve as an introduction to the study of Africa and its Diaspora and is intended to help students understand the complexities of interdisciplinary approaches to area studies. Emphasis will be placed on the complementary nature of such scholarship and a portion of the course will be devoted to learning how the "same" issue or thematic is treated in diverse ways depending on the disciplinary perspective of the scholar.

## ADST 310 Issues in Afro-Atlantic Studies (3)

Staff. An exploration of some of the central themes of Afro-Atlantic Studies through the study of selected issues arising out of the Afro-Atlantic moral, cultural, political, and religious experience.

## ADST 320 Issues in African Studies (3)

Staff. An exploration of some of the central themes of African studies through the study of selected issues arising out of the African moral, cultural, political, and religious experience.

## ADST 330 Issues in African Diaspora Studies (3)

Staff. An exploration of some of the central themes of African Diaspora Studies through the study of selected issues arising out of the African Diasporic moral, cultural, political, and religious experience.

ADST 389 Service Learning (1)
Staff. Prerequisite: Departmental approval. Students complete a service activity in the community in conjunction with the content of a three-credit corequisite course.
ADST 456, 457 Internship Studies (1-3, 1-3)
Staff. Prerequisites: approval of instructor and director. An experiential learning process coupled with pertinent academic course work. Open only to juniors and seniors in good standing. Registration is completed in the academic department sponsoring the internship on TUTOR. Note: a maximum of six credits may be earned in one or two courses toward the African and African Diaspora Studies major. See also the college requirements for internships.
ADST 481, 482 Special Topics in African and African Diaspora Studies (3, 3)
Staff. Special topics in African and African Diaspora studies; also cross-listed with special topics from other departments when related to African and African Diaspora studies. This course is required for African and African Diaspora majors. African and African Diaspora minors are encouraged but not required to take this course. May be used to fulfill African and African Diaspora studies distribution requirements in consultation with the Program Director.

## ADST 491, 492 Independent Studies (3, 3)

Staff. Open to advanced student with approval of the director and subject to availability of faculty mentor.

## ADST H499-H500 Honors Thesis $(3,4)$

Staff. For especially qualified juniors and seniors with approval of the director and the Honors Committee. Students must have a minimum of a 3.0 overall grade-point average and a 3.5 gradepoint average in the major.

## ELECTIVES

## Africa

ADST 320 Issues in African Studies
ANTH 311 Cultures of Sub-Saharan Africa
ANTH 415 African Pre-History
ARHS 385 African Art
CLAS 313 Egypt Under the Pharaohs
COMM 418 African Cinema
HISB 130 Africa to 1880
HISB 131 Africa Since 1880
HISB 312 West African Culture and Society
HISB 313 Southern Africa
HISB 422 Prison, Medicine, and Madness in Africa
HISB 423 Gender and Sexuality in Modern Africa
HISB 607 Africa and Gender Theory
HISB 611 Colonialism, Freedom, and the Problem of Difference
HISB 397, 398 Special Offerings in African History
HISM 404 Modern North Africa 1516-1914
HISM 405 Medieval Northwest Africa
PORT 413 Lusophone Africa: Literature and Society

## African Diaspora

ADST 330 Issues in African Diaspora Studies
ARHS 386 Arts of the African Diaspora
ARHS 387 20th-Century African-American Art
COMM 350 The Rhetoric of Civil Rights
COMM 460 Intercultural Communication
COMM 462 Women, Development, and Communication in the English-speaking Caribbean
COMM 464 Communication and Cultural Identity in the English-speaking Caribbean
ENLS 373 Introduction to African-American Literature
ENLS 444 Issues in African-American Literature
FREN 305 Literature in Exile
HISU 344 African-American Religious History

HISU 350 The Civil War and Reconstruction
HISU 357 Race Relations in the American South 1865-1970
HISU 358 Slavery and Freedom in the Antebellum South
HISU 369 African-American History to 1865
HISU 370 Introduction to African-American History: Emancipation to the Present
HISU 654 African-American Cultural History
HISL 172 Introduction to Caribbean History
HISL 374 Caribbean Cultural History
HISL H420 History of Voodoo
HISL 675 Africans in the Americas: Comparative Social and Cultural History of the African Diaspora
HISL 678 Readings in Caribbean History
MUSC 334 History of Jazz
POLA 425 Power and Poverty in America
SOCI 612 Race, Sex, and Power
SPAN 416 Africans in Latin America
PORT 616 Afro-Brazilians: Historical, Literary, and Cultural Perspectives
PSYC 331 Introduction to African-American Psychology
PSYC 461 Black Youth: Developmental Psychology Perspectives

## OTHER ELECTIVES

The following courses which do not meet the requirements for African or African Diaspora distribution credits may nevertheless be taken as electives by majors as well as minors. In addition, students may petition to count any African and African Diaspora studies related course currently being offered at Tulane or taken at other universities as part of their own curriculum. Such petitions will be considered by the program director in consultation with the program executive committee. Please note that of the courses below, a maximum of three dance credits may count toward the major or minor.
ANTH 672 Spoken Yoruba
COMM 240 Cinema, Race, and Culture
DANC 191 Beginning African Dance
DANC 391 Intermediate African Dance
ENLS 482 Colonial and Postcolonial Discourse
ENLS 483 Race, Class, and Gender
FREN 304 African and Caribbean Literature
FREN 305 Literature in Exile
FREN 480 Survey of Francophone Literature
HISB 323 The Atlantic Slave Trade

## American Studies

Office: 207 Norman Mayer
Phone: (504) 865-5160
Fax: (504) 862-8958
Program Administrator
Teresa A. Toulouse, English (Director)
Affiliated faculty come from the following schools and departments:

## Anthropology

## Architecture

Art
Communication
English
History
Latin American Studies
Philosophy
Political Science

## MAJOR

An interdisciplinary and interdepartmental major designed to provide an analysis of American thought, culture, and society, past and present. The required and elective courses balance flexibility and coherence as students select areas of concentration from the categories of American arts, American thought and experience, and American institutions and social practices. Students are also encouraged to address specifically local, regional, and comparativist dimensions of these categories both through their course work and through internships at local institutions and museums.
A student majoring in American studies must take the seven required courses listed below in addition to seven elective courses selected from a list of appropriate courses grouped in three major categories and offered by participating departments.
Normally, the elective courses are selected from above the 100 level and at least three of the seven courses must be above the 300 level. With the exception of American Studies 301 and 501, all of the required courses should normally be completed by the junior year.

Students interested in American studies should consult with the director as soon as possible so they can arrange their program with an eye to the American studies requirements. The director also maintains an up-to-date list of acceptable electives. Full descriptions of the courses are provided by the participating departments.
AMST 456, 457 Internship Studies (1-3, 1-3)
Staff. Prerequisites: approval of instructor and Program Director. An experiential learning process coupled with pertinent academic course work. Open only to juniors and seniors in good standing. Registration is completed in the academic department sponsoring the internship on TUTOR. (Note: A maximum of six credits may be earned in one or two courses.)
AMST 491, 492 Independent Studies (3, 3)
Staff. Open to qualified juniors and seniors only.
AMST H499-H500 Honors Thesis (3, 4)
Staff. Only one of these courses will count towards requirements for the major.

## REQUIRED COURSES

## American Studies

AMST 201 Issues of American Identity (3)
Staff. An exploration of one of the central themes of American studies, the American identity, through the study of selected issues arising out of the American moral, cultural, political, and religious experience.

AMST 301 Special Topics in American Studies (3)
Staff. Seminar primarily for American studies majors, generally taken in the junior year, comprising a detailed exploration of some one topic or theme relevant to the American scene.

## AMST 311 New Orleans as a Cultural System (3)

Staff. Analyzing the City as a cultural system, the course explores the nature of the intersections among diverse cultural phenomena such as space, ritual, food, and music.

## AMST 501 Seminar in American Studies (3)

Staff. Seminar primarily for American studies majors, generally taken in the senior year, involving an in-depth study of a major motif, movement, or problem in American intellectual or religious thought. The production of an acceptable research paper demonstrates competence in American studies.

## History

HISU 141-142 The United States from Colonization to 1865, and The United States from 1865 to the
Present $(3,3)$
or six credits of American history approved by the American studies director.

## English

ENLS 375-376 American Life in American Literature, 1620-1864 and 1865-1940 (3, 3) or six credits of American literature approved by the American studies director.

## ELECTIVE COURSES

Students should consult with the director for additional or alternative courses.

## American Arts

## Art

360 Art in America, 1492 to the Civil War
361 American Art from the Civil War to World War II
Music
331 History of Music in the United States
332 Musical Theatre in America
334 History of Jazz
335 Music in Contemporary Society
American Thought and Experience

## English

ENLS 373 Introduction to African-American Literature
ENLS 431 American Literature to 1820
ENLS 436 American Renaissance
ENLS 437 19th-Century American Literature
ENLS 440 Modern American Literature
ENLS 441 Contemporary American Literature
ENLS 442 Southern Literature

## History

HISU 342 Urban America
HISU 340 Women and Gender in U.S. History to 1830
HISU 341 Women and Gender in U.S. History, 1830 to the Present
HISU 343 History of American Religion
HISU 344 African American Religious History
HISU 355 American Political Traditions: Foundations, 1776-1860
HISU 358 Slavery and Freedom in the Antebellum South
HISU 361 U.S. Identity Politics, 1945-Present
HISU 370 Introduction to African-American History: Emancipation to Present
HISU 381 Southern Folk Culture
HISU 382 Mythic South in Film and Television

HISU 452 Rise and Fall of the Plantation South
HISU 652 Ideas and Thinkers in American History, 1607-1865
HISU 661 The Old South
HISU 662 The New South, 1865-Present

## Philosophy

PHIL 313 Classic American Thought
PHIL 314 Recent American Philosophy

## American Institutions and Social Processes

Anthropology
ANTH 413 North American Prehistory
ANTH 605 North American Indians
ANTH 613 Southeastern United States Prehistory
Political Science
POLA 315 Elections in America
POLA 322 The American Presidency
POLA 324 Public Policy
POLT 486 American Political Thought

## Sociology

SOCI 103 Sociology of the Family
SOCI 106 Urban Sociology
SOCI 109 Social Problems
SOCI 602 Political Sociology
SOCI 611 Sociology of Work and Leisure
Although not included in the program's requirements, American studies students are strongly encouraged to take one or more of the following courses as early in their career as possible.

## Anthropology

ANTH 102 Cultural Anthropology

## Communication

COMM 215 Film Analysis
COMM 326 Critical Analysis of the Media
Political Science
POLS 101 Introduction to Politics

## Sociology

SOCI 201 Foundations of Sociology

## Anthropology

Office: 1021 Audubon St.
Phone: (504) 865-5336
Fax: (504) 865-5338
Website: www.tulane.edu/~anthro
Professors
E. Wyllys Andrews V, Ph.D., Tulane

William Balée, Ph.D., Columbia
Harvey M. Bricker, Ph.D., Harvard
Victoria R. Bricker, Ph.D., Harvard
Dan M. Healan, Ph.D., Missouri
Robert M. Hill, Ph.D., Pennsylvania
Associate Professors
Tristram R. Kidder, Ph.D., Harvard
Adeline M. Masquelier, Ph.D., Chicago
Judith M. Maxwell, Ph.D., Chicago
Olanike-Ola Orie, Ph.D., British Columbia
John W. Verano, Ph.D., California, Los Angeles

## Assistant Professors

Shanshan Du, Ph.D., Illinois
Trenton W. Holliday, Ph.D., New Mexico

## MAJOR

Ten courses (excluding writing practica) totaling no fewer than thirty credits of approved course work are required for a major in anthropology. Only one course, Anthropology 406, is required for majors; this is a three-credit proseminar in general anthropology. In addition, there is a general distribution requirement within the major; at least one course above the 100 level must be taken in each of the four major subdivisions of anthropology: social/cultural anthropology, archaeology, linguistics, and physical anthropology.
Other anthropology courses used to satisfy the 30-credit requirement should be chosen by the student in response to his or her specific interests. Up to six credits toward an anthropology major may be given for courses offered by other departments of the university, provided that such courses are directly relevant to anthropology and to the student's specific course of study. Requests for approval of courses offered by other departments (for example, art history, biology, economics, geology, history, mathematics, philosophy, psychology, sociology) should be addressed to the advisor of majors. This flexibility permits many of the students majoring in anthropology to have double majors in their disciplines and to integrate their study of anthropology with various preprofessional (e.g., premedical) curricula. Anthropology majors may work toward the fulfillment of college requirements for either the B.A. or the B.S. degree. Students planning graduate work in anthropology should take course work in statistics either outside the major or within it (Anthropology 601).
The subject matter of anthropology is such that most of the curriculum is not an explicitly graded sequence. Few anthropology courses at Tulane have specific prerequisites (exceptions, mostly
linguistic courses, are noted in the catalog), and anthropology majors are expected to choose their courses from among all those with numbers less than 700. The 600-level courses are specifically designed for undergraduate as well as graduate students, and all junior and senior majors should choose freely from among these offerings.
The anthropology department administers the Kenneth J. Opat Fund in Anthropology, reserved for the support of undergraduate research in anthropology. Students majoring in anthropology are encouraged to seek further information from the advisor of majors about the use of this research fund.

## ANTH 101 Human Origins (3)

Staff. Biological evolution of the human species and the archaeology of early man. Relationship of man to other primates, living and extinct. Cultural achievements of early man and their relationship to biological evolution and the natural environment. The fossil and archaeological record of Pliocene and Pleistocene man.

## ANTH 102 Cultural Anthropology (3)

Staff. The observed range of variation of ways of life around the world. The cross-cultural investigation of becoming and being human. Comparative treatment of social organization, subsistence activities, values, and religion.
ANTH 114 Freshman Seminar (3)
Staff. Varies; specific description available when offered.
ANTH 201 Man Before History (3)
Staff. A selective worldwide survey of peoples and cultures of the prehistoric past, from the end of the Ice Age to the beginnings of recorded history. Examination of the technologies and institutions developed in antiquity to meet the challenges of the natural and social environments. Emphasis upon the great achievements of prehistory including late Ice Age adaptations, peopling of new continents, development of the world's major food sources, beginnings of urbanism, ancient American and other early civilizations of the non-Western world.

## ANTH 203 The Anthropology of Women and Men (3)

Staff. A cross-cultural survey of women in society and culture among hunters and gatherers, pastoral nomads and agriculturalists of Oceania, the Near East, Africa, and the New World. Kinship and female symbolism in Africa, women and men in myths in traditional societies. Crosscultural variability of women's roles and status and the variability of women's and men's language and behavior.

## ANTH 210 Myth and Life (3)

Ms. Bricker. Traditional oral narratives in their social and cultural context. The functions of myth in developing individual character and supporting social values. The structure of myth. Causes and limits of change.

ANTH 288 Writing Practicum (1)
Staff. Writing practicum. Fulfills the college writing requirement.
ANTH 301 Hunters and Gatherers (3)
Mr. Balée. Comparative study of selected modern and past groups of hunter-gatherers. Anthropological approaches to understanding subsistence practices, social organization, and cultural change in non-agricultural societies. Both ethnographic and archaeological cases will be considered.

## ANTH 305 North American Indians (3)

Mr. Hill. Native North American cultures from the time of European contact to the 20th century. Cultural variation from the Arctic to northern Mexico and the adjustments to modern life. See ANTH 605.

ANTH 306 South American Indians (3)
Mr. Balée. Ethnology of the indigenous peoples of lowland South America and adjacent southern Central America. The course examines cultural developments from prehistory to the present. Models for the classification of indigenous cultures, societies, and languages are critically reviewed. See ANTH 606.

## ANTH 307 Contemporary Chinese Society (3)

Ms. Du. Brief introduction to Chinese history and mainstream cultural traditions. Anthropological examination of the shared and contrasting identities and experiences of peasants, urbanites, and the members of different ethnic groups. See ANTH 607.

## ANTH 308 East Asia (3)

Ms. Du. Anthropological examination of East Asia, focusing on China, Japan, and Korea. Topics include mainstream philosophical traditions, individual and society, ethnicity and nationalism, gender and globalization See ANTH 608.
ANTH 309 Selected Cultural Systems (3)
Staff. Systematic treatment of specific cultures of the past and present.

## ANTH 311 Cultures of Sub-Saharan Africa (3)

Ms. Masquelier. A survey of the cultures of sub-Saharan Africa from the time of European contact to the present. A detailed study of selected African cultures, identifying, and explaining cultural diversity and unity of African cultures, and comparing African cultures with cultures of other geographic areas. Inequality, development, the family, gender roles, kinship systems, and world view are considered.

## ANTH 314 Primate Behavior and Ecology (3)

Staff. An introduction to the social and physical diversity of the Order Primates, emphasizing the biology, ecology, and behavior of living nonhuman primates. Social structure will be explored from an evolutionary perspective, and the ecological and social constraints on behavioral flexibility will be examined. Examples will cover both field and laboratory investigations of nonhuman primates. Students may not take both ANTH 314 and ANTH 614 for credit.

## ANTH 315 Cognitive Anthropology (3)

Mr. Balée. Cross-cultural investigation of human thinking and rationality. Assesses linguistic relativity; cognitive rationalism; comparative aspects of human classification and nomenclature of diverse semantic fields; the use of linguistic and cultural universals in attempts to define the nature of human thought processes; possible relationships among sociocultural evolution and the size and structure of given vocabularies in unrelated languages; and the problem of irrationality. See ANTH 615.

## ANTH 316 Peoples of the Pacific (3)

Mr. Marksbury. Introduction to the cultures of Polynesia, Micronesia, Melanesia, and Australia from the first settlement to the emergence of modern nation-states.

## ANTH 323 Zooarchaeology (3)

Staff. This course is designed to provide basic instruction in the identification of large mammal remains commonly recovered from archaeological sites. In addition, a taphonomic approach to zooarchaeology is stressed, with an emphasis on understanding and interpreting the formation of archaeological faunal assemblages.

## ANTH 326 Highland Mexican Prehistory (3)

Mr. Healan. Patterns and processes of cultural development in the highlands of central Mexico, western Mexico, and Oaxaca as known from archaeological and ethnohistorical data. Early cultures, Toltecs, Aztecs, Mixtecs, Zapotecs. See ANTH 626.

## ANTH 328 Middle American Indians (3)

Mr. Hill. Colonial and modern indigenous cultures of Mexico and Central America.

## ANTH 329 The Nature of Language (3)

Ms. Maxwell. Language as a reflection of the human mind and the role of language in defining the essence of humanity. Language and the expression of social values. Emphasis on analysis of primary linguistic data. Critical examination of theories of linguistic structure.

## ANTH 330 History of Writing (3)

Ms. Bricker. This course will look at the different systems of writing which have been used in various cultures through time with attention to the materials and purpose in relation to the cultures. Orientation to and practice in decipherment will be included. Finally, the issues of modern script development will be introduced.

## ANTH 331 Introduction to Historical Linguistics (3)

Ms. Maxwell. The investigation of language change and its causes. The reconstruction of earlier linguistic forms. The Indo-European language family. Selected problems in phonological and grammatical reconstruction.
ANTH 333 Anthropology of Gender (3)

Ms. Du, Ms. Masquelier. A theoretical and ethnographical examination of how gender is constructed across cultures. Topics include sex and gender, gender identity, bodily experiences, masculinity and femininity, gender roles, kinship and gender, gender stratification, and gender equality, as well as gender, ethnicity, and class.

## ANTH 334 Introduction to Archaeology (3)

Staff. Introduction to the method, theory, and techniques of prehistoric archaeology. Relationship of archaeology to other disciplines, how and why archaeologists work, archaeological records, dating, analysis and interpretation of artifacts, sites, and environments. Consideration of selected case studies.

## ANTH 335 Culture and Religion (3)

Ms. Masquelier. Religions, ideas, ritual, and organization of primitive peoples; nativistic and messianic movements; function of religion in social systems. See ANTH 635.

## ANTH 338 Cultural Dynamics (3)

Mr. Hill. An exploration of the development in the western tradition of ideas concerning culture, its variation, and change. The courses focuses on the specific insights of anthropology with regard to the study of change processes such as innovation, directed culture change, nativism, and revitalization. The relevant contributions of other social sciences will also be considered.

## ANTH 339 Peasants in Preindustrial Society (3)

Mr. Hill. An examination of the concept of peasants as a distinct sociocultural type and the predominant segment of preindustrial civilizations around the world, down to the 20th century. Agricultural systems, population dynamics, ideologies and systems of stratification, and strategies of resistance are among major topics addressed. Consideration is also given to early modern transformations and the problems associated with modernization.

## ANTH 340 Language and Culture (3)

Ms. Maxwell. Language, the complex symbolic system of our species, has the power to index, refer to, frame and reframe social reality. Cultures, shared symbolic and interactional systems, both shape and are shaped by language and its use. This course will explore speech communities around the world, their social practices and the language schemata which ground them: the quotidian instance of "asking for a drink" in Indonesia, the ritual of trading insults in inner city Detroit, the routine of formal and phatic greetings among the Kuna.

## ANTH 344 Dialectology (3)

Ms. Maxwell. Introduction to language variation both geographically and socially. The course looks at the history and methods of dialectology as well as the ways speakers demonstrate identity through speech patterns.

## ANTH 345 Methods of Observation in Behavioral

## Research (3)

Staff. This course will focus on the development, design, analysis, and presentation of research on behavior using observational methods. While these methods can be used on captive populations (zoo, research center) they are also appropriate for studies of free-ranging animals, including human beings. The student will be exposed to the specific challenges of observational research, and learn appropriate levels of analysis.

## ANTH 351 Race, Ethnicity, and Nationalism (3)

Ms. Du. Theoretical and ethnographic examinations of race, ethnicity, and nationalism. Topics also include multiculturalism, globalization, and diasporas.

## ANTH 353 Arts of Native North America (3)

Mr. Hill. A survey of the great range of media and the many forms of aesthetic expression developed by the indigenous peoples of what today are the United States and Canada. The course examines the functions of art in smaller-scale societies and illustrates aspects of their dynamics. Changes in arts due to European contact, attempts at revivals of specific genres, and the emergence of named artists in the 20th century are also addressed. See ANTH 653.

## ANTH 354 Regional Cultures of Native North America (3)

Mr. Hill. An opportunity for an in-depth examination of the cultures of a specific area (such as the Plains, Southwest, or Woodland) through the pertinent ethnographic and ethnohistorical literature. May be repeated for credit for different regions. See ANTH 654.

## ANTH 359 Introduction to Syntax (3)

Ms. Maxwell. Introduction of transformational generative syntax, with examples from selected areas of English grammar. Formal models in grammatical description. Emphasis on the logic of linguistic argumentation.

## ANTH 363 Linguistic Phonetics (3)

Ms. Orie. The course offers an overview of articulatory and acoustic phonetics with emphasis on matching acoustic cues closely with the articulatory gestures. The first part of the course will study the articulatory and acoustic cues to range of English and non-English speech sounds with information about the normal range of variation. The second part will focus on collecting and interpreting acoustic data, and using such data as evidence to solve phonological problems in normal and pathological speech.

## ANTH 364 Studies in Phonology (3)

Ms. Orie. Prerequisite: ANTH 363. This course provides an introduction to phonological analysis and theory, with strong emphasis on description and analysis of data from a wide variety of languages. Major issues to be addressed include universal principles of human phonological systems, language-specific variation, constraints on representation of rules, the relationship of phonology to morphological and syntactic components of the grammar, and the historical underpinnings of current theoretical models.

## ANTH 365 Morphology (3)

Ms. Orie. This course provides an introduction to prosodic and non-prosodic morphology with emphasis on data analysis and argumentation. With data from a variety of languages, the first part of the course will examine non-prosodic morphological processes to highlight the typology of word structure across languages. The second part will examine morphological processes conditioned by prosody, and consider the various frameworks for analyzing the data; eventually, the course will work toward a dormal model like that of McCarth and Prince's "Theory of Prosodic Morphology". The main objectives of the course are: (1) to learn to analyze morphological data; (2) to learn to compare alternative analysis for a given set of data and to find evidence to choose between the alternative; (3) to learn to present linguistic analysis and argumentation in a coherent essay.

## ANTH 366 Discourse Analysis: Pragmatics of Language Use (3)

Ms. Maxwell. Study of written and spoken texts from a variety of languages and language use contexts. Focus on structural aspects of language (noun phrase construction and anaphora, topicalization, focus constructions, word order, deictics, and definite reference) as they relate to the situated use of language.
ANTH 367 Language and Its Acquisition (3)
Ms. Orie. This course provides an introduction to issues such as language and its relation to animal communication; the genetic basis of language ability and acquisition; neurological aspects of linguistic knowledge; first language acquisition. Emphasis will be laid on data collection, description, and analysis.

## ANTH 368 Language and Power (3)

Ms. Maxwell. Exploration of the ways that language indexes, reflects, and constructs power. Cross-cultural study of the interrelationship of social ascriptions, attitudes toward groups and their members, and the speech patterns of in-group/out-group members. Examination of the manipulation of power and its linguistic correlates in the domains of medicine, the media, education, and the law. Effects of language policy, especially officialization and standardization, on speakers of minority languages or codes.

## ANTH 369 Language and Gender (3)

Ms. Maxwell. An exploration of the structures of language, phonological, morphological, syntactic, semantic, and pragmatic, as they index, inter-relate with, and construct gender identities cross-culturally.

## ANTH 370 Ecological Anthropology (3)

Mr. Balée. Critically reviews case studies of ecosystemic and energetic relations between human populations, cultures, and the environment in diverse ethnographic settings of the world, such as Amazonia, the Great Basin, New Guinea, and Southeast Asia. Examines the historical emergence of ecological paradigms in anthropology. Compares the modern contributions of cultural ecology, evolutionary ecology, ethnoecology, and historical ecology. Evaluates potential contributions of ecological anthropology to general ecology.

## ANTH 371 Historical Ecology of Amazonia (3)

Mr. Balée. Interactions between local peoples and Amazonian landscapes from prehistory to the present. Amazonian landscapes as an analytic unit will be examined from the interdisciplinary perspective of historical ecology. Changes and development of forests and savannas since the arrival of human beings. Historical, ecological, cultural forces involved in biological and edaphic diversity in modern forests. Long-term effects of prehistoric and historic human occupations and manipulation of landscapes. Implications for conservation and development. See EEOB 371/671 and ANTH 671.

## ANTH 372 Adaptation and Human Variability (3)

Mr. Holliday. Biological adaptations of living human populations to their environments, and the interaction of these adaptations with cultural patterns. Relationships of body size, form, and composition to climatic and nutritional factors in various geographical groups of modern man. Major adaptive problems facing the human species are discussed and implications for the future explored.

## ANTH 373 Principles of Forensic Anthropology (3)

Mr. Verano. Introduction to forensic anthropology, a subdiscipline of physical anthropology concerned with the identification of human skeletal remains in medico-legal contexts. Surveys the history of the field and the techniques used to determine age, sex, and physical characteristics of an individual from skeletonized remains, as well as methods used for positive identification, estimating time since death, and determining cause and manner of death.

ANTH 374 Human Sociobiology (3)
Staff. This course will investigate human social behavior from an evolutionary perspective, including the interplay between culture, environment, and natural selection. A critical analysis of studies utilizing evolutionary interpretations of human social behavior will be the topic of discussion, including recommendations on improvements of the line of investigation.
ANTH 375 Bones, Bodies, and Disease (3)
Mr. Verano. Survey of the field of paleopathology, the study of health and disease in ancient populations. Topics include methods for identifying evidence of injury and disease in bones, teeth, and mummified tissue; ancient medicine and surgery; chemical approaches to reconstructing diet; and human health trends through time.
ANTH 376 Primate Evolution and Adaptation (3)
Staff. This course will focus on the anatomy, evolution and adaptive radiation of the Order Primates. Basic information on living primates and detailed investigation of the primate fossil record will be presented. The dynamic nature of the field will be the subject of class discussion and investigative essays.

## ANTH 388 Writing Practicum (1)

Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.

## ANTH 403 Kinship Systems (3)

Mr. Balée, Ms. Du. Description and analysis of patterns of marriage, descent, alliance, and kinship terminology as comprehended within the cross-cultural framework. The contribution of studies of kinship systems to the development of social anthropology.
ANTH 406 Proseminar in Anthropology (3)
Staff. Prerequisite: junior or senior anthropology major status. Research and discussion on topics and problems involving integrated application of concepts and methods of the subdisciplines of anthropology.

## ANTH 413 North American Prehistory (3)

Mr. Kidder. A survey of the archaeology of Canada and the United States from the appearance of man in the New World to the arrival of the Europeans.

ANTH 415 African Prehistory (3)
Mr. Bricker. Survey of African prehistory from the earliest tool-makers (Olduvai Gorge, etc.) to protohistoric times. Emphasis on Africa south of the Sahara for later prehistory. Africa's role in human origins, development and spread of food-producing economies, the African Iron Age, early contacts with Arabic and European peoples.
ANTH 427 Roots of Western Civilization (3)
Mr. Bricker. Cultural history of Southwestern Asia and Europe from the Mesolithic, through the development of food production, to the beginnings of civilization. Emphasis upon the beginnings of complex societies and urban life and their early, pre-Roman development in Europe.

## ANTH 441 Olmec and Maya Civilization (3)

Mr. Andrews. Examines the development of highly advanced cultures and societies in one of the centers of native American civilization. Although the presentation stresses archaeological data, the course considers pre-Hispanic aesthetic achievements, social organization, values, written records, and adaptation to varying environments.

## ANTH 451 Species and Species Concepts in Human Paleontology (3)

Mr. Holliday. The number of proposed fossil hominid/hominin species has mushroomed in recent years yet the recognition of species in the human fossil record remains a daunting task. However, in order to reconstruct the phylogenetic (ancestor-descendent) relationships among humans, our ancestors, and close collateral relatives, we must group hominin fossils into meaningful taxonomic categories, ones that likely reflect truly monophyletic (shared common ancestor) descent patterns. This course explores different evolutionary species concepts and their applicability to human paleontology. Current approaches to the reconstruction of phylogenetic relationships are then discussed, and the taxonomic status of hominin species is assessed.

## ANTH 456, 457 Internship (3)

Staff. Prerequisite: approval of instructor. Internships in anthropology are available to qualified juniors and seniors on a limited basis for individual projects conducted in association with various private firms, public and private organizations, or governmental institutions in New Orleans. Students will work under professional supervision at these sites, and consult with a faculty sponsor. Requirements include a written report on the experience, and an evaluation by the supervisor. Credit for major elective requirement only.

ANTH 461 Ceramic Analysis (3)
Mr. Andrews, Mr. Kidder. A laboratory course dealing with the descriptive analysis of archaeological ceramics. Introduction to aspects of ceramic technology, classification, description, and the use of ceramics in archaeological research. Emphasis will be on practical methods and techniques for analyzing, describing, reporting, and graphically representing ceramic artifacts.
ANTH 462 Lithic Analysis (3)
Mr. Bricker, Mr. Healan. A laboratory course dealing with the technological analysis of lithic artifacts. Introduction to fracture mechanics and flintnapping, debitage analysis and classification. Application of principles and methods of technological classification, description, and graphical representation to archaeological specimens and modern replicates.
ANTH 488 Writing Practicum (1)
Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.
ANTH H491, H492 Independent Studies (3, 3)
Staff. Open to students in the Honors Program with approval of instructor
ANTH 491, 492 Independent Studies (1 or 3, 1 or 3)
Staff. By arrangement.
ANTH 495, 496 Special Projects (3, 3)
Staff. By arrangement.
ANTH H499-H500 Honors Theses (3, 4)
Staff. For senior honors candidates. Intensive reading and research in a selected field of anthropology.
ANTH 601 Anthropological Mathematics (3)
Mr. Healan. An introduction to mathematical methods relevant to anthropology.
ANTH 602 The Neandertal Enigma (3)
Mr. Holliday. The Neandertals are the best-understood group of non-modern fossil hominids, having been known to science since 1856. Yet even today they inspire many provocative questions. Who were the Neandertals? How were they different from us? Did they have language? How and why did they disappear? Were they our ancestors, or did our ancestors outcompete them? And if the Neandertals were not our ancestors, then who were? These are some of the questions we will explore in this class on the classic "cavemen"
ANTH 605 North American Indians (3)
See ANTH 305 for description.
ANTH 606 South American Indians (3)
See ANTH 306 for description.

## ANTH 607 Contemporary Chinese Society (3)

See ANTH 307 for description.
ANTH 608 Far East (3)
See ANTH 308 for description.

## ANTH 610 South American Archaeology (3)

Mr. Verano. Survey of South American archaeology with primary focus on the Andean area. Overview of culture history from the Paleoindian period through the Spanish conquest.
ANTH 613 Southeastern United States Prehistory (3)
Mr. Kidder. Survey of the various problems of the archaeology of the Southeastern United States.
ANTH 614 Primate Behavior and Biology (3)
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Staff. This course will familiarize students with the order Primates, with an emphasis on the "rules" of and constraints on nonhuman primate social structure, and the diversity and flexibility of primate social behavior. An introduction to the nonhuman primates will include physical characteristics, ecological influences and constraints on behavior, evolutionary history, taxonomy, and a consideration of the genetic basis for an evolutionary interpretation of behavior. A more detailed examination of different types of behavior (e.g., aggressive, status-related, developmental) and their function in primate social groups will be considered using evidence from both field and laboratory based studies. We will end with a review of the variability and flexibility of social structures, and a look to the future conservation of primate species. Students may not take both ANTH 314 and 614 for credit.
ANTH 615 Cognitive Anthropology (3)
See ANTH 315 for description.
ANTH 621 Development of Anthropological Theory (3)
Ms. Masquelier. Origin and development of anthropology since the Renaissance.

## ANTH 623 Archaeological Theory (3)

Mr. Kidder. An introduction to theoretical basis of modern archaeology. The implications of theory for excavation, analysis, and interpretation.

ANTH 624 Technical Analyses for Archaeology (3)
Mr. Bricker. A survey of scientific analytic techniques that have been adapted for application to common archaeological problems such as site discovery, dating, site formation processes, artifact source and function, and subsistence and diet. Examination of methodological literature and case studies.
ANTH 625 Man in the Pleistocene (3)
Mr. Bricker. A survey of man's cultural evolution from the earliest hominid toolmakers through the Upper Palaeolithic. Emphasis on the Old World. Man's Pleistocene environment and his adaptation to it, the record of technological change, the cultural context of human biological evolution.

## ANTH 626 Prehistory of Highland Mexico (3)

See ANTH 326 for description.

ANTH 632 Social Structure (3)
Ms. Bricker. History of the development of the structural/functional paradigm in social anthropology. Diachronic versus synchronic models, statistical versus normative models, decision models, networks, psychological reductionism.
ANTH 634 Medical Anthropology (3)
Ms. Masquelier. Survey of the relationships among disease, curing, culture and environment. Topics include problems of adapting modern medicines to diverse cultures; explication of the social and cultural correlates of physical and mental health and disease (social epidemiology); cross-cultural variation in disease concepts, medical practices, role of patients, and mental health; health and nutritional implications of planned culture change; contributions of anthropology to health-policy decisions of development organizations.

## ANTH 635 Culture and Religion (3)

See ANTH 335 for description.

## ANTH 642 Linguistic Field Methods (3)

Ms. Maxwell. Prerequisite: approval of instructor. Acquiring and using techniques for conducting linguistic field work. Investigation of one or more languages by working with native speakers. Emphasis on defining problems, developing and testing hypotheses.

ANTH 646 Human Osteology (3)
Mr. Holliday, Mr. Verano. A laboratory course emphasizing the study of the human skeleton. In addition to a thorough knowledge of skeletal anatomy, training is given in a variety of techniques and procedures for identification, reconstruction, description, and analysis of skeletal traits.

## ANTH 648 Human Functional Morphology (3)

Mr. Holliday. This course covers the functional anatomy of the human body, with emphasis on the structure, function, evolution, and development of the musculo-skeletal and nervous systems. The principle of biological uniformitarianism is used to correlate hard tissue (i.e., teeth and bone) structure with soft tissue function, since soft tissues are only rarely recovered in archaeological or paleontological settings.

## ANTH 649 Evolution of Behavior (3)

Staff. This seminar will be an intensive investigation into the evolution of behavior. First, the original literature will be examined and then specific topics will be introduced, such as the evolution of social behavior, parental behavior, communication systems, and reproductive strategies, giving careful consideration to the interplay of the genetic system with the environmental constraints.

## ANTH 650 Human Evolution (3)

Mr. Holliday, Mr. Verano. An investigation into the evolution of modern Homo sapiens (italics) over the last ten million years. Emphasis will be placed on the fossil record of human and nonhuman primates, the role of changing environments, and migration patterns. Models from "technologically simple" cultures and modern nonhuman primates will be included in the consideration of developing social organizations.
ANTH 651 Race, Ethnicity, and Nationalism (3)
See ANTH 351 for description.

## ANTH 652 Field Methods in Social and Cultural Anthropology (3)

Ms. Bricker. Theory, methods, and techniques of collecting, analyzing, and reporting ethnographic data including participant observation, formal and informal interviews, questionnaires, genealogies, componential analysis, photography, surveys and mapping, projective tests, ethnographic description, and anthropological fiction. Consideration of ethical problems and the use of oral and written historical materials. Field projects within the city.

## ANTH 653 Native North American Art (3)

See ANTH 353 for description.

## ANTH 654 Regional Cultures of Native North America (3)

See ANTH 354 for description.

## ANTH 670 Spoken Nahuatl (3)

Ms. Maxwell. The essentials of Nahuatl phonology, morphology, and syntax. Conversational practice and laboratory sessions along with emphasis on linguistic analysis of the language.
ANTH 671 Historical Ecology of Amazonia (3)
See ANTH 371 for description.
ANTH 672 Spoken Yoruba (3)
Ms. Orie. This course provides an introduction to the Yoruba language. Emphasis on grammar and vocabulary development, listening, speaking, reading, and writing skills. Practice in oral discussion will be enhanced by weekly dramatical presentations, poetry recitals, and story-telling.
ANTH 680 Spoken Yucatecan Maya (3)
Ms. Bricker. The essentials of Yucatecan Maya phonology, morphology, and syntax. Oral/aural exercises and conversational practice with a native speaker.
ANTH 681 Introduction to Maya Hieroglyphs (3)
Ms. Bricker. A survey of present knowledge about the nature of the pre-Columbian Maya writing system, including calendrical notation, astronomical calculations, the structure and content of phoneticism, and its relationship to other Mesoamerican writing systems.

## ANTH 682 Classical Yucatecan Maya (3)

Ms. Bricker. Morphology and syntax of Classical Yucatecan Maya. Palaeography and translation of Colonial Maya documents representing the following genres: land surveys and transfers, wills, official complaints, divinatory and/or prophetic texts.

## ANTH 683 Aztec and Maya Literature (3)

Ms. Bricker. A survey of indigenous literatures of Mesoamerica focusing on Aztec, Quiché, Tzotzil, and Yucatecan Maya sources and covering myths, chronicles, poetry, songs, folktales, proverbs, prayers, incantations, and riddles. Topics include elements of style, relationship between narrative and pictures, principles of translation, Aztec and Maya views of the Spanish Conquest, and European influences on the content and style of Mesoamerican literature.
ANTH 688 Writing Practicum (1)
Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.

## Architecture

see Allied Programs

## Art

Office: 202 Woldenberg Art Center at Newcomb College
Phone: (504) 865-5327
Fax: (504) 862-8710
Website: www.tulane.edu/~art
Professors
Elizabeth Hill Boone, Ph.D., Texas, Austin (Martha and Donald Robertson Chair in Latin American Art)
Marilyn R. Brown, Ph.D., Yale
Gene H. Koss, M.F.A., Temple
Arthur Okazaki, M.F.A., Idaho (Maxine and Ford Graham Chair in Fine Arts) (Chair)
Thomas F. Reese, Ph.D., Yale
William Tronzo, Ph.D., Harvard (Associate Chair)

## Associate Professors

Barry Bailey, M.F.A., East Carolina
Sandra Chism, M.F.A., Kansas
Teresa Cole, M.F.A., Cranbrook Academy of Art (Ellsworth Woodward Professor of Art)
Ronna Harris, M.F.A., California, Santa Barbara
Jeremy Jernegan, M.F.A., San Jose State
Michael Plante, Ph.D., Brown (Jessie Poesch Professor of Art)
Richard J. Tuttle, Ph.D., Stanford
Assistant Professors
Pamela Franco, Ph.D., Emory

## HISTORY OF ART

## MAJOR

The major in art history is designed to impart an understanding of the historical development and context of art, primarily in western Europe and the Americas. Majors are required to take 33 credits in art history, which must include a two-semester survey (101 and 102) and a minimum of nine advanced classes or 27 credits distributed among four broad areas. At least one course should come from each of the following fields: ancient, Pre-Columbian, or African; medieval; Renaissance or baroque; modern or American art. At least one course must be at the 600 level, and another must be at either the 400 level or 600 level.

Students are encouraged to take a foundations course in studio art for the insight provided into the making of works of art. A limited number of internships in local museums are available for academic credit. A one-credit writing practicum that satisfies the college writing requirement is available with art history courses at the 600 level.

## MINOR

A minor in art history consists of at least 21 credits of art history, of which 101 and 102 are required.

## ARHS 101 Art Survey I: Prehistory through the Middle Ages (3)

Staff. An introduction to the history of painting, sculpture and architecture from the Old Stone Age through the ancient Mediterranean world to the end of the medieval period in Western Europe. Considers issues including technique, style, iconography, patronage, historical context, and art theory. Required for majors in the history of art.

## ARHS 102 Art Survey II: Renaissance to the Present (3)

Staff. An introduction to the history of Western European and American painting, sculpture and architecture from the Renaissance through the baroque, rococo, and early modern periods to the late 20th century. Considers issues including technique, style, iconography, patronage, historical context, and art theory. Required for majors in the history of art.
ARHS 291 Special Topics in the History of Art (3)
Staff. Special topics in the history of art. Subjects will vary and may not be available every semester. Individual topics will be listed in the Schedule of Classes.
ARHS 313 Egypt Under the Pharaohs (3)
Staff. The culture of ancient Egypt from the pre-dynastic period through the end of the New Kingdom. The course emphasizes the sculpture, architecture, and painting of the pharaonic periods. Other areas covered are: Egyptian literary and historical documents, Egyptian religion, and major social developments. Same as CLAS 313 and HISA 313.

## ARHS 316 The Aegean Bronze Age (3)

Staff. The cultures of the Cycladic Islands, Crete, and the Greek mainland during the Bronze Age (ca. 3200-1150 B.C.E). Emphasis will be on the major and minor arts of the Minoans and Mycenaeans and how this material can be used to reconstruct the societies, cultures, and religions of the Aegean Bronze Age. Same as CLAS 316 and HISA 316.

## ARHS 317 Greek Art and Archaeology (3)

Staff. Greek arts (architecture, sculpture, and painting) and material culture in the light of social, intellectual, and historical developments from the end of the Bronze Age (ca. 1200 B.C.E.) to the end of the Hellenistic period (31 B.C.E.). Same as CLAS 317.

ARHS 318 Roman Art and Archaeology (3)
Staff. Architecture, sculpture, and painting in Rome and the Roman Empire, their sources, and their history from the Etruscan period through the 4th century C.E. Same as CLAS 318.
ARHS 319 Pompeii: Roman Society and Culture in Microcosm (3)
Staff. A survey of Roman culture through the study of the town destroyed by Mt. Vesuvius in 79 C.E. The focus is on the society, politics, religion, domestic life, entertainment, economy, and art of Pompeii and the surrounding region in the early imperial period. Same as CLAS 319 and HISA 319.

## ARHS 320 Early Christian and Byzantine Art (3)

Mr. Tronzo. A survey of art and architecture in the Mediterranean from the third through the fourteenth centuries, with a focus on the rise of Christian art in the late Roman world and the art of the Byzantine state.
ARHS 321 Art and Experience in the Middle Ages (3)
Mr. Tronzo. A survey in which both modern and historical categories of experience are used to understand the art of the Middle ages, especially as it manifested itself in the most characteristic of all medieval forms, the church. Along a chronological and geographical trajectory from Early Christian Rome to Gothic Paris this course will move through topics such as memory, poetry, pilgrimage, the body, gesture, devotion, narrative and liturgy.
ARHS 331 Art of the Early Renaissance in Italy (3)
Mr. Tuttle. Painting and sculpture in Italy from 1250 to 1500 with some attention given to architecture.

## ARHS 332 16th-Century Italian Art (3)

Mr. Tuttle. Painting and sculpture in Italy from the High Renaissance to the Counter Reformation.

## ARHS 333 Italian Renaissance Architecture (3)

Mr. Tuttle. A survey of the major architects and their principal achievements in theory and design during the period 1400-1600.
ARHS 342 Baroque Art (3)
Staff. Examines major developments in European art during the seventeenth century. Works of art will be discussed in terms of the historical, social, and artistic trends that surround them.

## ARHS 351 Romanticism and Realism (3)

Ms. Brown. The background and foundation of modern art. Consideration of the influence of social, cultural, and political forces on 19th-century European painting and sculpture from 1789 to 1863.

## ARHS 353 Survey of Russian Art (3)

Staff. An introduction to the art and architecture of Russia, from the 12th century to the present. The first part of the course deals with the medieval period (church architecture, icons, frescoes). The second part begins with the assimilation of western European styles during the 17th century, and concludes with a survey of current developments in Russia. No knowledge of Russian required. May be counted toward major only with approval of department. Same as RUSS 353.

## ARHS 354 Impressionism and Post-Impressionism (3)

Ms. Brown. The background and foundation of modern art. Consideration of the influence of social, cultural, and political forces on 19th-century European painting and sculpture from 1863 to 1900.

## ARHS 356 Twentieth-Century Art (3)

Ms. Brown. Symbolism, art nouveau, the development of fauvism, expressionism, cubism, futurism, constructivism, de stijl, dada, surrealism, abstract expressionism, pop, minimal, conceptual, and the other artistic styles and movements in the 20th century in Europe and America, with emphasis on painting and sculpture and the forces and theories that influenced them. Some consideration of architecture.

## ARHS $\mathbf{3 6 0}$ Art in America, 1492 to the Civil War (3)

Mr. Plante. Analysis of visual and material culture from the first European contact to the onset of the Civil War. Considers the transformation of cultural forms from the old world to the new in developments such as the rise of American urbanism and the formation of a "national" iconography as seen in portraiture, genre painting, and the establishment of a landscape painting tradition in the United States.

## ARHS 361 American Art from the Civil War to World War II (3)

Mr. Plante. This course will analyze the development of art and architecture in America in the years following the Civil War and the ways in which that art reflects the social, intellectual, and political life of the nation up to Would War II. Topics will include Realism, images of the American city and of the frontier, the birth of the skyscraper, the Harlem Renaissance, Regionalism, and Abstract Expressionism.
ARHS 362 Contemporary Art Since 1950 (3)
Mr. Plante. Explores the developments in the visual arts in the U.S. and Europe since 1950. Concentrates upon the social-historical formation of artistic development beginning with the aftermath of World War II, and continuing to the present. Emphasizes movements such as Pop, Minimalism, Earth art and Postmodernism. Issues surrounding the objects will include poststructuralism, post-colonialism as well as African-American, feminist, and gay and lesbian strategies for self-representation.

## ARHS 370 Pre-Columbian Art (3)

Ms. Boone. An introduction to the art and architecture of Pre-Columbian Mesoamerica (Mexico and Central America) with an emphasis on Mexico. The course focuses on the historical, political, and religious contexts of the visual arts and addresses the function of these artworks as ideological statements.

## ARHS 371 Colonial Art of Latin America (3)

Ms. Boone. Renaissance and baroque architecture, painting and sculpture of the metropolitan centers of the Spanish and Portuguese colonies from the 16th to the early 19th century with a major emphasis on Mexico.

## ARHS 385 African Art (3)

Ms. Franco. This course introduces students to the visual and performative arts of sub-Saharan Africa with primary emphasis on sculpture, pottery, leadership arts, and ritual performances. The timeframe extends from the 10th century to the present, though most of the objects would have originated prior to the 20th century and have undergone varying degrees of transformation under colonialism.

## ARHS 386 Arts of the African Diaspora (3)

Ms. Franco. This course seeks to introduce students to the geographical and cultural notion of "African Diaspora". It addresses such issues as migration, creolization, hegemony, and resistance. It also examines indigenous art forms including popular urban forms and performance.

## ARHS 387 20th-Century African-American Art (3)

Ms. Franco. This course is a survey of African-American art in the United States in the 20th century. The chronological development of African-American art parallels the chronology of twentieth-century American art. The course is organized around social, cultural, and political issues and themes, including the relation of art to identity politics.
ARHS 391 Special Topics in the History of Art (3)
Staff. Special topics in the history, criticism, or theory of art. The subjects will vary and may not be available every semester. Individual topics will be listed in the Schedule of Classes.

## ARHS 456, 457 Internship Studies (1-3, 1-3)

Staff. Prerequisites: approval of instructor and department. An experiential learning process coupled with pertinent academic course work. Open only to juniors and seniors in good standing. Registration is completed in the academic department sponsoring the internship on TUTOR. Only one internship may be completed per semester. (Note: A maximum of six credits may be earned in one or two courses.)

## ARHS 488 Writing Practicum (1)

Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.

ARHS 491, 492 Independent Studies (3, 3)
Staff. Open to qualified juniors and seniors with approval of instructor and chair of department.

## ARHS H499-H500 Honors Thesis $(3,4)$

Staff. Open to qualified students with approval of department, instructor, and Honors Committee.
ARHS 619 Seminar in Aegean and Greek Archaeology (3)
Ms. Carter. Topics include: Problems in Aegean Archaeology; Major Monuments in Greek Sculpture; Greek Vase-Painting; The Athenian Acropolis. Same as CLAS 619.

## ARHS 620 Seminar in Roman Art and Archaeology (3)

Staff. Topics include: Etruscans \& Early Rome; Ancient Painting and Mosaics; Roman Emperors as Builders; Roman Commemorative Monuments. Same as CLAS 620.
ARHS 623 Art History and Photography (3)
Mr. Tronzo. This course is about the intersection of a historical discipline, art history-and a visual medium-photography: in what ways has photography shaped art history?; how has art history used photography? In order to address these questions, we shall look at photography and art history as they are practiced in primarily two (partly overlapping) contexts: in scholarship (printed texts) and in museums.
ARHS 624 The Use of Antiquity in the Middle Ages (3)
Mr. Tronzo. A seminar which will focus on the problem of the meaning and function of classical art and architecture in the Christian Middle Ages.

## ARHS 625 Word and Image in Early Italian Painting (3)

Mr. Tronzo. An introduction to the problem of the relationship between language and visual arts, as it developed in Italian art of the later Middle Ages and early Renaissance, particularly in the art of Duccio and Giotto.

## ARHS 635 Seminar in Michelangelo (3)

Mr. Tuttle. Examines the life and works of Michelangelo Buonarroti with an emphasis on his career as a sculptor before 1534. While focused on particular major works of art, class discussions address such topics as the artist's early education and training, his patrons and social status, methods of production, religious and philosophical beliefs, stylistic development, and artistic legacy. Special attention given to contemporary documents, Michelangelo’s own writings, and the biographies of Condivi and Vasari.

## ARHS 653 Degas (3)

Ms. Brown. In-depth examination of Degas's works and career in light of various historical and critical approaches, ranging from formalism and iconography to sociopolitical and cultural studies, Marxism, psychoanalysis, and feminism. Attention will be paid to male and female spectatorship and to relevant works by Degas's Impressionist contemporaries, including Cassatt, Gonzales, Manet, Morisot, and Whistler, as well as other artists including Daumier, Delacroix, Ingres, Tissot, and Toulouse-Lautrec. Additional comparative topics include academic art, photography, journalistic illustration, and Japanese prints.

## ARHS 656 Manet (3)

Ms. Brown. In-depth examination of Manet's works and career in light of various historical and critical approaches, ranging from formalism, and iconography to sociopolitical and cultural studies, Marxism, psychoanalysis, and feminism, Attention will be paid to male and female spectatorship and to relevant works by Manet’s Impressionist contemporaries, including Cassatt, Degas, Gonzales, Monet, and Morisot. Other comparative topics include academic art, photography, journalistic illustration, and Japanese prints.
ARHS 661 Visuality, Representation and the Body (3)
Mr. Plante. Examines the ways in which artists-painters, sculptors, film makers, performance artists-from the 19th- and 20th-century have constructed and organized representations of the human body. Dependent upon the writings of Lacan and other post-Freudian theorists, the body will be examined as a site across which history, memory and cultural politics have been played out. Artists studied will include Cassatt, Duchamp, Eakins, Madonna, Mapplethorpe, O’Keefe, Lorna Simpson, and Kiki Smith.

## ARHS 662 Reading Abstract Expressionism (3)

Mr. Plante. Examines the ways in which Abstract Expressionism has been interpreted, both from the view of American critics and historians and their European counterparts. Emphasizes the extent to which formalist criticism evolved around Abstract Expressionism, and that only recently have scholars challenged those apolitical reading of this art, considering the political and economic factors which contributed to its international predominance on the global stage. Artists will include De Kooning, Frankenthaler, Hofmann, Krasner, Newman, Pollock, and Still.

## ARHS 663 Revising the 1960’s (3)

Mr. Plante. Charts the development of American, and some European, art during the 1960's, away from the international dominance of Abstract Expressionist style toward a more diverse range of styles such as Color Field painting, Pop art, Minimalism and Post-Minimalism, and Performance art. Attention will be paid to the development of artistic and cultural criticism during this period (Greenberg, Sontag, Barthes), and the arguments about the role of culture in American society, the status of so-called "high" and "low" art. Artists studied will include Frankenthaler, Hesse, Judd, Lichtenstein, Morris, Smithson, and Warhol.

## ARHS 665 Postmodern Formations: Art Since 1980 (3)

Mr. Plante. Examines both European and American conceptions of postmodernism, as it originated in post-structural and psychoanalytic theory. Emphasis will be place upon artists working since 1980, including Basquiat, Jenny Holzer, Barbara Kruger, Mapplethorpe, Cindy Sherman, Warhol and the politically-based art project of Gran Fury, the Guerrilla Girls and the Names Project. Interpretive strategies will be taken from readings in European literary theory, with emphasis place upon the shift in criticism in art-making, away from Europe, toward an ideology formed around the issues of racial, sexual, and gender performance of identity.
ARHS 672 Seminar on Aztec Arts (3)
Ms. Boone. Prerequisite: ARHS 370 or approval of instructor. Intensive investigation of Aztec arts as fundamental manifestations of Aztec imperial ideology (especially political and religious). The course concentrates on the urban iconographic programs developed in sculpture and architecture and considers the role of ritual and performance within these programs. It also
reviews the sixteenth-century sources (pictorial and alphabetic) that are used to understand Aztec culture.

## ARHS 673 Seminar in Mexican Manuscript Painting (3)

Ms. Boone. Prerequisite: ARHS 370 or approval of instructor. Detailed investigation of the pictorial codices painted in Mexico in the 15th and 16th centuries. The course examines the pictorial conventions and grammar used by the Mexican scribes to record knowledge. It analyzes the tradition of manuscript painting as it developed in Pre-Columbian Mesoamerica and then as it adapted to new functions and changed audiences in the early colonial period. Specific topics will vary from time to time.
ARHS 681, 682, 683, 684, 685, 686, 687 Seminars in the History of Art (3 each)
Ms. Boone, Ms. Brown, Ms. Franco, Mr. Plante, Mr. Tronzo, Mr. Tuttle. Advanced topics in the history, criticism, or theory of art. The subjects of the seminars vary according to the needs of the students and the scholarly interests of the individual instructor. Specialized topics are listed in the Schedule of Classes.

## ARHS 688 Writing Practicum (1)

Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.

## Studio Art

## BACHELOR OF ARTS IN STUDIO ART

For a bachelor of arts in studio art, the student must fulfill all general requirements as described in the liberal arts curriculum. In addition, the B.A. in studio art program requires a total of 45 credits. The B.A. requires 33 credits in studio courses including three courses from among six in the Foundations of Art Series. (If two foundations courses are taken in two-dimensional areas, the third must be taken in a three-dimensional area or vice-versa.) Also required are 105 and 106. Of the remaining 18 studio credits, at least 12 credits must be in one area beyond the 100 level. Also 12 credits in art history are required, these include Art History 101 and 102. No more than half of required studio and art history courses can be transferred into the degree program.

## BACHELOR OF FINE ARTS IN STUDIO ART

The bachelor of fine arts provides a preprofessional introduction to the visual arts with a greater degree of concentration on courses in the studio area. For the B.F.A. in studio art, the student must fulfill all general requirements as described in the liberal arts curriculum with the following exceptions: two courses required in the sciences and mathematics category instead of three; and two courses required in the social science category instead of three.
The B.F.A. requires at least 60 art credits, of which a minimum of 51 must be in studio courses, including three courses from among six in the Foundations of Art series. (If two foundation courses are taken in two-dimensional areas, the third must be taken in a three-dimensional area or vice versa.) The studio requirements are 105 and 106; two drawing courses at the 200 level or higher; at least eight electives at the 200 level or higher, six of which must be in an area of concentration; and Major Project 501 and 502. Also, three courses in art history are required: Art History 101, 102, and one additional course. No more that half of required studio and art history courses can be transferred into the degree program. Transfer students wishing advanced standing in studio courses toward the B.F.A. are required to submit representative examples of the work done for which credit has been received at another institution.
Incoming freshmen who expect to be art majors are advised to take Art Studio 105 and three foundations courses during their freshman year. At the end of the sophomore year, the art department studio faculty will assign an advisor. Candidates for the B.F.A. are allowed to take only one level of a studio course sequence in summer school.

Declaration of the B.F.A. major is contingent on the acceptance by the faculty and must be done at least one year before graduation. Review of applications will take place once at the end of each semester. Applications must include: (1) major declaration form; (2) current degree audit sheet; (3) portfolio of 5-10 pieces of artwork in any medium. The faculty strongly suggests that the student meet with his/her major studio professor before initiating this process. Accepted candidates will then be reviewed and evaluated during the spring semester of their junior year and late in the fall semester of their senior year.

In the senior year, each candidate for the B.F.A. develops a substantial body of studio work in Major Project 501 and 502. The art studio faculty will review each project at the end of the fall and spring semester. A grade of (B) or higher is mandatory for continuation in the B.F.A. program. The studio faculty will review the completed B.F.A. thesis show. If in the judgment of the faculty in the Art Department, the work demonstrates sufficient evidence of artistic accomplishment, the student will be recommended for graduation.

## MINOR

A minor in studio art consists of six studio courses: 105 and 106, one two-dimensional course (painting, drawing, photography, printmaking), one three-dimensional course (sculpture, ceramics, glass), and two additional courses: one course at the 200 level and one course at the 300 level. Also required are two art history courses, 101 and 102 recommended. The minor requires a total of 24 credit hours.

## FOUNDATIONS OF ART SERIES

A series of foundations courses designed for all university students with an interest in the visual arts. These courses explore the nature of the visual arts through direct experience with a variety of art media. Lectures, discussion, critiques, and extensive studio work are directed toward the development of design principles and an understanding and appreciation of the visual arts and their role in the expression of personal and cultural values.

## ARST 113 Foundations of Art: Ceramics (3)

Mr. Jernegan. This course focuses on design elements and principles of organization within the context of contemporary ceramic art. Students will be introduced to a variety of ceramic materials, processes and aesthetic concerns. Emphasis is given to the relationships between ceramics and other art mediums.

## ARST 117 Foundations of Art: Glass (3)

Mr. Koss. This course focuses on the history and theory of glass art, and also introduces basic techniques with attention given to issues of composition, perception, communication, and expression. Emphasis also will be placed on the relationships between glass art, other art mediums, and the history of art.

## ARST 125 Foundations of Art: Painting (3)

Ms. Chism, Ms. Harris. An introduction to color and color theory in painting. Since color constitutes a major means of expressive communication in the visual arts, the painting projects encourage personal responsiveness to color and explore how it enriches our understanding of the natural world.

ARST 135 Foundations of Art: Photography (3)
Mr. Okazaki. This course focuses on the history and theory of photography, and also introduces basic techniques, with attention given to issues of composition, perception, communication, and expression. Emphasis also will be placed on the relationships between photography, other art mediums, and the history of art.

## ARST 137 Foundations of Art: Printmaking (3)

Ms. Cole. This course is designed as an introduction to a wide range of techniques in printmaking. It is developed to give the student an overview of the possibilities with the processes of relief and intaglio printing. Through a series of demonstrations, projects, critiques, and slide lectures the student will explore the rich diversity of the medium and become exposed to the strong tradition of printmaking. Areas covered include: linoleum cuts, woodcuts, collagraph, mono type, dry point, engraving, and etching.

## ARST 149 Foundations of Art: Sculpture (3)

Mr. Bailey. An introductory study of three-dimensional form and spatial relationships making use of a variety of media and processes. Slide lectures supplement studio work and present examples of contemporary sculpture within a historical context.

## COURSES

## ARST 105 Beginning Drawing (3)

Staff. For majors and non-majors. In this course we will be working from life. The goal is to acquire and develop conceptual and technical skills necessary to translate three dimensional forms to a two dimensional surface.

## ARST 106 Beginning Drawing (3)

Staff. Prerequisite: ARST 105. This course will further explore the primary elements of drawing: line, form, value, and texture as a means of perception, understanding, representation, and communication. Emphasis will be placed on creating a correspondence between subject, method, and intent.

## ARST 205 Intermediate Drawing: Color (3)

Ms. Chism, Ms. Harris. Prerequisites: ARST 105 and 106. Incorporating color theory and experimentation, the course will explore the expressive and conceptual potential of color use in drawing media.

## ARST 207 Descriptive Drawing (3)

Ms. Chism, Ms. Harris. Prerequisites: ARST 105 and 106. An exploration of drawing in both an historical and contemporary context as a means of perception, analysis, representation, and communication. Course work investigates the relationships of the subject to technique and the visual to conceptual. Emphasis is placed on providing a systematic analysis of each subject through the use of multiple approaches.

## ARST 208 Life Drawing (3)

Ms. Chism, Ms. Harris. Prerequisites: ARST 105 and 106. A study of the anatomy and structure of the human form with a view toward understanding and employing the human image in its historical, humanistic function as a vehicle of expression.

## ARST 213 Intermediate Ceramics (3)

Mr. Jernegan. Prerequisite: ARST 113. The course focuses on the use of the potter's wheel in developing ceramic forms. A variety of techniques and forms will be covered with emphasis on their aesthetic and conceptual potential in the field of ceramic art. Historical and contemporary approaches are presented in slide lectures and demonstration.

## ARST 214 Intermediate Ceramics (3)

Mr. Jernegan. Prerequisite: ARST 113. The course focuses on hand working processes with plaster molds and use of extruded elements in the development of original works. Press molding and slip casting will be covered. Students participate in developing clays, glazes and firing procedures.
ARST 215 Studio Art in Paris (3)
Staff. Studio art courses taught only through Tulane University's Summer Paris Program. Topics vary.

## ARST 217, 218 Intermediate Glass (3, 3)

Mr. Koss. Prerequisite: ARST 117. The goal of this class is to achieve a functional understanding of glass art. This general course focuses on blowing, casting, and forming glass. Attention is given to using the approaches to glass for individual expression.

## ARST 227 Intermediate Painting (3)

Ms. Chism, Ms. Harris. Prerequisite: ARST 125. This course focuses on the formal and expressive qualities of both nature-based and pure abstraction. Abstraction is investigated through historic and contemporary ideologies, technical issues and the use of non-traditional materials. Systematic exploration of a variety of approaches will serve as a structure for development of the student's own goals and sensibility.
ARST 228 Intermediate Painting (3)
Ms. Chism, Ms. Harris. Prerequisite: ARST 125. An exploration of basic visual and philosophical concepts involved in creating paintings with an introduction to the technical aspects of painting in oils, i.e., preparing a canvas, media, and mixing and applying paint.

## ARST 235 Intermediate Photography (3)

Mr. Okazaki. Prerequisite: ARST 135. A continuation of traditional photographic procedures exploring more complex visual and technical issues, augmented by the employment of supplementary imaging tools and alternative processes.

## ARST 237 Intermediate Printmaking (3)

Ms. Cole. Prerequisite: ARST 137 or two courses in drawing. An in-depth exploration of the printmaking medium covering technical, historical, and conceptual issues. A strong emphasis is placed on students developing a personal voice through their work. An intensive study in the art of stone and plate lithography.

## ARST 238 Intermediate Printmaking (3)

Ms. Cole. Prerequisite: ARST 137 or two courses in drawing. An in-depth exploration of the printmaking medium covering technical, historical, and conceptual issues. A strong emphasis is placed on students developing a personal voice through their work. An intensive study on fine art silk screen.

## ARST 249, 250 Intermediate Sculpture (3, 3)

Mr. Bailey. Prerequisite: ARST 149. This course explores and expands on the basic concepts, techniques, and processes of sculpture. Students work with projects that develop understanding of both sculptural ideas and materials. A wide variety of media and approaches are explored in this course, including wood, plaster, welding and casting metals, mixed media, and working from the figure.

## ARST 301, 302 Special Courses (1 or 3, 1 or 3)

Staff. Prerequisite: approval of instructor. Course work for additional credit in conjunction with 200- or 300-level studio courses.
ARST 313 Advanced Ceramics (3)
Mr. Jernegan. Prerequisites: ARST 213. Further examination of the aesthetic and conceptual applications of the ceramic medium. The development of individual concerns and vocabulary of form will be stressed. Clay and glaze formulation will be covered. Students are responsible for developing clays and glazes and firing their work.

## ARST 314 Advanced Ceramics (3)

Mr. Jernegan. Prerequisites: ARST 213 or 214. Development of advanced throwing techniques and concepts related to creating original works on the potter's wheel. More complex forms, as well as glazing and firing processes will be covered. Lectures, demonstration and critiques will supplement studio work time.

## ARST 315 Ceramic Firing Technology: Theory and

## Practice (3)

Mr. Jernegan. Gas, wood, and electric kiln design, and construction. Firing theory and process will precede specific analysis of the artist's needs, and demonstration and practice of kiln construction and firing.

ARST 317, 318 Advanced Glass (3, 3)
Mr. Koss. Prerequisites: ARST 217 and 218. This class further develops the student's ability to study methods and processes for forming molten glass into sculpture. Instruction in glass casting and blowing are taught with a focus on creating specific ideas.
ARST 325, 326 Advanced Painting (3, 3)
Ms. Chism, Ms. Harris. Prerequisites: ARST 227 and 228. Principles of picture building and creative composition with a study of media and methods that best stimulate individual expression and predilections.

## ARST 335 Advanced Photography: Chemical Processes (3)

Mr. Okazaki. Prerequisite: ARST 235. Emphasis will be placed on advanced exposure and developing controls and printing techniques. Non-traditional and non-conventional image-making processes will be explored, such as muliple printing, tinting, toning, non-silver techniques, and the Sabattier effect. The use of medium and large-format equipment will be introduced, as will advanced studio lighting techniques.

## ARST 336 Advanced Photography: Digital Processes (3)

Mr. Okazaki. Prerequisite: ARST 235. Building on a foundation of traditional photography, students will be involved with digital imaging as another tool in the process of fine art photographic printmaking. Digital capturing, editing, and outputting will be explored.
ARST 337, 338 Advanced Printmaking (3, 3)
Ms. Cole. Prerequisites: ARST 237 and 238. A detailed study of the variety of printmaking methods, exploring conceptual and/or personal visions. A strong emphasis is placed on combining techniques, expanding material vocabulary, and experimenting with new processes. Seminars covering both historical and contemporary issues of printmaking will be presented to broaden the students critical dialogue.
ARST 349, 350 Advanced Sculpture (3, 3)
Mr. Bailey. Prerequisites: ARST 249 and 250. Further exploration of metals fabrication and casting, carving techniques, additive processes, and environmental art. Seminars, field trips, and slide lectures will supplement the course.
ARST 390 Studio Internships (3)
Staff. Prerequisite: approval of instructor. Studio internships are available for individual projects done in association with various firms and institutions in New Orleans. Students will work under professional supervision at these sites, and consult with an art studio faculty member. Requirements include a written report on the experience, and an evaluation by the supervisor. For elective credit only.

## ARST 413, 414 Studio Ceramics (3, 3)

Mr. Jernegan. Prerequisites: ARST 313 and 314. Advanced level work for ceramics majors, emphasizing individual expression and development of ideas. Independent project work within a class situation.
ARST 417, 418 Studio Glass (3, 3)
Mr. Koss. Prerequisites: ARST 317 and 318. Continuing instruction in glass casting and forming techniques. The emphasis will be on professional presentation of specific ideas.

## ARST 425, 426 Studio Painting (3, 3)

Ms. Chism, Ms. Harris. Prerequisites: ARST 325 and 326. Advanced work for majors.

## ARST 435, 436 Studio Photography (3, 3)

Mr. Okazaki. Prerequisites: ARST 335 and 336. Individual projects in a class situation. Each student explores special interests with the opportunity of working with other advanced students doing diverse projects arrived at in consultation with faculty.

## ARST 437, 438 Studio Printmaking (3, 3)

Ms. Cole. Prerequisites: ARST 337 and 338. Personal exploration into the expansive world of printmaking. Stress is placed on personal growth and development both on the conceptual and technical level. The course will consist of individual and group projects in a class setting.

ARST 449, 450 Studio Sculpture (3, 3)
Mr. Bailey. Prerequisites: ARST 349 and 350. Individual exploration within a cooperative format. Attention given to the development of personal style with seminars supplementing studio research.

## ARST 491, 492 Independent Studies (3, 3)

Staff. Open to especially qualified juniors and seniors with approval of instructor and chair of department.

## ARST H499-H500 Honors Project (3, 3)

Staff. Students propose studio thesis projects at the end of their junior year. Projects are reviewed by an honors committee at the end of the fall semester of the senior year and a recommendation is made on whether to continue. Finished thesis projects are evaluated by the honors committee on a pass or fail basis.

ARST 501, 502 Major Project $(3,3)$
Staff. Required of each candidate for the B.F.A. major.
ARST 601, 602 Special Advanced Courses (1 or 3, 1 or 3)
Staff. Prerequisite: approval of instructor.

## Asian Studies

Office: 220 Newcomb Hall
Phone: (504) 862-3024
Fax: (504) 865-5869
Website: www.tulane.edu/~asia
Program Administrators
Yutaka Horiba, Economics (Co-Director)
Carl L. Bankston, Sociology (Co-Director)
Faculty Associates
Kathleen Davis, Spanish and Portuguese
Shanshan Du, Anthropology
Richard A. Marksbury (Dean, University College)
Robert S. Robins, Political Science
Michael Zimmerman, Philosophy

## COORDINATE MAJOR

The coordinate major in Asian studies consists of nine courses irrespective of whether the courses are three or four credits taken from the courses listed below. Students who do not satisfy the language proficiency with an Asian language must include within the nine courses at least two courses in an Asian language. Asian Studies credit may be earned in the semester abroad program at Kansai Gaidai University in Japan.
ASTA 318 Peoples of South Asia (3)
Mr. Marksbury. A survey of the peoples and cultures of India, Pakistan, Nepal, Bangladesh, Bhutan, Sikkim, and Sri Lanka. Emphasis is placed upon the social organization and cultural history of the diverse peoples who have inhabited the Indian Triangle.

## ASTA 391, 392 Special Offerings in Asian Studies (3, 3)

Staff. Courses offered by visiting professors.
ASTA H491, H492 Independent Studies (3, 3)
ASTA H499-H500 Honors Thesis $(3,4)$
CHINESE
ASTC 101 Beginning Chinese I (4)
Staff. Designed for students to acquire a knowledge of the fundamentals of the Chinese language to be demonstrated in four areas of basic language skills: oral and listening comprehension, speaking, writing (Chinese characters), and some reading ability.

ASTC 102 Beginning Chinese II (4)
Staff. Prerequisite: ASTC 101 or placement. A continuation of the objectives presented in Beginning Chinese I. Attention is given to practical and topics-oriented conversational skills, moods of speech, and complex level of syntax.
ASTC 203 Intermediate Chinese I (4)
Staff. Prerequisite: ASTC 102 or passing proficiency test. An intensive study of conventional Chinese characters, additional grammar, and an exposure to simplified Chinese characters. Continued emphasis on reading, writing, listening, and speaking abilities.

## ASTC 204 Intermediate Chinese II (4)

Staff. Prerequisite: ASTC 203 or equivalent. A continuation of the objectives presented in Intermediate Chinese I. Attention is given to improvement of the student's ability to read and write in modern Chinese.

## JAPANESE

ASTJ 101 Beginning Japanese I (4)
Staff. Emphasizes conversational Japanese based on Romaji text. Includes study of basic grammar and introduction of hiragana, and katakana.

## ASTJ 102 Beginning Japanese II (4)

Staff. Prerequisite: ASTJ 101 or equivalent. Emphasizes conversational Japanese based on text in hiragana, katakana, kanji. Includes study of complex grammar and introduction of approximately 100 kanji.

## ASTJ 203 Intermediate Japanese I (4)

Staff. Prerequisite: ASTJ 102 or equivalent. Conversation, reading, and writing based on text in hiragana, katakana and kanji. Continuation of study of complex grammar and introduction of approximately 100 additional kanji.

## ASTJ 204 Intermediate Japanese II (4)

Staff. Prerequisite: ASTJ 203 or equivalent. Conversation, reading, and writing based on text in hiragana, katakana, and kanji. Continuation of study of complex grammar and introduction of approximately 150 additional kanji.

## VIETNAMESE

ASTV 101 Beginning Vietnamese I (3)
Staff. The study of grammar, vocabulary, phonetics, and diacritical marks necessary to read, write, and speak the Vietnamese language.

## ASTV 102 Beginning Vietnamese II (3)

Staff. Prerequisite: ASTV 101 or equivalent. A continuation of the study of grammar, vocabulary, phonetics, and diacritical marks begun in ASTV 101.

ASTV 201 Intermediate Vietnamese I (3)
Staff. Prerequisite: ASTV 102 or placement. An intensive grammar review with readings from Vietnamese texts and a development of conversational skills.

## ASTV 203 Intermediate Vietnamese II (3)

Staff. Prerequisite: ASTV 203 or placement. A continuation of the objectives presented in Intermediate Vietnamese I. Attention to speaking, reading, and writing. Drills and daily dialogues. Students will become acquainted with the geography, economy, literature, history, and culture of Vietnam.

## COURSES FROM OTHER DEPARTMENTS

Anthropology
ANTH 307, 607 Contemporary Chinese Society
ANTH 308, 608 East Asia
ANTH 316 Peoples of the Pacific

## Economics

ECON 372 Contemporary Japanese Economy
ECON 374 Asia-Pacific Economic Development
Philosophy
PHIL 350 Buddhism

## Political Science

POLC 338 Asian Governments
POLT 487 Asian Political Thought

## Sociology

SOCI 146 Asian American Communities

## Astronomy

Office: 2001 Percival Stern Hall
Phone: (504) 865-5520
Fax: (504) 862-8702

## Program Administrator <br> John Perdew, Physics (Chair)

The student who wants a one-semester survey of astronomy should take Astronomy 100. Students who complete Astronomy 100 may not take Astronomy 101 or 102 for credit. The solar system is treated in more depth in 101. Similarly, 102 treats stellar astronomy in depth.

## ASTR 100 Descriptive Astronomy (3)

Staff. A one-semester survey of astronomy for the liberal arts student. The solar system, properties and evolution of stars and galaxies, and cosmology. Recent discoveries in astronomy are emphasized. Students who take 100 may not take 101 or 102.

## ASTR 101 The Solar System (3)

Staff. The organization and origin of the solar system, the earth in motion, the sun, the moon, the planets, comets, and meteors. Not open for credit to students who have completed 100.

## ASTR 102 Stellar Astronomy (3)

Staff. The stars, their distances, spectra, magnitudes. Stellar atmospheres and interiors, stellar evolution. Variable and collapsing stars, nebulae, galaxies and cosmology. Not open for credit to students who have completed 100.
ASTR 110 Observational Astronomy (4)
Staff. Prerequisite: ASTR 100 or approval of instructor. Activities, readings, and projects in observational astronomy. This course provides students with practical experience in observational techniques, while guiding them to an understanding of the role of measurement in the scientific method.

ASTR 301 Archaeoastronomy (3)
Mr. Purrington. A study of ancient Old- and New-World astronomy as exhibited in archaic myth, megalithic monuments, Mesoamerican buildings, stelae and manuscripts, and alignments of archaeological sites. The fundamentals of spherical astronomy will he presented, with emphasis on horizon phenomena, making it possible to explore the implications of possible astronomical alignments, astronomical content of Mesoamerican codices, and the sky-lore of a variety of cultures. Special attention will be given to early Bronze Age megalith monuments in Britain, to Middle American astronomy, and to astronomy of the Native American Indians.
See also Physics 607, Physics 675.

## Biological Chemistry

Cell and Molecular Biology

Office: 2000 Percival Stern Hall
Phone: (504) 865-5546
Fax: (504) 865-6785

## Chemistry

Office: 2015 Percival Stern Hall
Phone: (504) 865-5573
Fax: (504) 865-5596
Program Administrators
Larry D. Byers, Chemistry (Co-Director)
David A. Mullin, Cell and Molecular Biology (Co-Director)
William L. Alworth, Chemistry (Co-Director)

## MAJOR

A major in biological chemistry must include the cell and molecular biology courses in list I below plus three courses from biology courses in lists II and III below. In addition, the major must include all the chemistry, physics, and mathematics courses listed in lists IV, V, and VI below. An appropriate six-credit special project such as Cell and Molecular Biology 495, 496 or Chemistry 401, 402, integrating the student's biological and chemical studies, is also required. Cell and Molecular Biology 101 and 211, and Ecology and Evolutionary Biology 101 and 111, either for credit or audit, are recommended in the freshman or sophomore year. Because of the interdisciplinary nature of the biological chemistry major, students in this program may not minor in chemistry, cell and molecular biology, or ecology and evolutionary biology.

## I. Cell and Molecular Biology Required Courses

CELL 205 Genetics
CELL 301 Cell Biology
CELL 311 Molecular Biology
CELL 312 Molecular Biology Laboratory

## II. Cell and Molecular Biology Elective Courses

CELL 302 Cell Biology Laboratory
CELL 411 Cells and Tissues
CELL 413 Embryology
CELL 416/417 Developmental Biology (or H416/H417 Honors Developmental Biology)
CELL 422 Microbiology
CELL 423 Microbiology Laboratory

## III. Ecology and Evolutionary Biology Elective Courses

EEOB 333 Vertebrate Physiology

## IV. Chemistry Required Courses

CHEM 107, 117 General Chemistry I (or 109, 111 Honors General Chemistry I)
CHEM 108, 118 General Chemistry II (or 110, 112 Honors General Chemistry II)
CHEM 241, 243 Organic Chemistry I (or 245, 247 Honors Organic Chemistry I)
CHEM 242, 244 Organic Chemistry II or 246, 248 Honors Organic Chemistry II
CHEM 312 Physical Chemistry II or 612 Physical Biochemistry
CHEM 314 Physical Chemistry Laboratory II
CHEM 383 Introduction to Biochemistry
CHEM 384 Intermediate Biochemistry
CHEM 385 Introduction to Biochemistry Laboratory

## V. Physics Required Courses

PHYS 131 General Physics I
PHYS 132 General Physics II

## VI. Mathematics Required Courses

MATH 121 Calculus I
MATH 122 Calculus II
Note: MATH 131 Consolidated Calculus may be taken in lieu of 121 and 122.
MATH 221 Calculus III

## Biological Sciences

See:
Biological Chemistry
Cell and Molecular Biology
Ecology and Evolutionary Biology

## Brazilian Studies

(Note: minor program only)

## Political Science

Office: 323 Norman Mayer
Phone: (504) 862-8312
Fax: (504) 862-8745

## Spanish and Portuguese

Office: 322C Newcomb Hall
Phone: (504) 862-3416
Fax: (504) 862-8752

## Program Administrators

Christopher Dunn, Spanish and Portuguese (Co-Director)
Anthony Pereira, Political Science (Co-Director)

## MINOR

Five courses (minimum of 15 credits) are required for the minor in Brazilian Studies. This will include BRAZ 201 Introduction to Brazilian Studies plus two additional electives at the 300 level or above and at least two at the 600 level. Of these four electives, students must choose at least one from the humanities and at least one from the social sciences. Furthermore, students must take at least three Portuguese language courses which do not count as electives. This requirement will be waived if at least two of the electives are taught in the Portuguese language, relate to Brazil, and are at the 300 level or higher. Students are strongly encouraged to participate in study abroad programs in São Paulo and Salvador, Bahia, yet at least half of the electives must be completed at Tulane University.

## Anthropology

ANTH 306/606 South American Indians

## Brazilian Studies

BRAZ 201 Introduction to Brazilian Studies
BRAZ 481 Special Topics in Brazilian Studies
BRAZ 491 Independent Studies
History
HISL 681 Colonial Brazil
HISL 682 Modern Brazil
Political Science
POLC 634 Brazilian Government

## Spanish and Portuguese

PORT 313 Readings in Luso-Brazilian Literature
PORT 414 Women on the Lusophone World
PORT 461 Brazilian Cinema
PORT 614 Major Authors of Brazil
PORT 616 Afro-Brazilians
PORT 622 The Literature of Brazil
PORT 629 Brazilian Cultural Studies
BRAZ 201 Introduction to Brazilian Studies (3)
Staff. An expansive interdisciplinary introduction to the history, politics, society, literature, and cultures of Brazil, the largest nation of Latin America.
BRAZ 481 Special Topics in Brazilian Studies (3)
Staff. Courses offered by visiting or permanent faculty. For description consult the Director of Brazilian Studies.

BRAZ 491, 492 Independent Studies (3, 3)
Staff. Prerequisite: approval of Director of Brazilian Studies.

## Business

see Allied Programs

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## Cell and Molecular Biology

Office: 2000 Percival Stern Hall
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Website: cell.tulane.edu
Professors
Joan W. Bennett, Ph.D., Chicago
Ken Muneoka, Ph.D., California, Irvine (Chair)
Jeffrey Tasker, Ph.D., University of Bordeaux, France
Leonard B. Thien, Ph.D., California, Los Angeles
Associate Professors
Carol Burdsal, Ph.D., Duke
YiPing Chen, Ph.D., Iowa
David Hurley, Ph.D., Pennsylvania State
David A. Mullin, Ph.D., Texas, Austin
Assistant Professors
Andrei B. Belousov, Ph.D., Moscow State, Russia
Fiona Inglis, Ph.D., University of Glasgow
Liang Ma, Ph.D., Southern California
Bret Smith, Ph.D., Tennessee Medical Center
The curriculum in the cell and molecular biology department is designed for students with interests in the cellular and molecular basis of life and the application of molecular techniques to medical, technological, and environmental issues.

## MAJOR

Students majoring in cell and molecular biology must complete a minimum of ten courses in the biology component, totaling at least 22 credits, 16 credits in chemistry (one year of both general chemistry with laboratories 107/117, 108/118 or H109/H111, H110/ H112 and organic chemistry with laboratories $241 / 243$, $242 / 244$, or H245/H247, H246/H248), six credits in mathematics (see B.S. math requirements), and eight credits of physics with laboratories 121, 122 or 131, 132. Students intending to pursue graduate study are advised to take one year of calculus to satisfy their math requirement.
To fulfill the biology component, all students must complete Cell and Molecular Biology 101 General Biology (lecture only). Students with AP scores of 4 or 5 are awarded three units of credit for 101 and one unit of credit for 211. In addition to 101, all students must complete 205, 301, 311, and either 401 or Chemistry 302 or 383 . Students must also complete either 302 or 312, and one course from 331, 332, 416, 478.
An additional three elective courses are required, with at least two of the three being laboratory oriented. One course involving independent laboratory research, either H491, H492, 495, 496, H499 or H500 may be used as a laboratory oriented course in the electives requirement. Students may use approved courses from other departments to fill the elective component. A list of courses which fulfill this requirement is available from the cell and molecular biology department.

## MINOR

Students wishing to minor in cell and molecular biology must complete Cell and Molecular Biology 101, 205, 301, and 311; two additional electives in biology; and 16 credits in chemistry (one year of both general and organic chemistry and their respective laboratories). Because of the interdisciplinary nature of the biological chemistry major, students in that program may not minor in cell and molecular biology.

## HONORS COURSES

## CELL H205 Genetics (3)

Ms. Bennett. Prerequisite: approval of department. Special course for superior students covering the material listed for 205 plus readings and discussion of recent discoveries.
CELL H416 Developmental Biology (3)
Ms. Burdsal, Mr. Chen. Prerequisite: approval of department. Special course for superior students covering the material listed for 416 plus readings and discussion of recent discoveries.

## CELL H491, H492 Independent Studies (1-3, 1-3)

Staff. Laboratory or library research under direction of a faculty member.

## CELL H499-H500 Honors Thesis $(3,4)$

Staff. For especially qualified juniors and seniors with approval of department and the Honors Committee.

## INTRODUCTORY LEVEL COURSES

## CELL 101 General Biology (3)

Ms. Bennett. A study of the phenomena fundamental to all living systems: cellular biology, physiology, genetics, and development. Required of all cell and molecular biology majors.

## CELL 103 Heredity and Society (3)

Staff. The nature, scope, and implication of the recent accomplishments in the field of genetics. A consideration of human birth defects, hereditary diseases, and the potential of the human species to manipulate its own genes (genetic engineering). Meets the college non-laboratory science requirement. Satisfies the college laboratory science requirement with completion of CELL 106. Does not count toward the requirements for a major or minor in cell and molecular biology.

CELL 106 Heredity and Society Laboratory (1)
Staff. Prerequisite or corequisite: CELL 103. Laboratory and computer exercises to reinforce concepts discussed in Heredity and Society lecture. Students will learn basic laboratory skills, including microscopy and molecular biological techniques. In addition, they will make use of computer programs and internet activities on the world wide web. Satisfies the college laboratory course requirement with completion of CELL 103. Does not count toward the requirements for the major or minor in cell and molecular biology.
CELL 123 Biology of the Nervous System (3)
Staff. Basic concepts in neuroscience, including discussion of the components of the nervous system, the ways nerves communicate with each other, mechanisms of drug action, the ways that an organism responds to its internal and external environment, and discussion of neurological and behavioral disorders. Meets the college non-laboratory science requirement. Does not count towards the requirements for a major or minor in cell and molecular biology or neuroscience. Credit may not be received for both CELL 123 and PSYC 367.

## CELL 210 Biology of Human Reproduction (3)

Ms. Bennett. The anatomy and physiology of male and female reproductive systems, and the diseases relating to each. A consideration of relevant aspects of gynecology, obstetrics and urology. Meets the college non laboratory science requirement. Does not count toward the requirements for a major or minor in cell and molecular biology.

## COURSES FOR INTERMEDIATE AND ADVANCED UNDERGRADUATES

CELL 205 Genetics (3)
Ms. Bennett. Prerequisite: CELL 101. The principles of genetic analysis and the nature of the gene. Discussion of the chromosomal and molecular basis of transmission, replication, mutation, and expression of heritable characteristics.
CELL 211 General Biology Laboratory (1)
Staff. Prerequisite: CELL 101. Laboratory exercises emphasizing concepts in cell, molecular, and developmental biology. Designed for majors in the biological sciences.

## CELL 222 Exploring Careers in Medicine (1)

Staff. Prerequisites: CELL 101 and approval of instructor. This course will examine different careers in medicine, the distribution of hours spent in practice each week, and some of the disease processes and treatments seen by physicians. It will be taught from a practical, clinical point of view and is intended to help students identify their areas of interest in medicine or medical research. Must be taken S/U.

CELL 301 Cell Biology (3)
Staff. Prerequisites: CELL 205 and 311. Fundamental properties of eukaryotic cells and the physiology of cellular components. Emphasis on modern biological approaches and the interaction between cells and their environment.

CELL 302 Cell Biology Laboratory (1)
Staff. Prerequisite or corequisite: CELL 301. Growth and differentiation of mammalian cells in vitro and in vivo. Basic laboratory skills in cell culture, gene transfer, and immunochemistry.

## CELL 305 Drugs and Their Actions (3)

Ms. Beckman. Prerequisites: four credits of biology and eight credits of organic chemistry, or equivalent, or approval of instructor. Basic principles of pharmacology and selected topics of special interest, such as drugs of socioeconomic importance and socially abused drugs. Same as CHEM 305 and GPHR 605.
CELL 311 Molecular Biology (3)
Mr. Mullin, Mr. Thien. Prerequisite: CELL 205. Introduction to theory and applications of molecular biology.
CELL 312 Molecular Biology Laboratory (1)
Staff. Prerequisite or corequisite: CELL 311. Laboratory experience in modern molecular biology techniques.

## CELL 321 Cellular Physiology (3)

Mr. Belousov. Prerequisite: CELL 101. A survey of vertebrate anatomy and physiology emphasizing the cellular and molecular basis of organ function. This course emphasizes modern experimental approaches for exploring physiological function of a variety of organ systems.
CELL 331 Cellular Neuroscience (3)
Mr. Tasker. Prerequisite: CELL 101. Introduction to the basic principles of the neurosciences, including cellular and molecular neurobiology, neuroanatomy and neurophysiology of simple invertebrate and vertebrate systems, neural development, neuropharmacology and synaptic organization of higher neural systems.

## CELL 332 Systems Neuroscience (3)

Mr. Smith. Prerequisite: CELL 101 or approval of instructor. The subject of this course is the human nervous system, its anatomy, connectivity and function. Discusses the normal structure of the nervous system and the relationship of that structure to physiological function. The course is taught from a practical, clinical point of view and is intended to prepare students for further study in the neurosciences.

## CELL 389 Service Learning (1)

Staff. Prerequisite: departmental approval. Students complete a service activity in the community in conjunction with the content of a three-credit corequisite course.

CELL 401 Cellular Biochemistry (3)
Mr. Hurley. Prerequisites: CELL 205 and 301. Structure and function of biological molecules, energetics, metabolism, synthesis of macromolecules and assembly of structures.
CELL 410 Molecular Mechanisms of Reproduction (3)
Mr. Ma. Prerequisite: CELL 311 or approval of instructor. This course contains lectures covering the human and the mouse reproductive tract development and the adult reproductive process. It contains both an overview of the reproductive physiology and detailed molecular mechanisms pertaining to the reproductive processes.
CELL 411 Cells and Tissues (4)
Staff. Prerequisite: CELL 301 or approval of instructor. Emphasis on modern techniques and their applications to research on cell and tissue structure, physiology, and biochemistry. Lectures and laboratory.
CELL 413 Embryology (4)
Mr. Muneoka. Prerequisite: CELL 301 or approval of instructor. Anatomical study of developmental processes in humans. Lecture and online laboratory.

## CELL 416 Developmental Biology (3)

Ms. Burdsal, Mr. Chen. Prerequisite: CELL 205 or approval of instructor. The origin and development of form and patterns in organisms. Recent investigations and research methodology on the processes of growth and differentiation are stressed.
CELL 417 Developmental Biology Laboratory (1)
Staff. Prerequisite or corequisite: CELL 416. The role and patterns of gene expression and cell interactions involved in the formation and function of tissues and organisms are investigated.
CELL 422 Microbiology (3)
Mr. Mullin. Prerequisite: CELL 301. Taxonomy, physiology, genetics and ecology of microorganisms. This course will cover the role of microbes in medicine and industry, and as model systems for research.

## CELL 423 Microbiology Laboratory (1)

Staff. Prerequisite or corequisite: CELL 422. Laboratory studies of microbial taxonomy, physiology, biochemistry, and genetics.

## CELL 427 Seminar in Molecular Biology (2)

Mr. Mullin. Prerequisite: approval of instructor. Selected current topics in molecular biology literature will be critically analyzed.

## CELL 434 Neurobiology of Disease (3)

Mr. Belousov. Prerequisite: CELL 331. Advanced course on the higher neural functions of the nervous system and neurological diseases resulting from disruption of these functions. An emphasis is placed on the physiology of the nervous system and neural dysfunction caused by inherited and acquired diseases. Topics range from motor control and neuromuscular diseases to high cognitive function and dementia.

## CELL 435 Developmental Neurobiology (3)

Ms. Inglis. Prerequisite: CELL 331 or CELL 416 or approval of instructor. A broad overview of the different stages of neural development. Examination of the molecular aspects of developmental neurobiology, with reference to some important signaling pathways involved in neural growth and specification. Particular attention will be given to those active research fields, such as growth cone guidance and collapse and activity-dependent development, and applications of these to injury and disease.
CELL 441 Molecular Basis of Human Genetic Disease (3)
Mr. Hurley. Prerequisite: CELL 401. Analysis and understanding of the emerging knowledge of human diseases in terms of their causative genetic and molecular mechanisms. Using this
information, students develop the ability to critically review the current scientific literature on the subject of molecular medicine, with an attempt to predict some of the future paths along with molecular medicine will evolve in the post-genomic years.

## CELL 456, 457 Internship Studies (3, 3)

Staff. Prerequisites: approval of instructor and department. An experiential learning process coupled with pertinent academic course work. Open only to juniors and seniors in good standing. Registration is completed in the academic department sponsoring the internship. (Note: A maximum of six credits may be earned in one or two courses.)

## CELL 466 Special Topics in Cell and Molecular Biology (1-3)

Staff. Courses offered by visiting professors or permanent faculty primarily for undergraduates. For description, consult department.

## CELL 471 The Molecular Biology of Cancer (3)

Ms. Burdsal. Prerequisite: CELL 301. The complex multistep process which transforms a normal cell into a cancer cell, carcinogenesis, will be examined with emphasis on current molecular insights.

## CELL 478 Developmental Genetics (3)

Mr. Chen. Prerequisite: CELL 416 or approval of instructor. The genetic control of developmental processes.

## CELL 488 Writing Practicum (1)

Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.
CELL 495, 496 Special Projects in Cell and Molecular Biology (1-3, 1-3)
Staff. Individual studies in a selected field. Open to qualified students with approval of instructor and advisor.

## COURSES FOR ADVANCED UNDERGRADUATES AND GRADUATES

## CELL 600 Biomedical Ethics (3)

Ms. Bennett. Prerequisite: Cell 101 or approval of instructor. An interdisciplinary course that examines the moral principles that apply to biology and medicine. Ethical principles will be analyzed in relation to such topical issues as informed consent, abortion, death and dying, allocation of scarce resources, personhood, AIDS, risk, human experimentation, and public policy. Case studies and class discussion will complement lectures and video presentations.

## CELL 601 Cellular Biochemistry (3)

See CELL 401 for course description. Additional term paper required.

## CELL 608 Advanced Developmental and Cell Biology II (3)

Ms. Burdsal, Mr. Chen, Mr. Ma, Mr. Muneoka. Prerequisite: approval of instructor. Lectures, readings, and discussion of the literature in the fields of cellular, developmental, and molecular biology.

## CELL 610 Molecular Mechanisms of Reproduction (3)

See CELL 410 for description. Additional term paper required.

## CELL 611 Cells and Tissues (3)

See CELL 411 for course description. Additional term paper required.
CELL 613 Embryology (3)
See CELL 413 for course description. Additional term paper required.

## CELL 616 Developmental Biology (3)

See CELL 416 for course description. Additional term paper required.

## CELL 621 Cellular Physiology (3)

See CELL 321 for course description. Additional term paper required.
CELL 622 Microbiology (3)
See CELL 422 for course description. Additional term paper required.
CELL 631 Cellular Neuroscience (3)
See CELL 331 for course description. Additional term paper required.
CELL 632 Systems Neuroscience (3)
See CELL 332 for course description. Additional term paper required.

CELL 633 Cellular Gene Regulation and Expression (3)
Mr. Hurley. Prerequisite: CELL 311. A critical evaluation of recent literature on the topic of eukaryotic gene regulation. Embryonic development, tissue differentiation, response to environmental factors, and the flow of information through the eukaryotic cell will include subjects to be discussed via current publications on each topic.
CELL 634 Neurobiology of Disease (3)
See CELL 434 for course description. Additional term paper required.

## CELL 635 Developmental Neurobiology (3)

See CELL 435 for course description. Additional term paper required.
CELL 641 Molecular Basis of Human Genetic Disease (3)
See CELL 441 for course description. Additional term paper required.

## CELL 663 Cellular Neurophysiology (3)

Mr. Smith. Prerequisite: CELL 331 or approval of instructor. Survey of current topics and techniques in the physiology of neurons and neuronal circuits, concentrating primarily on electrophysiological studies.
CELL 666 Special Topics in Cell and Molecular Biology (1-3)
Staff. Courses offered by visiting professors or permanent faculty. For description, consult department.

## CELL 671 The Molecular Biology of Cancer (3)

See CELL 471 for course description. Additional term paper required.

## CELL 678 Developmental Genetics (3)

See CELL 478 for course description. Additional term paper required.

## CELL 684 Current Topics in Developmental Biology (2)

Mr. Burdsal, Mr. Chen, Ms. Inglis, Mr. Ma, Mr. Muneoka. Prerequisite: approval of instructor.
Reports and discussions of current literature on developmental processes.

## Chemistry

Office: 2015 Percival Stern Hall
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Professors
William L. Alworth, Ph.D., California, Berkeley (Chair)
Larry D. Byers, Ph.D., Princeton
Michael F. Herman, Ph.D., Chicago (Dean, Graduate School)
Brent D. Koplitz, Ph.D., Princeton
C. J. Li, Ph.D., McGill University, Canada

Joel T. Mague, Ph.D., M.I.T.
Gary L. McPherson, Ph.D., Illinois (Associate Dean, Faculty of the Liberal Arts and Sciences)
V. Ramamurthy, Ph.D., Hawaii (Bernard Baus Professor of Chemistry)

Russell H. Schmehl, Ph.D., North Carolina
Mark Sulkes, Ph.D., Cornell

## Associate Professors

Harry E. Ensley, Ph.D., Harvard
Mark J. Fink, Ph.D., Wisconsin
Pernilla Wittung-Stafshede, Ph.D., Chalmers University of Technology, Sweden
Assistant Professor
Sankaran Thayumanavan, Ph.D., Illinois

## FRESHMAN PROGRAMS

Students who take chemistry to satisfy the science requirement of the B.A. curriculum must elect Chemistry 107 and 117. Science majors, engineering students, and students fulfilling medical school requirements should take Chemistry 107 and 117 and 108 and 118. Advanced placement may be granted in accordance with the results of a special placement examination given upon a petition.
Each year a small group of freshman students whose previous record and entrance and achievement examinations show superior preparation are invited to participate in the scholars and honors sequence of courses beginning with Chemistry H109 and H111, H110 and H112, which substitute for 107 and 117, 108 and 118 respectively.

## MAJOR

Students majoring in chemistry must satisfy the general requirements of the B.S. curriculum. Chemistry 107 and 117; 108 and 118; 241 and 243; 242 and 244; 311 and 313; 312 and 314; and one of the lecture-lab combinations, 231 and 233, or 321 and 323, or 331 and 333; Mathematics 121, 122 or 141, 142, plus 221 and 224; and Physics 131 and 132 are required of all chemistry majors. In order to complete the major, three additional, three-credit courses above the 100 level are required. These may be in chemistry (Chemistry 305 does not satisfy this requirement) but may also be in relevant areas of biology, geology, mathematics or physics, subject to departmental approval. A list of courses fulfilling this requirement is available from the chemistry department.

Students intending to pursue graduate work in chemistry or in an allied interdisciplinary field should select their programs with care. Unless an interdisciplinary program of graduate work is contemplated, students should elect advanced chemistry courses, including 401 and/or 402 to complete the major. Majors are also strongly urged to complete courses in German and/or Russian through the 200 level. Close consultation with their department advisor will assure development of a program which can be recommended for graduate work.
The Department of Chemistry is fully accredited by the Committee on Professional Training of the American Chemical Society. The ACS will certify a degree which includes 107 and 117, 108 and 118, 241 and 243, 242 and $244,302,311$ and 313,312 and 314,321 and 323, 423, 231 and 233, 331 and 333, eight credits of research, and one advanced course in chemistry, mathematics or physics.

Premedical students should elect Chemistry 107 and 117, 108 and 118, and 241 and 243 and 242 and 244 or their equivalents. In addition, Chemistry 231 and 233 are strongly recommended.

## MINOR

A minor in chemistry consists of Chemistry 107 and 117 or Chemistry H109 and H111 and Chemistry 108 and 118 or Chemistry H110 and H112 plus four additional courses in chemistry chosen in consultation with the chemistry department. Prior approval of the choice of these courses and coregistration in appropriate laboratory courses is required. Only one semester of research may be counted towards the minor. For students whose major requires Chemistry 107 and 117 and Chemistry 108 and 118 at least one of the additional four courses must be one not required by that major. Because of the interdisciplinary nature of the biological chemistry major, students in this program may not minor in chemistry or biology.

## HONORS COURSES

Students who elect H499 and H500 with the preparation of a senior research thesis may be recommended to the college for the award of degree with departmental honors.

## CHEM H109 General Chemistry (3)

Staff. Prerequisite: approval of department. Corequisite: CHEM H111. Special course for superior students covering the material listed for 107 plus topics of current interest. Three hours of lecture per week. Concurrent registration in H111 required. Chemistry H109 and H111 may be substituted in the program for 107 and 117. Credit will not be given for both CHEM H109 and H111 and CHEM 107 and 117.

## CHEM H110 General Chemistry (3)

Staff. Prerequisite: approval of department. Corequisite: CHEM H112. Special course for superior students covering the material listed for 108 plus topics of current interest. Three hours of lecture per week. Concurrent registration in H 112 required. On completion of H 110 and H 112 , the student is prepared to continue with H245-H248. Chemistry H110 and H112 may be substituted in the program for 108 and 118. Credit will not be given for both CHEM H110 and CHEM H112 and 108 and 118.
CHEM H111 General Chemistry Laboratory (1)
Staff. Prerequisite: approval of department. Corequisite: CHEM H109. Laboratory to accompany H109. Introduction to synthesis, qualitative and quantitative analyses, and instrumental techniques in chemistry. Up to six hours of laboratory per week. Concurrent registration in CHEM H109 required.

## CHEM H112 General Chemistry Laboratory (1)

Staff. Prerequisite: approval of department. Corequisite: CHEM H110. Laboratory to accompany H110. A continuation of H111. Experiments in acid/base chemistry, thermodynamics and electrochemistry. Use of instrumental techniques in chemistry. Up to six hours of laboratory per week. Concurrent registration in CHEM H110 required.
CHEM H245 Organic Chemistry (3)
Mr. Alworth, Mr. Byers, Mr. Ensley, Mr. Li, Mr. Ramamurthy. Prerequisites: CHEM 108 and 118, or equivalent. Corequisite: CHEM H247. The structural, chemical, and physical properties of organic compounds with particular emphasis on areas of current interest. For students who have done superior work in previous chemistry courses. Three hours of lecture per week. Concurrent registration in H247 required. Chemistry H245 and H247 may be substituted in the program for 241 and 243. Credit will not he given for both CHEM H245 and H247, and CHEM 241 and 243.

CHEM H246 Organic Chemistry (3)
Mr. Alworth, Mr. Byers, Mr. Ensley, Mr. Li, Mr. Ramamurthy. Prerequisite: CHEM 241 or H245. Corequisite: CHEM H248. The structural, chemical, and physical properties of organic compounds with particular emphasis on areas of current interest. For students who have done superior work in previous chemistry courses. Three hours of lecture per week. Concurrent registration in H248 required. Chemistry H246 and H248 may be substituted in the program for 242 and 244. Credit will not be given for both CHEM H246 and H248, and CHEM 242 and 244.

## CHEM H247 Organic Chemistry Laboratory (1)

Mr. Alworth, Mr. Byers, Mr. Ensley, Mr. Li, Mr. Ramamurthy. Prerequisites: CHEM 108 and 118, or equivalent. Corequisite: CHEM H245. Laboratory to accompany H245. Techniques of organic synthesis and chemical and physical methods of identification of organic compounds. Four hours of laboratory per week. Concurrent registration in CHEM H245 required.
CHEM H248 Organic Chemistry Laboratory (1)
Mr. Alworth, Mr. Byers, Mr. Ensley, Mr. Li, Mr. Ramamurthy. Prerequisite: CHEM 243 or H247. Corequisite: CHEM H246. Laboratory to accompany H246. Techniques of organic synthesis and chemical and physical methods of identification of organic compounds. Four hours of laboratory per week. Concurrent registration in CHEM H246 required.
CHEM H499-H500 Honors Thesis (3, 4)
For senior honors candidates. May be substituted for 401 and 402, respectively.

## LECTURE AND LABORATORY COURSES

CHEM 107 General Chemistry I (3)
Staff. Corequisite: 117. An introduction to chemical principles. Stoichiometry, thermochemistry, states of matter, periodic relationships, atomic structure and bonding. Three hours of lecture per week. Concurrent registration in 117 required. Credit will not be given for both 107 and H109.
CHEM 108 General Chemistry II (3)
Staff. Prerequisites: CHEM 107 and 117. Corequisite: CHEM 118. The chemistry of solutions, equilibrium, thermodynamics, electrochemistry, kinetics. Three hours of lecture per week. Concurrent registration in CHEM 118 required. Credit will not be given for both 108 and H110.
CHEM 117 General Chemistry Laboratory I (1)
Staff. Corequisite: CHEM 107. Laboratory to accompany CHEM 107. Introduction to laboratory techniques in chemistry. Experiments dealing with stoichiometry, thermochemistry, properties of gases, and simple analytical techniques. One three-hour lab per week. Concurrent registration in CHEM 107 required. Credit will not be given for both CHEM 117 and H111.

CHEM 118 General Chemistry Laboratory II (1)
Staff. Prerequisite: CHEM 117. Corequisite: CHEM 108. A continuation of Chemistry 117. Experiments to illustrate principles of chemical equilibrium, electrochemistry, kinetics, thermodynamics, qualitative and quantitative analysis. One four-hour laboratory per week. Concurrent registration in 108 required. Credit will not be given for both CHEM 118 and H112.
CHEM 231 Quantitative Analysis (3)
Mr. McPherson, Mr. Schmehl. Prerequisites: CHEM 108 and 118, or equivalent or instructor approval. Corequisite: CHEM 233. Basic theory of gravimetric, volumetric and selected instrumental methods of analysis. Three hours of lecture per week. Concurrent registration in CHEM 233 required. Offered in alternate years.

CHEM 233 Quantitative Analysis Laboratory (1)
Mr. McPherson, Mr. Schmehl. Prerequisites: CHEM 108 and 118, or equivalent. Corequisite: CHEM 231. Laboratory to accompany CHEM 231. Practice of gravimetric, volumetric and selected instrumental methods of analysis. Two four-hour laboratory periods per week. Concurrent registration in 231 required. Offered in alternate years.

## CHEM 241 Organic Chemistry I (3)

Mr. Alworth, Mr. Byers, Mr. Ensley, Mr. Li, Mr. Ramamurthy. Prerequisites: CHEM 108 and 118, or equivalent. Corequisite: CHEM 243. An introduction to the structural, chemical, and physical properties of organic compounds. Three hours of lecture per week. Concurrent registration in 243 required. Credit will not be given for both 241 and H245.

## CHEM 242 Organic Chemistry II (3)

Mr. Alworth, Mr. Byers, Mr. Ensley, Mr. Li, Mr. Ramamurthy. Prerequisites: CHEM 241 and 243. Corequisite: CHEM 244. A continuation of 241 with emphasis on areas of current interest. Three hours of lecture per week. Concurrent registration in CHEM 244 required. Credit will not be given for both CHEM 242 and H246.

## CHEM 243 Organic Chemistry Laboratory I (1)

Mr. Alworth, Mr. Byers, Mr. Ensley, Mr. Li, Mr. Ramamurthy. Prerequisites: CHEM 108 and 118, or equivalent. Corequisite: CHEM 241. Laboratory to accompany CHEM 241. Introduction to laboratory techniques in organic chemistry. Synthesis of organic compounds. One four-hour laboratory period per week. Concurrent registration in 241 required. Credit will not be given for both 243 and H247.

## CHEM 244 Organic Chemistry Laboratory II (1)

Mr. Alworth, Mr. Byers, Mr. Ensley, Mr. Li, Mr. Ramamurthy. Prerequisite: CHEM 243. Corequisite: CHEM 242. Laboratory to accompany 242. A continuation of 243. Includes identification of unknown organic compounds. One four-hour laboratory period per week. Concurrent registration in 242 required. Credit will not be given for both 244 and H248.

CHEM 250 Environmental Chemistry (3)
Mr. Alworth, Mr. McPherson. Prerequisite: CHEM 107, 108, or 241. An overview of the many aspects of environmental chemistry. Topics include aquatic chemistry, including water pollution and water treatment; atmospheric chemistry, air pollution and major threats to the global atmosphere; geochemistry and soil chemistry; nature, sources, and environmental chemistry of hazardous wastes; and toxicological chemistry.
CHEM 302 Survey of Biochemistry (3)
Mr. Alworth. Prerequisite: CHEM 241. Corequisite: CHEM 242. This course is a one-semester survey of biochemistry. Students can not take both CELL 401 and CHEM 302 for graduation credit. Biological Chemistry majors should take CHEM 383 and CHEM 384.
CHEM 305 Drugs and Their Actions (3)
Ms. Beckman. Prerequisites: four credits of biology and eight credits of organic chemistry, or equivalent, or permission of chair, Department of Pharmacology. Basic principles of pharmacology and selected topics of special interest, such as drugs of socioeconomic importance and socially abused drugs. Lectures only. Does not count toward the major in chemistry. Same as GPHR 605 and CELL 305.

## CHEM 311 Physical Chemistry I (3)

Mr. Herman, Mr. Koplitz, Mr. Levy, Mr. Sulkes. Prerequisites: CHEM 108, 118, and MATH 224 or equivalent. Pre-requisites or corequisites: PHYS 131 and 132. Corequisite: CHEM 313. Elementary quantum mechanics, quantum theory of molecular structure and bonding, fundamentals of spectroscopy. Three hours of lecture per week. Concurrent registration in CHEM 313 required.
CHEM 312 Physical Chemistry II (3)
Mr. Koplitz, Mr. Levy, Mr. Sulkes, Ms. Wittung-Stafshede. Prerequisites: CHEM 108, 118, and MATH 221 or equivalent. Corequisite: CHEM 314. First, second, and third laws of thermodynamics, thermodynamic energy state functions, phases of pure substances, properties of mixtures, chemical equilibrium, equilibrium electrochemistry, statistical thermodynamics.

## CHEM 313 Physical Chemistry Laboratory I (1)

Mr. Koplitz, Mr. Sulkes. Prerequisites: CHEM 108, 118, and MATH 244 or equivalent. Prerequisites or corequisites: PHYS 131 and 132. Corequisite: CHEM 311. Laboratory to accompany 311. Experiments in spectroscopy and spectroscopic analysis. One four-hour laboratory period per week. Concurrent registration in 311 required.

CHEM 314 Physical Chemistry Laboratory II (1)
Mr. Koplitz, Mr. Sulkes. Prerequisites: CHEM 108, 118, and MATH 221 or equivalent. Corequisite: CHEM 312 or 612. Knowledge of FORTRAN recommended. Laboratory to accompany 312. Experiments illustrate thermodynamic and statistical mechanical principles. One four-hour laboratory period per week. Concurrent registration in CHEM 312 or 612 required.

CHEM 321 Inorganic Chemistry (3)
Mr. Fink, Mr. Mague, Mr. McPherson, Mr. Schmehl. Corequisite: CHEM 323. Periodic relationships, types of bonding, coordination complexes, acid-base concepts, inorganic reaction mechanisms. Three hours of lecture per week. Concurrent registration in CHEM 323 required.
CHEM 323 Inorganic Chemistry Laboratory (1)
Mr. Fink, Mr. Mague, Mr. McPherson, Mr. Schmehl. Prerequisite or corequisite: CHEM 311 and 313. Corequisite: CHEM 321. Laboratory to accompany 321. Synthetic methods in inorganic and organometallic chemistry. Use of instrumental methods in inorganic chemistry. One four-hour laboratory period per week. Concurrent registration in CHEM 321 required.
CHEM 331 Instrumental Analysis (3)
Mr. McPherson, Mr. Schmehl. Prerequisites: CHEM 108, 118, and either CHEM 241 and 243 or CHEM H245 and H247. Corequisite: CHEM 333. Introduction to modern methods of instrumental analysis including separation techniques and spectroscopic and electrochemical methods. Three hours of lecture per week. Concurrent registration in CHEM 333 required. Offered in alternate years.
CHEM 333 Instrumental Analysis Laboratory (1)
Mr. McPherson, Mr. Schmehl. Prerequisites: CHEM 108, 118, and either CHEM 241 and 243 or CHEM H245 and H247. Corequisite: CHEM 331. Laboratory to accompany 331. Practice of separation techniques and spectroscopic and electrochemical methods of analysis. Two four-hour laboratory periods per week. Concurrent registration in CHEM 331 required. Offered in alternate years.
CHEM 383 Introduction to Biochemistry (3)
Mr. Alworth, Mr. Byers, Ms. Wittung-Stafshede. Prerequisite: CHEM 242. Properties of biological compounds. Bioenergetics, basic metabolic pathways, general biochemical mechanisms. Same as CHEM 683.

## CHEM 384 Intermediate Biochemistry (3)

Mr. Alworth, Mr. Byers, Ms. Wittung-Stafshede. Prerequisite: CHEM 383. Intermediary metabolism with emphasis on the integration of lipid, saccharide, and amino acid metabolism. Electron transport and oxidative phosphorylation. Photosynthesis. Purine and pyrimidine metabolism. Same as CHEM 684.

CHEM 385 Introduction to Biochemistry Laboratory (1)
Mr. Alworth, Mr. Byers. Corequisite 383 (exemption by approval of instructor). Eight hours of laboratory per week. Offered both semesters. Same as CHEM 685.
CHEM 391 Special Topics (3)
Staff. Special topics in chemistry. For description, consult department.

## CHEM 401 Research and Seminar (1 or 3)

Staff. Prerequisite: junior standing or approval of department. Individual research supervised by the faculty. Students are expected to present a short seminar based on their research. At least ten hours of research effort per week. A maximum of three credits may be taken.
CHEM 402 Research and Seminar (1 or 3)
Staff. Same as Chemistry 401 in organization. A maximum of three credits may be taken.
CHEM 423 Organometallic Chemistry - The Transition Elements (3)

Mr. Fink, Mr. Mague. Prerequisites: CHEM 242, H246, or approval of instructor. The chemistry of compounds containing transition metal and carbon bonds. A survey of major classes of transition metal compounds, their chemistry, and their role in homogeneous catalysis.

## CHEM 424 Organometallic Chemistry - The Main Group Elements (3)

Mr. Fink, Mr. Mague. Prerequisites: CHEM 242, H246, or approval of instructor. The chemistry of compounds containing main group element carbon bonds. A survey of major classes of main group organometallic compounds and applications to organic synthesis, structural, and electronic materials.
CHEM 683 Introduction to Biochemistry (3)
See Chemistry 383 for description.

## CHEM 684 Intermediate Biochemistry (3)

See Chemistry 384 for description.

## CHEM 685 Introduction to Biochemistry Laboratory (1)

See Chemistry 385 for description.

## Classical Studies

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Professors
Dennis P. Kehoe, Ph.D., Michigan
Joe Park Poe, Ph.D., Columbia (Chair)
Associate Professors
Jane B. Carter, Ph.D., Harvard

## Assistant Professors

Chris M.M. Brady, D.Phil., Oxford
Fred S. Naiden, Ph.D., Harvard
Demetrius K. Williams, Th.D., Harvard

## CLASSICAL STUDIES MAJORS

The Department of Classical Studies seeks to design major programs involving work in such diverse areas as language and literature, art and archaeology, religion, and history to meet the needs and interests of individual students. Students have the option of electing language-based majors in Greek and Latin, or non-language based majors in Classical Studies. Students pursuing a language-based major are encouraged to select Classics courses that complement their language courses.
Greek or Latin courses used to satisfy the foreign language proficiency requirement may not be counted toward the major.
Students interested in pursuing graduate study in Classics should consult with their departmental advisor about the undergraduate preparation needed for graduate school. Courses for each type of major should be selected as follows:
Greek (CLAG) A major in Greek consists of 30 credits in Greek, Latin, and Classics courses (27 credits if the student has a double major), 15 of which must be in Greek at or above the 300 level.
Latin (CLAL) A major in Latin consists of 30 credits in Greek, Latin, and Classics courses (27 credits if the student has a double major), 15 of which must be in Latin at or above the 300 level.

Classical Studies (CLAS) The major consists of 30 credits in Greek, Latin, or Classics courses (27 credits if the student has a double major), with at least six credits at or above the 400 level. Students majoring in Classical Studies should, in consultation with their departmental advisor, choose their course work for the major to accommodate their individual interests. The courses taken for the major, however, should include one ancient history survey course (CLAS 100, 101, $302,305,309$, or 331 ), one archaeological survey course (CLAS 316, 317, 318, or 319), one course in Greek or Latin literature in translation (CLAS 304, 306, or 406), and one course in ancient religion (CLAS 220, 314, 315, 320, or 322). With the approval of the department chair, other courses may be substituted for the specific courses listed here.

## CLASSICAL STUDIES MINORS

Students who minor in Classical Studies should designate as an area of concentration one of the following: Greek, Latin, or Ancient Culture. Courses should then be chosen as outlined below.
Latin or Greek courses used to satisfy the foreign language proficiency requirement may not be counted toward the minor.
Greek (CLAG): A minor in Greek consists of a minimum of 15 credits including at least nine credits in Greek at or above the 300 level. A maximum of two courses in Latin or Classics may be included as part of the minor.
Latin (CLAL): A minor in Latin consists of a minimum of 15 credits including at least nine credits in Latin at or above the 300 level. A maximum of two courses in Greek or Classics may be included as part of the minor.
Ancient Culture (CLAC): A minor in Ancient Culture should include at least 15 credits in Greek, Latin, or Classics courses. Nine credits must be at or above the 300 level; of these nine, three must be at or above the 400 level.

## CLASSICS

Knowledge of Greek and Latin is not required for these courses, and students majoring in other fields are encouraged to enroll.

## CLAS 100 The Ancient Near East and Greece (3)

Mr. Harl. In the light of the growth of civilization in the Near East, this survey course covers Greek political, intellectual, and cultural developments to 323 B.C.E. Emphasis is given to the archaic and classical periods of Greece. Same as HISA 100.

## CLAS 101 The Rise of Rome (3)

Mr. Kehoe, Mr. Poe. Not open to senior history majors. This survey devotes itself to the emergence of Hellenistic civilization and the growth of Roman power in the Mediterranean. Special attention is given to the Hellenistic impact upon Rome, the evolution of Roman institutions, and the transition from republic to empire. Same as HISA 101.

## CLAS 110 Introduction to Religious Studies (3)

Mr. Williams. This course gives an overview of the development of the western approach to the study of religion. It will be comparative and cover many aspects of world civilization, provide a window on the cultural dimensions of global politics, and supply a way of perceiving approaches to the study of religion under the rubrics of anthropology of religion, sociology of religion, history and phenomenology of religion, and philosophy of religion. Important theorists and schools of thought will also be examined. Same as RLST 110.
CLAS 201 History of Ancient Philosophy (3)
Ms. Burger, Mr. Reck. A study of ancient Greek philosophy, focusing on the thought of the PreSocratics, Plato, and Aristotle. Same as PHIL 201.

## CLAS 210 Introduction to the Hebrew Bible - Old

Testament (3)
Mr. Brady. In this course we will attempt to understand the Hebrew Bible better by examining samples of each of the major genres represented while at the same time placing each within its historical context. We will also focus upon questions of interpretation. By taking a general survey of the ways in which the Hebrew Bible has been read and interpreted in the past we will begin to understand how these ancient texts continue to live and speak to so many. Same as JWST 210.
CLAS 211 Classics of Political Philosophy I (3)
Ms. Burger. This course will be devoted to a study of classical works of political philosophy in the Western tradition, primarily Plato’s Republic and Aristotle’s Politics. Same as PHIL 211.
CLAS 220 Ancient Christianity (3)
Mr. Williams. This course is designed to introduce students to the history of the Ancient Christian movement within the Roman Empire. It will illustrate the historical developments through the discussion of the use of the scripture, the production of new literature and emergence of the canon of the New Testament writings from the second though the fourth centuries.
CLAS 281 Special Topics (3)
Staff. Topics will be at an introductory level appropriate for freshmen and sophomores. Subject areas will be interdisciplinary and combine material from such fields as ancient literature, cultural studies, archaeology, religion, and history.
CLAS 302 The High Roman Empire (3)
Mr. Harl, Mr. Kehoe. This course introduces the institutional, social, and cultural changes of the empire from Augustus to Diocletian. Stress is placed upon the birth of imperial administration, cultural change and continuity, and the rise of Christianity. Same as HISA 302.

CLAS 303 Early Medieval and Byzantine Civilization from Constantine to the Crusades (3) Mr. Harl. The course examines the birth of a medieval Christian civilization after the collapse of Roman power, the achievements of Byzantine civilization, the conversion of Eastern Europe, and the impact of the Crusades. Same as HISA 303.
CLAS 304 Mythology (3)
Staff. A study of the origins of Greek mythology and the importance of myth for Greek and Roman culture.

CLAS 305 Ancient Historiography (3)
Mr. Kehoe, Mr. Naiden. Readings and discussions of selected topics concerning the major classical historians, especially Herodotus, Thucydides, Polybius, Livy, and Tacitus, studying the development of history writing and its relationship to changing historical conditions. Same as HISA 305.
CLAS 306 Greek Tragedy and Comedy (3)
Mr. Poe. Plays by Aeschylus, Sophocles, Euripides, and Aristophanes read in the light of Aristotle's Poetics and of modern criticism.

CLAS 307 Plato (3)
Ms. Burger. Prerequisite: CLAS 201 or approval of instructor. An in-depth reading of one or more of the Platonic dialogues. Same as PHIL 320.

CLAS 309 Law and Society in Ancient Rome (3)
Mr. Kehoe. This course investigates the social and cultural values of the Roman world by studying Roman private law. The course also examines the development of Roman courts in the empire and the influence of Roman law on modern legal systems. Same as HISA 304.
CLAS 310 Select Topics in Greek History (4)
Mr. Harl. Readings and discussion of select topics in classical Greek history: Homer and the Trojan War; Athenian Empire (480-404 B.C.E.); Sparta and Macedon in the Age of Hegemonies (404-323 B.C.E.); or Greek Leagues and Macedonian Kings in the Hellenistic World (323-133 B.C.E.). Same as HISA 310.

CLAS 311 Select Topics in Roman History (4)
Mr. Harl. Readings and discussion of select topics in Roman history: The Making of Roman Italy (509-264 B.C.E.); The Punic Wars (264-146 B.C.E.); Roman Revolution (133-27 B.C.E.); or Rome and the Jews (167 B.C.E.- 135 C.E.). Same as HISA 311.
CLAS 313 Egypt Under the Pharaohs (3)
Ms. Carter. The culture of ancient Egypt from the pre-dynastic period through the end of the New Kingdom. The course emphasizes the sculpture, architecture, and painting of the pharaonic periods. Other areas covered are: Egyptian literary and historical documents, Egyptian religion, and major social developments. Same as ARHS 313 and HISA 313.

CLAS 314 Hebrew Bible: Text, Interpretation, and Historical Perspectives (3)
Mr. Brady. In this course we will read and study passages from the Hebrew Bible (in translation) and a selection of Jewish commentaries. The aim of this course is to familiarize the student with the writings of the Hebrew Bible and how they have been read, interpreted, and explained by Jews throughout the centuries. The student will also learn to read the texts critically and begin to form his/her own understandings of the text. We will also examine the issues of reading the Bible as an historical text and its place in ancient Near Eastern culture. Same as JWST 314.

## CLAS 315 Second Temple Judaisms (3)

Mr. Brady. Starting with the Return from Babylonia up until the destruction of the Jerusalem Temple in 70 C.E., Judaism was transformed from a local ethnic religious cult to a broad-based, diverse, and often fragmented sectarian religion. Many outside cultures and civilizations, from the ancient Persians to the Imperial Romans, influenced the Jews and Judaism through language, culture and political contacts. We will study these cultural contracts and conflicts that caused Jews in the Second Commonwealth to develop competing understandings of Judaism. Same as JWST 315.

## CLAS 316 The Aegean Bronze Age (3)

Ms. Carter. The cultures of the Cycladic Islands, Crete, and the Greek mainland during the Bronze Age (ca. 3200-1150 B.C.E.). Emphasis will be on the major and minor arts of the Minoans and Mycenaeans and how this material can be used to reconstruct the societies, cultures, and religions of the Aegean Bronze Age. Same as ARHS 316 and HISA 316.

## CLAS 317 Greek Art and Archaeology (3)

Ms. Carter. Greek arts (architecture, sculpture, and painting) and material culture in the light of social, intellectual, and historical developments from the end of the Bronze Age (ca. 1200 B.C.E.) to the end of the Hellenistic period (31 B.C.E.). Same as ARHS 317.

## CLAS 318 Roman Art and Archaeology (3)

Staff. Architecture, sculpture, and painting in Rome and the Roman Empire, their sources, and their history from the Etruscan period through the 4th century C.E. Same as ARHS 318.

## CLAS 319 Pompeii: Roman Society and Culture in Microcosm (3)

Staff. A survey of Roman culture through the study of the town destroyed by Mt. Vesuvius in 79 C.E. The focus is on the society, politics, religion, domestic life, entertainment, economy, and art of Pompeii and the surrounding region in the early imperial period. Same as ARHS 319 and HISA 319.

## CLAS 320 Greek Religion (3)

Mr. Naiden. This course examines Greek religion in its social and historical context, utilizing an interdisciplinary approach incorporating archaeological, artistic, literary, and epigraphic evidence. The course begins with a survey of the major concepts connected with Greek religion, including the types of beings offered worship, the delineation of sacred space, and the forms of ritual. Emphasis is placed on the social and political function of ritual, that is, on ritual as the enacted representation of cultural values and social roles. The second section of the course investigates the major Greek divinities, their iconography, mythology, and cult. The course concludes with a study of the phenomenon of mystery cults, surveying the forms of these cults in the Greek world and discussing their continuation under the Romans. Same as HISA 318.

## CLAS 322 New Testament: An Historical Introduction (3)

Mr. Williams. This course is a literary and historical introduction to the canonical New Testament. It will engage issues of authorship, dating, theology, genre, and special problems related to the "scientific" (or scholarly) study of the New Testament. There will be some engagement with literature outside of the canonical New Testament but only as it relates to special issues and topics in New Testament interpretation.

## CLAS 324 The Historical Jesus (3)

Mr. Williams. This course is an examination of the modern quest for the earthly Jesus behind the veil of ecclesiastical doctrines and dogmas. This examination will utilize modern methods of literary, historical, and hermeneutical criticism to sift through layers of traditions and interpretations. It will involve reading ancient as well as modern interpretations of the life of Jesus. It will explore the Old Quest as well as the recently revived New Quest for the historical Jesus.

## CLAS 325 Paul the Apostle (3)

Mr. Williams. The historical, literary, exegetical, and ideological investigation into the life and thought (theology) of the Apostle Paul. It will investigate the "historical" Paul and the Paul of legend and ecclesiastical tradition. This course will also explore the phenomenon of Paulinism and the importance of the appropriation of the Pauline tradition for orthodox and heretical movements. This course assumes a basic familiarity with the Pauline and Deutero-Pauline letters. Some attention will be given to the writing of an exegesis paper. Student unfamiliar with exegesis are strongly recommended to read Daniel J. Harrington's Interpreting the New Testament: A Practical Guide (Liturgical Press).

## CLAS 329 Gnosticism and Early Egyptian Christianity (3)

Mr. Williams. This course traces the history and development of Gnosticism in its pre-Christian forms in Egypt and in Jewish wisdom traditions to its Valentinian Christian manifestations. The largest "heretical" movement in early Christianity was the greatest challenge the early church experienced.

## CLAS 331 Ancient Greek Tyranny and Democracy (3)

Mr. Naiden. This course examines the origins and characteristics of basic Greek forms of government in their historical context, concentrating on tyranny and democracy in the archaic and classical periods. The course stresses the development of Greek political institutions and political thought. Same as HISA 308.

## CLAS 360 Women in the Hebrew Bible (3)

Mr. Brady. Women play a significant role in the Bible, one that is often at best misunderstood and at worst ignored. In this class we will examine the biblical stories and their historical context in order to understand the role of women in the biblical period as well as the role of the figures within the biblical text. We will also examine modern interpretations of these tests (including feminist readings and creative fiction based upon the biblical text) to see how modern scholars have understood these ancient texts in modern times. Same as JWST 360.

## CLAS 381 Special Topics (1-3)

Staff. Topics will focus on particular areas and issues in the fields of ancient culture, religion, and history.

## CLAS 388 Writing Practicum (1)

Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.

## CLAS H400 Colloquium in Ancient History (4)

Mr. Harl. Interdisciplinary seminar compares classical civilization of Greece or Rome with contemporary civilization of Near East, Central Asia, and East Asia. Stress is on political and military contact, cultural exchange, and comparison of institutions. Topics include The Birth of City-States in the Mediterranean and Near East (1000-500 B.C.E.); Greeks, Macedonians, and Persians: Birth of the Hellenistic World (600-250 B.C.E.); The Greeks in Iran and India (500 B.C.E.- 200 C.E.); or Imperial Rome and Imperial China (200 B.C.E.- 200 C.E.). Fulfills the college intensive-writing requirement. Same as HISA H400.

## CLAS H401 Colloquium in Late Antiquity (4)

Mr. Harl. Interdisciplinary seminar on the transformation of classical civilization into the institutions and values of early Medieval and Byzantine societies. Topics include Rome and the Northern Barbarians (100 B.C.- A.D. 700); Rome and Iran (100 B.C.- A.D. 650); The Conflict of Pagans and Christians in the Roman Empire (A.D. 30-565); or the Great Transformation of Society and Economy (A.D. 100-1100). Fulfills the college intensive-writing requirement. Same as HISA H401.

## CLAS H403 The Great Captains, Masters of Innovation in Warfare (4)

Mr. Harl. Interdisciplinary colloquium on how the careers of great commanders have altered warfare and society. Stress is on changes in political, economic, and social institutions that stood behind these careers as well as the impact of innovations in technology, tactics, and strategy. Commanders include Alexander the Great, Hannibal, Scipio Africanus, Belisarius, Gustavus Adolphus, Frederick the Great, and Napoleon. Fulfills the college intensive-writing requirement. Same as HISA H403.
CLAS 406 Classical Epic (3)
Staff. Homer, Apollonius of Rhodes, Virgil, and Lucan, with selected prose belonging to the heroic tradition. A comparison with primitive epics of other cultures and with later literary epics.

CLAS 408 Seminar in Ancient Society and Economy (3)
Mr. Kehoe, Mr. Naiden. Topics include: The Family in Ancient Rome; Roman Imperial Society and Economy; Greeks, Romans, Barbarians. Same as HISA 408.

## CLAS H409 Colloquium and Field Work in Ancient and Medieval Mediterranean Civilizations (4)

Mr. Harl. Directed research on the cultural exchange and continuity of a major region of the Mediterranean world; Anatolian Civilizations; Aegean Civilization; or Rome, Campania, and Sicily. This interdisciplinary seminar examines interaction between Hellenic civilization and neighboring cultures in Anatolia, Italy, Sicily, and Africa, the impact of Rome, and the emergence of Western, Greek Orthodox, and Islamic civilization in the medieval and early modern ages. Students conclude their study with a one-month academic excursion. Fulfills the college intensive-writing requirement. HISA H410.

## CLAS 411 Rabbinic Judaism (3)

Mr. Brady. Recommended prerequisite: CLAS 315. This course will focus on the literature and culture of the early Rabbinic period (c. 200-500 C.E.). We will concentrate on reading and analyzing primary texts (Midrash, Mishnah, and Talmud) as well as studying the historical context and methodological issues. This course will discuss the various literatures' styles, methods and contents as well as their internal and external cultural influences. Same as JWST 411.

## CLAS 418 Seminar in Ancient Religion (3)

Staff. This course examines various topics in the history of Greek and Roman religion though readings and discussion of literary and epigraphical sources and examination of archaeological evidence. Topics include Mystery Cults of Greece and Rome; History of Roman Religion; Magic and the Supernatural in the Ancient World; Death and the Afterlife in the Ancient World; Problems in the Iconography of Greek and Roman Religion. Same as HISA 417.

CLAS 419 Seminar in Aegean and Greek Archaeology (3)
Ms. Carter. Topics include: Problems in Aegean Archaeology; Major Monuments in Greek Sculpture; Greek Vase-Painting; The Athenian Acropolis. Same as CLAS 619.
CLAS 420 Seminar in Roman Art and Archaeology (3)
Staff. Topics include: Etruscans \& Early Rome; Ancient Painting and Mosaics; Roman Emperors as Builders; Roman Commemorative Monuments. Same as CLAS 620.

CLAS 425 The Dead Sea Scrolls (3)
Mr. Brady. Prerequisites: JWST 210 and JWST 315 or approval of instructor. It has been just over 50 years since a group of Bedouin shepherds found several clay jars containing ancient scrolls. The documents include copies of the Hebrew Bible, apocryphal works, and sectarian works written to provide order and meaning to the readers lives. But who wrote the scrolls and who were they writing for? This course will investigate these questions and others by focusing on the texts themselves and the archaeological evidence from the site of Khirbet Qumran. Secondary sources will also be consulted and read critically. Same as JWST 425.
CLAS 430 The Literature of Early Christianity (3)
Mr. Williams. This is an introductory course to the literature of early Christianity from the first through the third centuries. The purpose of this course is two-fold: to introduce students to examples of early Christian literature outside of the New Testament canon, and to examine and recognize the variety of early Christianity reflected in these writings. While an introductory course to the New Testament and/or to early Christian history is helpful, it is not necessary.
CLAS 481 Special Topics (3)
Staff. Topics will focus on particular areas and issues in the field of ancient culture, religion, and history.

## CLAS 488 Writing Practicum (1)

Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.

## CLAS H491, H492 Independent Studies $(3,3)$

Staff. Open to superior students provided approval of department is granted and an appropriate faculty director is available.

## CLAS H499-H500 Honors Thesis (3, 4)

Admission by approval of department and Honors Committee.
CLAS 501 Special Readings in Classics (3)
Staff.
CLAS 600 Seminar in Select Topics in Greek History (4)
Mr. Harl. Research seminar on select topics in Greek history: Archaic Greece (750-480 B.C.E.); Athenian Constitutional History; or Alexander the Great. Same as HISA 600.

CLAS 601 Seminar in Select Topics in Roman History (4)
Mr. Harl. Roman Imperialism and Transmarine Expansion (264-50 B.C.E.); Roman Principate; Roman Provinces; Roman Imperial Army; or Later Roman Empire. Same as HISA 601.
CLAS 608 Seminar in Ancient Society and Economy (3)
See CLAS 408 for course description. Same as HISA 608.
CLAS 609 Seminar in Select Topics in Byzantine
History (4)
Mr. Harl. Research seminar on select topics in Byzantine history: The Age of Justinian (518-565); The Byzantine Dark Age (610-1025); The Iconoclastic Controversy; or Byzantium and the Crusades (1025-1204). Same as HISA 609.
CLAS 619 Seminar in Aegean and Greek Archaeology (3)
See CLAS 419 for description. Same as ARHS 619.
CLAS 620 Seminar in Roman Art and Archaeology (3)
See CLAS 420 for description. Same as ARHS 620.
CLAS 681 Special Topics (3)
Staff. Topics will focus on particular areas and issues in the fields of ancient culture, religion, and history.
CLAS 688 Writing Practicum (1)
Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.

## GREEK

GREK 101 Elementary Greek (4)
Staff. Reading in the language is combined throughout with study of vocabulary, morphology, and syntax.
GREK 102 Intermediate Greek (4)
Staff. Prerequisite: GREK 101 or equivalent. Reading of Greek texts combined with study of vocabulary, morphology, and syntax.
GREK 203 Attic Prose (4)
Staff. Prerequisite: GREK 102 or equivalent. Readings in Plato's Socratic dialogues. Practice in Greek prose composition.

GREK 307 Select Authors (3)
Staff. Prerequisite: GREK 203 or equivalent.
GREK 391, 392 Independent Study (1-3, 1-3)
Staff. Students wishing to maintain and improve their skill in reading Greek may enroll in a reading course for one, two, or three credits. The reading will sometimes be part or all (depending on the amount of credit sought) of the assigned reading in an existing 300-level course. Independent study in Greek is open to superior students provided that departmental approval is given and an appropriate faculty director is available.

GREK 403 Tragedy (3)
Mr. Poe. Several tragedies of Aeschylus, Sophocles, or Euripides are read, the selection depending on the desires and needs of the students enrolled. Same as GREK 603.

## GREK 404 Greek Comedy (3)

Mr. Poe. Comedy of the fifth century B.C.E., known as Old Comedy, focused on political issues, while Greek comedy of the fourth century B.C.E., known as New Comedy, focused on domestic entanglements. Eleven plays of Aristophanes survive from Old Comedy, and large fragments of seven plays by Menander survive from New Comedy. Several comedies of Aristophanes and selected fragments of Menander will be read in this course. Same as GREK 604.
GREK 405 Plato (3)
Mr. Naiden. Readings from the first six books of the Republic, with lectures on various aspects of Plato's thought. Same as GREK 605.
GREK 406 Greek Historians (3)
Mr. Naiden. Extensive selections from Herodotus or Thucydides with lectures on sources for the modern history of ancient Greece. Same as GREK 606.
GREK 407 Greek Lyric Poetry (3)
Ms. Carter. This course deals with early iambic, elegiac, and lyric poetry or with the poetry of Pindar. Same as GREK 607.

GREK 408 Greek Orators (3)
Ms. Carter, Mr. Naiden. Greek orators of the fifth and fourth centuries B.C.E. wrote speeches for the law courts, for political assemblies, and for display. Readings for this course will be selected from the speeches of Gorgias, Antiphon, Andocides, Lysias, Isokrates, Demosthenes, and Aischines. Same as GREK 608
GREK 409 Greek Epic Poetry (3)
Staff. Any Greek epic poetry may be studied in this course, but it usually deals with Homer or Hesiod. Same as GREK 609.

GREK 411 Special Authors (3)
Staff. Same as GREK 611.

## GREK 415 The Undisputed Letters of Paul (3)

Mr. Williams. This course will survey the primary writings of Paul (Romans, 1 and 2 Corinthians, Galatians, 1 Thessalonians, Philippians, Phelemon) in Greek. The apostle Paul is the most noted Christian writer of earliest Christianity. This course will examine his theology, ethics, and literary style as well as the basics of biblical exegesis. There will also be some review of Greek grammar and syntax. Same as GREK 615.

GREK 488 Writing Practicum (1)
Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.
GREK 491, 492 Independent Study (1-3, 1-3)
Staff. Students wishing to maintain and improve their skill in reading Greek may enroll in a reading course for one, two, or three credits. The reading will sometimes be part or all (depending on the amount of credit sought) of the assigned reading in an existing 400-level course. Independent study in Greek is open to superior students provided that departmental approval is given and an appropriate faculty director is available.

GREK H499-H500 Honors Thesis (3, 4)
Admission by approval of department and the Honors Committee.
GREK 603 Tragedy (3)
See GREK 403 for description.
GREK 604 Greek Comedy (3)
See GREK 404 for description.
GREK 605 Plato (3)
See GREK 405 for description.
GREK 606 Greek Historians (3)
See GREK 406 for description.
GREK 607 Greek Lyric Poetry (3)
See GREK 407 for description.
GREK 608 Greek Orators (3)
See GREK 408 for description.
GREK 609 Greek Epic Poetry (3)
See GREK 409 for description.
GREK 611 Special Authors (3)
See GREK 411 for description.
GREK 615 The Undisputed Letters of Paul (3)
See GREK 415 for description.
GREK 688 Writing Practicum (1)
Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.

## LATIN

LATN 101 Elementary Latin (4)
Staff. A study of basic Latin grammar.
LATN 102 Intermediate Latin (4)
Staff. Prerequisite: LATN 101 or equivalent. Reading of simple Latin prose and poetry.
LATN 203 Introduction to Literature (4)
Staff. Prerequisite: LATN 102 or equivalent. Readings from selected authors. Practice in Latin prose composition.
LATN 303 Readings in Latin Poetry (3)
Staff. Prerequisite: LATN 203 or equivalent. Selections from Ovid, Metamorphoses, Ars Amatoria, and other poets.

## LATN 307 Readings in Latin Prose (3)

Staff. Prerequisite: LATN 203 or equivalent. Selections from such authors as Cicero, Sallust, and Apuleius. Practice in Latin prose composition.
LATN 391, 392 Independent Studies (1-3, 1-3)
Staff. Prerequisite: approval of department. Students wishing to maintain and improve their skill in reading Latin may enroll in a reading course for one, two, or three credits. The reading will normally be part or all, depending on the amount of credit sought, of the assigned reading in an existing 300-level course.
LATN 401 Roman Comedy (3)
Mr. Poe. Selected plays of Plautus and Terence to suit the needs and desires of the students enrolled. Same as LATN 601.
LATN 402 Catullus and the Elegiac Poets (3)
Mr. Poe. Readings in Catullus, and the elegies of Propertius, Tibullus, and Ovid. Same as LATN 602.

LATN 403 Virgil (3)
Staff. The last six books of the Aeneid; selections from the Eclogues and Georgics. Same as LATN 603.

## LATN 404 Roman Philosophy (3)

Mr. Poe. Lucretius and others. Same as LATN 604.
LATN 407 Medieval Latin (3)
Staff. Survey of medieval Latin literature with special attention to the various styles and literary types, and to the cultural background.

## LATN 408 Literature of the Neronian Age (3)

Mr. Kehoe. This course examines the reign of the emperor Nero through readings in the literature of that period. Particular focus will be placed upon the changing status of the emperor, the role of the emperor as patron of the arts, and the development of intellectual and political resistance to Nero and the principate. Same as LATN 608.
LATN 411 Special Authors (3)
Staff. Readings in Latin from a Roman author. Same as LATN 611.
LATN 413 Roman Historians of the Republic (3)
Mr. Kehoe. Readings in Livy’s history or Sallust’s Catiline and Jugurtha. Same as LATN 613.
LATN 414 Roman Satire (3)
Mr. Poe. Readings in the satires of Horace, Persius, or Juvenal. Same as LATN 614.
LATN 415 Roman Historians of the Empire (3)
Mr. Kehoe. Readings in the historical works of Tacitus and other historians of the Roman empire. Same as LATN 615.

LATN 417 Cicero (3)
Staff. A study of the man and the period based on portions of his work. Same as LATN 617.

## LATN 418 Horace (3)

Mr. Poe. Odes and Epodes. Same as LATN 618.
LATN 488 Writing Practicum (1)
Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.
LATN 491, 492 Independent Studies (1-3, 1-3)
Staff. Prerequisite: approval of department. Students wishing to maintain and improve their skill in reading Latin may enroll in a reading course for one, two, or three credits. The reading will
normally be part or all, depending on the amount of credit sought, of the assigned reading in an existing 400-level course.
LATN H499-500 Honors Thesis (3, 4)
Staff. Admission by approval of department and Honors Committee.
LATN 601 Roman Comedy (3)
See LATN 401 for description.
LATN 602 Catullus and the Elegiac Poets (3)
See LATN 402 for description.
LATN 603 Virgil (3)
See LATN 403 for description.
LATN 604 Roman Philosophy (3)
See LATN 404 for description.
LATN 608 Literature of the Neronian Age (3)
See LATN 408 for description.
LATN 611 Special Authors (3)
See LATN 411 for description.
LATN 613 Roman Historians of the Republic (3)
See LATN 413 for description.
LATN 614 Roman Satire (3)
See LATN 414 for description.

## LATN 615 Roman Historians of the Empire (3)

See LATN 415 for description.
LATN 617 Cicero (3)
See LATN 417 for description.
LATN 618 Horace (3)
See LATN 418 for description.
LATN 688 Writing Practicum (1)
Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.

## Cognitive Studies

Office: 105H Newcomb Hall
Phone: (504) 862-3380
Fax: (504) 862-8714
Website: www.tulane.edu/~phil/undercognitive2.html
Program Administrators
Radu Bogdan, Philosophy, (Director)
Jeffrey J. Lockman, Psychology

## COORDINATE MAJOR

The coordinate major in cognitive studies combines a regular major with a core curriculum in three tracks: formal disciplines, philosophical foundations and psychology. The program is designed to provide basic knowledge of current research on mind, cognition, and language.
The major consists of ten courses of which six are required and four elective. At least one elective must be in each of the three component tracks. With the director's consent, work in a different but relevant discipline may be substituted for, at most, one elective course. It is suggested that students interested in philosophy take an introductory course, preferably Philosophy 104, Beginning with Minds or Philosophy 220 Matter and Consciousness.

## REQUIRED COURSES

## (six courses, two in each track)

## I. Formal Disciplines Track

## Computer Science

CPSC 101 Software Design and Programming
CPSC 102 Object-Oriented Design
CPSC 319 Symbolic Computing
Logic
PHIL 121 Elementary Symbolic Logic
PHIL 304 Mathematical Logic

## II. Philosophical Foundations Track

PHIL 326 Mind and Knowledge
PHIL 374 Consciousness
PHIL 380 Language and Thought

## III. Psychology Track

PSYC 100, 101, 102 Introduction to Psychology
and one of the following:
PSYC 307 Thinking and Information Processing
PSYC 367 Brain and Behavior
PSYC 657 Cognitive Neuroscience

## ELECTIVES

(four courses, a minimum of one in each track)

## I. Formal Disciplines Track

Computer Science
*CPSC 300 Principles of Computer Science
*CPSC 466 Artificial Intelligence

## Logic

PHIL 343 Semantics of Natural Languages
PHIL 662 Philosophical Logic

## Linguistics

ANTH 359 Introduction to Syntax
LING 411 Brain and Language

## II. Philosophical Foundations Track

PHIL 376, PSYC 376 Interpreting Minds
PHIL 387 Mind in Evolution
PHIL 617 Philosophy of Perception
PHIL 618 Mental Representation

## III. Psychology Track

PSYC 321 Child Psychology
PSYC 326 Infancy
PSYC 345 Research Methods in Social Cognition

* Non-LAS course. See the college SPC restrictions.


## Colloquia

Office: 119 Norman Mayer
Phone: (504) 865-5517
Fax: (504) 862-8709

## Program Administrator

Jean Danielson, Political Science (Director, The Tulane Honors Program)
Colloquia usually meet once a week in a seminar format with the emphasis upon class discussion. Honors colloquia, designated by the prefix H, are open only to students in the Tulane Honors Program, to those on the dean's list, or to candidates for degrees with departmental honors. Honors colloquia on the 400 level are open to juniors and seniors (sophomores by special permission). The other colloquia listed below are open to any student in good standing. Colloquia may be used for elective credit. Consult the director of the Honors Program regarding credit for individual colloquia. For many of the colloquia listed below, the specific topic varies from semester to semester, consult the Schedule of Classes for further information or request a current course description from the Honors Program office.

## COLQ H101 Honors Freshman Colloquium (1-3)

COLQ H201 Honors Sophomore Colloquium (1-3)
Staff. A general colloquium built around some significant concept or problem which may be approached from many different points of view.
COLQ H301 Science and Human Values (3)
Mr. Birtel. The prohibition against confusion of "is" and "ought" has not prevented scientific theories from impinging on sociopolitical and religious values. The purpose of this colloquium is to examine specific instances of the interaction of science and values in order to gain insights into various ways in which these interactions occur. What is science? What are values? Is the methodology of science relevant to the methodology of ethics? What is the role of theology in science and in ethics? Is science objective and are values subjective? Is science value-free? The emphasis is on the interaction of science and values, not on the history of science or on the growth of knowledge.

## COLQ H302 God(s) and Science (3)

Mr. Birtel. Is it not all over with belief in God? Has religion any future? Can we have morality without religion? Is not science sufficient? Has atheism not been proved and is nihilism not refutable? And, if God does exist, what kind of God is He? How has science changed theology? Is there any similarity between the two enterprises? Are there really different ways of knowing? What alternatives exist to replace the legacy of dualism? Are the god of philosophy, the god of history, and the god of nature and god of faith different gods?

## COLQ H303 Science and Religion (3)

Mr. Birtel. Two great themes have shaped Western civilization during the last ten centuries: science and the Judeo-Christian tradition. The Enlightenment, by enthroning science, increasingly has rejected the Judeo-Christian tradition. But now science itself has come under attack. If those two principal cultural influences diminish, some alternative must be found to spawn a new ethos, or a new paradigmatic view relating science and religion is needed to give intelligibility to the relation of God, man, and nature. A dialogue has begun to emerge redefining and unifying the roles of theology and science. This seminar examines the current status of post-modern science and theology and probes alternative themes for the evolution of Western civilization under the influence of the present "revolution by consciousness."

## COLQ H304 Honors Junior Colloquium (3)

COLQ H401, H402 Humanities Colloquium (1-3, 1-3)
Staff. Built around some concept or problem which may be viewed from many different vantage points, thus relating the various disciplines within the humanities. Does not meet the college humanities distribution requirement.
COLQ H407 Student-Initiated Interdisciplinary Colloquium (3)
Staff. A student-initiated colloquium for juniors and seniors. It is the students' obligation to find the director. More than one section may be approved. Enrollment in each section is limited to 12.
COLQ H420 Honors Senior Colloquium (3)
COLQ 102 Freshman Colloquium (1-3)
COLQ 203 Sophomore Colloquium (1-3)
COLQ 305 Junior Colloquium (3)
COLQ 388 Writing Practicum (1)
Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.

## COLQ 412 The Grand Canyon (3)

Mr. Parsley, professor-in-charge. No prerequisite. A study of the anthropology, archaeology, biology, geology, and history of the southern Colorado plateau region, especially the Grand Canyon. Lectures, readings, and research paper followed by a post-semester, eight-day float trip through the Marble and Grand Canyons. Open to freshmen through seniors.
COLQ 414 The Natural History of Mesoamerica (3)
Mr. Flowers, Mr. Nelson. Geologic history of Mesoamerica, archaeology of Mesoamerica, history of the conquest and colonial period, flora and economic botany of the region. Lectures, readings, and a two-week, post-semester field trip to the region are required.

## COLQ 421 Senior Colloquium (3)

## COLQ 601, 602 The Andrew W. Mellon Professorship in Humanities (3, 3)

An interdisciplinary course offered by a scholar of notable achievements both in teaching and research in humanistic learning. This course is not assigned to any particular discipline but spans the broad area of the humanities: classical, English, and foreign languages and literatures, history, history of fine arts, and philosophy. Ordinarily, appointments to the Mellon Professorship are for one semester. Enrollment open to juniors, seniors and graduate students.

## Communication

Office: 219 Newcomb Hall
Phone: (504) 865-5730
Fax: (504) 862-3040
Associate Professors
Constance J. Balides, Ph.D., Wisconsin, Milwaukee
Ana M. Lopez, Ph.D., Iowa (Associate Provost)
James A. Mackin, Ph.D., Texas (Chair)
John H. Patton, Ph.D., Indiana
Carole J. Spitzack, Ph.D., Southern Illinois
N. Frank Ukadike, Ph.D., New York

## Assistant Professors

Joy Van Fuqua, Ph.D., Pittsburgh
MAJOR
The major in communication provides students with an understanding of theories, processes, and practices of human communication. The major consists of ten courses with a minimum of 30 credits. The core courses, required of all majors, are Communication 324, 325, and 326; they should be taken as early as possible, and should normally be completed by the end of the junior year. Students whose overall grade-point average is below 2.5 at the time of declaring the major will be classified COMR (restricted); these students must achieve at least a C- in a 200-level communication course before they will be allowed to enroll in subsequent core courses. In addition, majors consult with their advisors to select seven elective courses, at least three of which must be 400 level or above. Students wishing to graduate with honors in communication must take 621 or 622, and complete an honors project. Majors planning to enter the Junior Year Abroad program should seek departmental advice as early as possible.

## COMM 105 Introduction to Personal Communication (3)

Staff. Survey of person-to-person communication, including interpersonal, group, organizational and public communication. Concepts and theoretical approaches for each of the areas will be introduced.

## COMM 110 Introduction to Mass Communication (3)

Ms. Fuqua, Mr. Mackin. Survey of mass communication, including the various types of contemporary mass media. Theories of mass communication and current trends will be discussed, together with an overview of research methods.

## COMM 115 Introduction to Cinema (3)

Ms. Balides. Ms. Lopez. Introduction to the assumptions, methods, questions, and terms of film studies via a focus on significant international films and movements, 1895 to the present.

COMM 215 Film Analysis (3)
Ms. Balides, Ms. Lopez. Introductory film course designed to develop a critical understanding of how films produce meanings. The main focus will be on classical Hollywood cinema, but alternative filmmaking traditions are also assessed.
COMM 220 Organizational Communication (3)
Staff. An introductory exploration of the nature and function of communication within organizations. Emphasis on how speakers, messages, and forms of communication interact with the needs and objectives of corporate, governmental, and professional organizations.

## COMM 223 Interpersonal Communication (3)

Ms. Spitzack. Introduction to theories and models of interpersonal communication which enhance understanding and development of interpersonal relationships. Course content covers topics such as listening behavior, intrapersonal processing, dyadic interaction, conflict management, intercultural, intimate, and nonverbal communication.

## COMM 225 Public Address (3)

Mr. Mackin, Mr. Patton. A survey of oratory and other forms of public address in the Western world, beginning with the classical Greek period and proceeding up to the present time. The course explores the historical and critical dimensions of significant rhetorical artifacts that illustrate both continuity and change in Western rhetoric.
COMM 240 Cinema Race and Culture (3)
Mr. Ukadike. This course is designed to explore developments in the cross-cultural use of media - from Hollywood feature films to ethnographic documentaries, from Caribbean liberationist literature to African allegories of colonialism, from indigenous use of film and video to Black Diasporan "oppositional" film practice. Issues to be addressed include Afrocentrism, Eurocentrism, ethnocentrism, multiculturalism, racism, sexism, gender, and class bias.
COMM 260 Rhetorical Principles of Writing for News Media (3)
Mr. Mackin. Applies principles of classical and contemporary rhetorical theory to problems of writing for news media. Incorporates grammar review. Writing requirements include major news story, major feature story, and numerous smaller assignments. Emphasis on writing for print media, but stylistic techniques for broadcast media also covered.
COMM 281, 282 Special Topics $(3,3)$
Staff. A detailed study of particular issues, problems, and developments in the history, theory, and criticism of communication. Topics may be drawn from any of the departmental areas of concentration, for example, the concept of invention, the rhetoric of religion, non-verbal communication, mass media and culture, and similar themes. May be taken twice for credit on different topics.

## COMM 321 Principles and Practice of Argument (3)

Mr. Mackin, Mr. Patton. The study and application of theories of argumentation and debate. Students develop oral and written arguments on current problems to apply theories, standards, and techniques for argumentation in debate and other formats.

## COMM 322 Small Group Communication (3)

Ms. Spitzack, Staff. Theory and practice of group formation, development, interaction, leadership, productivity, and satisfaction. Formal and informal groups are examined with an emphasis on task-oriented groups.

## COMM 324 Interaction Analysis (3)

Ms. Spitzack. Focus on the investigation, interpretation, and critical assessment of human interaction. Emphasis is given to interaction occurring in the relational contexts of marriage, friendship, and the organization. Study includes the cultural and ideological elements, the models of communication used to explain interaction, and the analysis of everyday communication phenomena in each context.

## COMM 325 Rhetorical Criticism (4)

Mr. Mackin, Mr. Patton. The description, analysis, interpretation, and evaluation of persuasive uses of language. Emphasis on classical, situational, generic, dramatistic, and ideological methods of criticism. Judgments about aesthetic, pragmatic, logical, and ethical dimensions of rhetoric.

## COMM 326 Critical Analysis of Media (3)

Ms. Balides, Ms. Fuqua. The study of structure and design of mass media programs; symbolic function of language and images in media themes and programming; the function of media programming in reinforcing or altering public perceptions of ideas, events, and people; the influence of media programming on specific audiences in different periods and locales. Topics include identification of major critical approaches to media, comparison of United States and foreign programming, examination of the major genres of media content, and the means of influence used in mass communication.

## COMM 327 Authors and Genres in the Cinema (3)

Ms. Balides, Ms. Lopez. Questions of authorship and questions of genre are the two principal paradigms of film criticism. This course examines the aesthetic and theoretical bases for notions of authorship and genre in the cinema, (respectively, romantic theories of art and auteur criticism and structuralism, myth and genre analysis) and considers the historical development of film critical discourse by focusing on selected case studies of film "authors" and genres from Hollywood, non-mainstream U.S. film production, and non-U.S. cinema.

## COMM 328 History of Mass Communication (3)

Ms. Balides. A history of the development of mass communication from the Industrial Revolution to the present. The history of books, magazines, newspapers, radio, television, film, and sound recording are covered. Emphasis on major developments and trends rather than aesthetic or critical issues.

## COMM 336 Television Criticism (3)

Ms. Balides, Ms. Fuqua. Critical analysis of the content, form, and cultural significance of television. Includes consideration of critical approaches to criticism; analysis of specific programs, genres, and creators of programs; and the broader social implications of the creation of televisual knowledge and understandings.
COMM 350 The Rhetoric of Civil Rights (3)
Mr. Patton. Examination of the speeches, writings, public demonstrations, and symbolic actions of the civil rights movement, and forms of contemporary civil rights discourse.

## COMM 351 Environmental Communication (3)

Mr. Patton. The purpose of this course is to provide an understanding and analysis of communication processes used in defining environmental issues and shaping environmental policies. Topics include defining nature and environment; diverse audiences and environmental messages; developing strategies for risk communication; creating effective environmental campaigns. Case studies of successful and unsuccessful environmental communication will be examined.

## COMM 355 Third World Cinema (3)

Mr. Ukadike. This course surveys the cinematic practices of the developing nations of Africa, Asia, Latin America, and the Middle East. The filmic practice, at once revolutionary and ideological, has not only produced some of the world's most striking filmic innovations, but is now recognized as having initiated a new phase and expanded definitions of the art of cinema. The issues to be addressed include: the development of a national cinema, the impact of politics on film style, video and television culture, the commonalities and differences in modes of production, the relationship of film to the societies' values and cultures, and the role of cinema as a mediation of history.

## COMM 358 Film History (3)

Ms. Balides, Ms. Lopez. An analysis of the development of U.S. Hollywood cinema in terms of film form and style, the studio system, and social issues in film history. Focus on how institutional considerations affect the production of meaning in film. Topics include the cinema of attractions, the classical Hollywood style, the monopoly structure of studios, picture palaces, censorship, cinema and consumer culture, and cinema history as popular memory. Films from 1896 to the present.

## COMM 360 Documentary Film (3)

Mr. Ukadike. The films to be studied in this course are selected from the spectrum of documentary film practice from the 1920 s to the present. We will concentrate on specific topics as well as an historical overview. Considering the developing and shifting conception of documentary film practice, social issues, political and propagandistic values, and documenting "Other," as well as claims to veracity and objectivity will be treated within analytical framework. Different approaches to production - particularly within the burgeoning ethnographic and women's film practices- will also be examined.

## COMM 389 Service Learning (1)

Staff. Prerequisite: departmental approval. Students complete a service activity in the community in conjunction with the content of a three-credit corequisite course.

## COMM 418 African Cinema (3)

Mr. Ukadike. This course will provide a critical and interdisciplinary look at the development of African cinema from its inception in the 1960s to the present. In looking at this period, we will move from the sociopolitical upheavals of late colonialism to the recent phase of introspection and diversification. The relationship of cinematic practices to transformation in the social and economic sphere will be examined, as well as the creation of distinctively African film styles based on oral traditions. In pursuing these topics, we will consider the impact of technology, history and culture, ties to the cinema of other developing nations, and co-productions.

## COMM 419 Introduction to Latin American Film (3)

Ms. Lopez. The development of the cinema in Latin America from its arrival as an imported technology to the present. Films studied in relation to the sociopolitical environment and emphasis placed on close analysis as well as a contextual understanding of the material. Topics include the struggle to create national film industries, the "art film" and New Cinema movements, and recent trends in countries such as Mexico and Argentina. Same as SPAN 419.

## COMM 420 Organizational Issues Management (3)

Staff. Prerequisite: COMM 220 or 324. Overview and analysis of how organizations create and maintain social reality through the rise of communication policies and practices. This course examines issues management or how complex organizations develop strategies for anticipating and adapting to public policy changes through planning, compliance, and communication. Methodologies studied are applied to practical research assignments in organizational settings.

## COMM 421 Persuasion (3)

Mr. Patton. A study of contemporary theories of persuasion and their applications. Persuasive appeals in political campaigns, social movements, forms of propaganda, and advertising are examined. The influence of evidence, forms of argument, cultural attitudes, and language on the persuasive process are considered.

## COMM 425 Rhetorical Theory (3)

Mr. Mackin, Mr. Patton. A survey of rhetorical theories from pre-Socratic Greek theories to contemporary European and American theories. The course compares and analyzes theories of Plato, Aristotle, Cicero, St. Augustine, Bacon, Blair, Campbell, Whately, Richards, Burke, Derrida, and others. Ontological, epistemological, and practical aspects of theories will be examined.

COMM 426 Communication, Culture, and the Body (3)
Ms. Spitzack. An examination of the relationship between communication as the production and consumption of cultural meaning, and the body as both the agent and the product of communication. Emphasis is given to the analysis of 20th-century practices, images, and institutions which illustrate and inform prevailing cultural representations of the body.

## COMM 427 Film Theory (3)

Ms. Balides, Ms. Lopez. Prerequisite: COMM 215. An examination of how film communicates as a visual medium. The composition and sequencing of images are treated as complex message systems that interact with audiences’ abilities to decode them. This is not a production course but one that emphasizes the communicative underpinnings of traditional film aesthetics and criticism.

## COMM 435 Gender and the Cinema (3)

Ms. Balides, Ms. Lopez. Explores the position of women in Hollywood and other cinemas by studying the evolution of women's cinema and of feminist film theories from the 1920s to the present. The history of feminist film analysis, focusing on theoretical-sociological, psychoanalytic, semiological underpinning of feminist critiques of both commercial and independent avant-garde film practices.

## COMM 436 Introduction to Cultural Criticism (3)

Ms. Balides, Ms. Fuqua, Ms. Lopez, Ms. Spitzack. Examination of the major concepts of culture from the late 19th century to the present as they relate to the analysis of cultural practices and texts. Specific emphasis on the interdisciplinary nature of cultural analysis, the relation between elite and popular cultures, dominant formations and the resistance to them, and intercultural encounters.

## COMM 440 Mass Communication Law (3)

Staff. Prerequisite: COMM 326. Studies federal and state regulation of both print and broadcast media in the United States to understand how legal mandates and constraints have defined the roles of media in society. Historical and contemporary analyses include laws in areas such as libel, privacy, free press versus fair trial, access to government information, regulation of advertising, and regulation of broadcasting.

## COMM 445 Communication, Language, and Gender (3)

Staff. This course will examine the role that gender plays in the subfield of interpersonal communication, including the complex currents which have contributed to debates over the relationships among language, communication, and gender. Issues to be explored include differences in vocabulary for naming and describing women and men, differences in men's and women's communication styles, and the influence of language and communication on perpetuating gender inequalities and on facilitating changes in gender roles.

## COMM 450 Political Communication (3)

Mr. Patton. A survey of theories, empirical research, and critical analysis of public political communication. In addition to a study of the rhetoric of electoral campaigns, course topics include material on communication emanating from the judiciary, the legislature, the executive branch, and mass media. Social movements which impinge on the political process are also discussed.

## COMM 455 Film and Politics (3)

Ms. Balides, Ms. Lopez. Prerequisite: COMM 215. An exploration of the relationship between the cinema and politics. The course has a dual focus, analyzing the intrinsically political and ideological nature of cinematic communication as well as the specific political functions that the cinema has served historically.
COMM 456, 457 Internship in Communication (3, 3)
Staff. Prerequisites: approval of academic supervisor and department. Provides combination of academic work and practical experience in communication with specific business and professional organizations. Must meet college and departmental requirements.

## COMM 460 Intercultural Communication (3)

Mr. Patton, Ms. Spitzack. A critical examination of communication in intercultural, interethnic, and international contexts. An overview of models and approaches designed to explain cultural differences in communication, with emphasis on the dimensions of symbolization, acculturation, prejudice, stereotyping, and ideology. Conceptual frameworks are applied and tested within a range of cultural populations as defined by race, ethnicity, gender, physical disability, sexuality, socio-economic class, and geographic location.

## COMM 462 Women, Development, and Communication in the English-speaking Caribbean

 (3)Ms. Lopez, Mr. Patton. A study of the role of communication in the development of women in Caribbean culture. Examination of processes of gender role-learning in families and institutions distinctive to Caribbean culture. Analysis of women's communication in survival, status, and gender role-conflict situations in past and present Caribbean societies. Explores the development of interpersonal, narrative, and public communication in relationship to evolving social and political roles of Caribbean women.
COMM 464 Communication and Cultural Identity in the English-speaking Caribbean (3)
Mr. Patton. The evolving definitions and expressions of cultural identity from the perspectives of individuals and groups in the English-speaking Caribbean. The course focuses on major forms of communication as these shape and develop cultural narratives. Emphasis is placed on oral traditions, public discourse and argument, the nature and function of Caribbean mass media, and the significant role of music and performance in the formation of cultural identity.
COMM 466 Youth Culture and the Mass Media (3)
Ms. Fuqua. The relationship between youth culture and mass media in the post-World War II era. An analysis of youth-oriented popular music, novels, films, and television programs. In addition the course focuses on the historical conditions which gave rise to such media texts.

## COMM 470 Ethics of Communication (3)

Mr. Mackin, Mr. Patton. A critical study of various ethical theories within the field of communication studies. Theories will be applied in case studies from different contexts of communication, including interpersonal communication, organizational communication, mass communication, and political communication.

## COMM 476 Cultural Studies and Popular Culture (3)

Ms. Fuqua, Ms. Spitzack. Prerequisite: COMM 326. Theoretical developments in cultural studies as related to popular cultural trends from 1955 to the present. The history of cultural studies as an
academic field in inquiry is addressed as well as major theoretical discourses within this broad area of study.

## COMM 480 Constructing Masculinities (3)

Ms. Spitzack. This course examines cultural representations of masculinity across a wide range of communication practices. Informed by an interdisciplinary approach to questions of gender identity, the course interrogates key sites in the performance of masculinity. Topics include historical, theoretical, and critical conceptualizations of men and manhood, dominant and marginalized masculinities, cultural influences on masculine identity, central practices in male culture, and strategies for rethinking gender.

## COMM 481, 482 Special Topics in Communication (3, 3)

Staff. A detailed study of particular issues, problems, and developments in the history, theory, and criticism of communication. Topics may be drawn from any of the departmental areas of concentration, for example, the concept of invention, the rhetoric of religion, non-verbal communication, mass media and culture, and similar themes. May be taken twice for credit on different topics.

## COMM 484 AIDS and the Media (3)

Ms. Fuqua. Prerequisite: COMM 326 or approval of instructor. This course analyzes a wide range of U.S. and non-U.S. cultural images and narratives about HIV/AIDS. Spanning the decades of the 1980s and 1990s, the course examines the ways the media representation shapes our ways of defining a pandemic. Topics may include historical and theoretical explorations of disease and the construction of otherness, the roles of experts and science, and issues of identity, sexuality, marginality.
COMM 491, 492 Independent Studies (1-3, 1-3)
Staff. Open to qualified juniors and seniors only.

## COMM H499-H599 Honors Thesis $(3,4)$

Staff. For especially qualified juniors and seniors with approval of the department and the Honors Committee.
COMM 621, 622 Seminar in Communication Studies $(3,3)$
Staff. Prerequisite: approval of instructor. An intensive study of a specific issue or set of issues in rhetoric and public address, interpersonal communication, or mass communication (e.g., propaganda, legal communication research), or of an individual theorist (e.g., Aristotle, Kenneth Burke) or genre of discourse (e.g., ideological argumentation, the rhetoric of social movements). May be taken twice for credit on different topics.

## Computer Science

see Allied Programs

## Cultural Studies

(Note: minor program only)
Office:219 Newcomb Hall
Phone: (504) 865-5160
Fax: (504) 862-8958

## Program Administrator

Joy Van Fuqua (Director)

## Cultural Studies Advisory Board

Hope H. Glidden, French and Italian
Amy Koritz, English
Ana M. Lopez, Communication
Molly A. Rothenberg, English
Carole Spitzack, Communication
Richard Teichgraeber, History
Martyn P. Thompson, Political Science

## MINOR

A minor in cultural studies provides students with an interdisciplinary approach to the study of culture. Cultural studies courses focus on the interrelationships between representations-visual, written, oral, etc.-and the world in which they are produced and consumed. The overarching concern of cultural studies is to explore how representations function to create and embody cultural meaning and values. Representations are cultural artifacts that stand for, symbolize, depict, or portray objects, people, thoughts, or emotions, etc. The minor introduces students to a variety of approaches to the analysis of culture, while permitting them to focus on a cluster area pertinent to their interests.
The minor in Cultural Studies consists of six courses. No more than two of the courses counting towards a cultural studies minor may count toward a departmental major. All students working toward the minor will be required to take 300 Introduction to Cultural Criticism, one elective course selected from a preapproved list, three courses in a cluster area of concentration, and 590 Cultural Studies Research Seminar.

## ELECTIVES

## Anthropology

ANTH 210 Myth and Life
ANTH 621 Development of Anthropological Theory
ANTH 683 Maya and Aztec Literature

## Communication

COMM 426 Contemporary Culture and the Body
COMM 466 Youth Culture and the Mass Media
COMM 476 Cultural Studies and Popular Culture
COMM 481 Special Topics in Communication (when cultural studies topic)
Cultural Studies
CLST 480 Special Topics in Cultural Studies

## English

ENLS 482 Colonial and Post-Colonial Discourse
ENLS 483 Race, Class, and Gender
ENLS 484 Performance Studies
ENLS 485 Cultural Politics and Practice
ENLS 486 Topics in Cultural Studies
French
FREN 301 Franco Women Writers in Translation

## History

HISB 312 West African Culture and Society
HISB 322 Africa and Hollywood: Myth, Romance, and Savage Imagery
HISU 381 Southern Folk Culture

## Latin American Studies

LAST 301 The Cultural Heritage of Latin America, Discovery to Independence
LAST 302 The Cultural Heritage of Latin America, Independence to Present
Spanish and Portuguese
SPAN 483 Hispanic Literature Topics in Translation: Renaissance Performances of Gender; Spanish Performances of the Subject; Culture and Technologies in Spanish America; Anatomies of Melancholy

## AREAS OF CONCENTRATION

A cluster area of concentration consists of three courses (from at least two different departments) focused around an issue or problem in culture that demands interdisciplinary study. The cluster areas enable sustained analysis of how these problems or issues have been represented in specific historical and social contexts. Currently, the cultural studies cluster areas of concentration are:

## Performances of Culture

This cluster allows students to investigate the role of performance as a way of representing important values and beliefs about the world. Courses address the creation and interpretation of performances in institutionalized theatre, festivals, political events, storytelling circles, etc. By examining the performative dimensions of, for example, racial stereotypes and national identities, these courses explore ways in which cultural status and values are represented for and by individuals through performances in both aesthetic and social contexts.

## (Three of the following):

## Classical Studies

CLAS 320 Greek Religion

## English

ENLS 483 Race, Class, and Gender: Primitivism and Modernism; Machine Dreams
ENLS 484 Performance Studies
Music
MUSC 335 Music in Contemporary Society

## Spanish and Portuguese

SPAN 483 Hispanic Literature Topics in Translation: Renaissance Performances of Gender; Spanish Performances of the Subject
In addition to the courses listed above, other colloquia, seminars, independent studies, and special topics courses may be applied to the cluster area subject to approval by the directors of the program. For complete information about these courses, consult the Schedule of Classes or obtain a current course description from the co-directors of the program.

## Natures, Technologies, Cultures

This cluster examines how the intersection of the natural/human and the technological/human have been represented in scientific, medical, philosophical, aesthetic, and other discourses. Courses in the cluster area explore how a range of popular and scholarly scientific discourses and technologies have influenced how people think about and represent human bodies, diseases, and ways of organizing and understanding nature. Other courses focus on how technologies such as handwriting and computers have been represented and interpreted as extensions of or substitution for the natural and the human.

## (Three of the following):

Communication
COMM 426 Contemporary Culture and the Body

## English

ENLS 483 Race, Class, and Gender: Machine Dreams
ENLS 485 Cultural Politics and Practice: The AIDS Crisis
ENLS 486 Topics in Cultural Studies: Men, Women, Bodies, Machines
Philosophy
PHIL 334 Humanity's Place in Nature

## Physics

PHYS 304 Approaches to the Scientific Revolution

## Spanish and Portuguese

SPAN 483 Hispanic Literature Topics in Translation: Culture and Technologies in Spanish America; Anatomies of Melancholy
In addition to the courses listed above, other colloquia, seminars, independent studies, and special topics courses may be applied to the cluster area subject to approval by the directors of the program. For complete information about these courses, consult the Schedule of Classes or obtain a current course description from the co-directors of the program.
CLST 300 Introduction to Cultural Criticism (3)
Ms. Balides, Ms. Koritz, Ms. Lopez, Ms. Nair. Examination of the major concepts of culture from the late 19th century to the present as they relate to the analysis of cultural practices and texts. Specific emphasis on the interdisciplinary nature of cultural analysis, the relation between elite and popular cultures, dominant formations and the resistance to them, and intercultural encounters.

## CLST 480 Special Topics in Cultural Studies (3)

Staff. An in-depth examination of specific cultural studies topics which may be drawn from any of the areas of concentration, for example the body in the Western tradition or the rhetoric of scientific invention. May be taken twice for credit on different topics.
CLST 590 Cultural Studies Research Seminar (2)
Ms. Koritz, Ms. Lopez. This seminar will enable students to integrate the multi-disciplinary course work taken as a cluster area of concentration. Students will meet regularly with the professors, either individually or in groups, and will be expected to produce a substantial research paper. This paper should demonstrate their ability to synthesize diverse disciplinary and theoretical approaches to some aspect of the cluster area and to analyze its relationship to a specific cultural context.

## Earth and Environmental Sciences

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Professors
Ronald L. Parsley, Ph.D., Cincinnati
Brent McKee, Ph.D., North Carolina State
Thomas Bianchi, Ph.D., University of Maryland
Associate Professors
George C. Flowers, Ph.D., California, Berkeley (Chair)
Stephen A. Nelson, Ph.D., California, Berkeley
Mead A. Allison, Ph.D., SUNY, Stony Brook
Franco Marcantonio, Ph.D., Columbia
Assistant Professors
Nancye H. Dawers, Ph.D., Columbia
Shuhai Xiao, Ph.D., Harvard

## BACHELOR OF SCIENCE IN GEOLOGY

The major in geology provides students with an understanding of the materials that make up the Earth, the history of the Earth, and physical, chemical, and biological processes that have operated on and within the Earth throughout its history.
The major consists of a minimum of ten courses including EENS 111/113, 112/114, 211, 212, 327, 340, 399, 609, and two additional 600-level courses including accompanying laboratories where scheduled. Students must earn a C- or better in 211 to qualify for further enrollment in EENS courses. All majors must complete Chemistry 107 and 108 and accompanying laboratories 117 and 118; and Physics 121 and 122, or 131 and 132, with laboratories. Mathematics taken to meet the B.S. degree requirement must be Calculus 121 and 122, or Consolidated Calculus 131. Introduction to Calculus 115 and 116 may substitute for Calculus 121. These supporting science and mathematics courses may not be taken satisfactory/unsatisfactory.

In the junior and senior years, students preparing to enter graduate school in geology or paleontology are strongly urged to elect additional courses in their major field. It should be noted that such preparation may result in students’ attaining more than the total number of credits required for graduation (see provisions for earning graduate credit in the senior year).
All majors are expected to participate in certain departmental activities including departmental field trips held annually or semiannually, and special lecture programs with visiting speakers.

## GEOLOGY MINOR

A minor in geology consists of five courses and accompanying laboratories as follows: EENS 111/113, 211, 212 plus two courses at or above the 300 level.

## BACHELOR OF SCIENCE IN ENVIRONMENTAL GEOSCIENCE

The major in environmental geoscience consists of a minimum of ten courses including: EENS $111 / 113,120,202$, 207 or $223,211,327,398$; one course from among 603,630 , or 632 ; and two
additional 600-level courses, including accompanying laboratories. Student must earn a C- or better in 211 to qualify for further enrollment in the program. All majors must complete Chemistry 107 and 108 and accompanying laboratories 117 and 118; Physics 121, or 131 with laboratories; and Ecology and Evolutionary Biology (EEOB) Biostatistics 408. Mathematics taken to meet the B.S. degree requirements can be Calculus 121 and 122, or Consolidated Calculus 131. Introduction to Calculus 115 and 116 may substitute for Calculus 121. These supporting science and mathematics courses may not be taken satisfactory/unsatisfactory.
In the junior and senior years, students preparing to enter graduate school in environmental geoscience are strongly urged to elect additional courses in their major field. It should be noted that such preparation may result in students attaining more than the total number of credits required for graduation (see provisions for earning graduate credit in the senior year).

## ENVIRONMENTAL GEOSCIENCE MINOR

A minor in environmental geoscience consists of five courses and accompanying laboratories as follows: EENS 111/113, 120, 211, plus two 600-level courses from the approved list of environmental courses.
EENS 603 Environmental Methods
EENS 605 Natural Disasters
EENS 619 Marine Geology
EENS 621 Global Biogeochemical Cycles
EENS 622 Major World River Systems
EENS 625 Isotopes in the Environment
EENS 627 Organic Geochemistry
EENS 628 Coastal Strata Formation
EENS 629 Sedimentary Geochemistry
EENS 630 Groundwater Hydrology
EENS 632 Subsurface Geology
EENS 669 Biogeochemistry of Estuaries

## BACHELOR OF ARTS IN EARTH SCIENCES

The major in earth science provides students with an understanding of the materials that make up the Earth, the history of the Earth, and physical, chemical, and biological processes that have operated on and within the Earth throughout its history. The major in earth sciences consists of a minimum of seven EENS courses including 111/113, 112/114, 202, 211, 212, 327 and 609 with accompanying laboratories where scheduled, Chemistry 107 and 108, plus four other coordinated courses from the fields of astronomy, biology, chemistry, geography, geology, mathematics, physics, and relevant courses in nonscience departments. The major program will be developed by the student with approval of the undergraduate major advisor in the Department of Earth \& Environmental Sciences. This is not considered to be a preprofessional program and is designed for students who are interested in environmental concerns, premed, prelaw, primary or secondary education, or a liberal education in the sciences.

## EARTH SCIENCES MINOR

A minor in earth sciences consists of five courses with accompanying laboratories where scheduled, as follows: $111 / 113,112 / 114,202$ plus two additional EENS courses, one of which must be above the 200 level; or 111/113, 112/114, 609 plus two courses from the following: 306, 327, 610, or Ecology and Evolutionary Biology 614.

## EENS 111 Physical Geology (3)

Staff. Corequisite: EENS 113. The nature and material of the Earth and the moon; the development of their surficial features; and the results of the interaction of chemical, physical, and biological factors upon them. Lectures.

## EENS 112 Historical Geology (3)

Mr. Parsley, Mr. McKee. Corequisite: EENS 114. The physical evolution of the Earth with particular attention to North America. Also, the evolution of life through geological time.
EENS 113 Physical Geology Laboratory (1)
Staff. Corequisite: EENS 111. Includes the study of rocks and minerals, landforms, structural geology, topographic maps, and aerial photographs.
EENS 114 Historical Geology Laboratory (1)
Staff. Corequisite: EENS 112. Includes the study of fossils, geologic time, geologic maps.

## EENS 120 Earth Systems (3)

Mr . McKee. An introductory examination of the origins of and interactions between the hydrosphere, atmosphere, biosphere, and geosphere that together make up the Earth Systems. This course presents an integrated view of our planet, how it evolved during the past $\sim 4.5$ billion years, why it has changed (and continues to change) and what makes Earth a habitable planet.

EENS 202 Environmental Geology (3)
Mr. Flowers, Mr. Marcantonio. The interaction of humans and their geologic environment. A study of Earth processes and their action on rocks, soil, fluids, and life in ways that either affect or control the human environment. The effect of humans on their environment through the action of these processes.

## EENS 204 Natural Disasters (3)

Mr. Nelson. An examination of the causes, effects, and options available to mitigate natural disasters, such as earthquakes, volcanic eruptions, landslides, subsidence, coastal erosion, flooding, severe weather, and meteorite impacts.

## EENS 206 Introductory Geography (3)

Mr. Flowers. An introduction to the basic facts concerning the physical environment: landforms, climates, vegetation and soils, followed by a comprehensive survey of the relationship between the physical environment and human activity in the major geographic regions of the world. The geography of Louisiana is considered in its relation to the region. Recommended to students working for Louisiana certification in elementary education. Lectures.

## EENS 207 Weather and Climate (3)

Mr. Flowers. An introduction to the earth's atmosphere with particular emphasis on weather and climate. Topics covered include: heating and cooling of the atmosphere; atmospheric circulation and wind; air masses and cyclonic storms; tropical weather and hurricanes; and global climates and climatic change.

## EENS 211 Earth Materials (3)

Mr. Flowers, Mr. Nelson. Prerequisites: EENS 111. Corequisites: CHEM 108/118. An introduction to earth materials, including minerals and rocks. Crystallography, mineralogy, the origin of rocks, and hand specimen identification of minerals and rocks. Lectures and two laboratories per week.
EENS 212 Petrology (3)
Mr. Nelson. Prerequisite: EENS 211. The study of igneous and metamorphic rocks including their nature and origin, and identification which the petrographic microscope. Lectures and two laboratories per week.

EENS 223 Oceanography (3)
Mr. Bianchi. A broad survey of chemical, physical, and geological oceanography with a brief historical overview and a consideration of current concepts. Same as EEOB 223.

## EENS 288 Writing Practicum (1)

Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.

EENS 306 Dinosaurs (3)
Mr. Parsley. Evolution of the dinosaurs and their ancestors. An examination of their classification, morphology, and modes of life. Emphasis on their fossil record and man's concept about dinosaurs. Meets the college science requirements. Does not count toward the major in geology or environmental geoscience.

EENS 327 Sedimentation and Stratigraphy (3)
Mr. Allison. Prerequisite: EENS 211. Composition, primary textures, and structures of sediments in major sedimentary environments. Environmental interpretation of ancient sedimentary sequences. The basic principles utilized in interpretation of the stratigraphic column. Lectures and laboratory which focuses primarily on methods of sedimentary analysis.
EENS 340 Structural Geology (4)
Ms. Dawers. Prerequisites: EENS 111, 211; PHYS 121 and 122 or approval of instructor. Structures and mechanics of rock formation. Geological maps and cross-sections. Plate tectonics. Lectures and Laboratory.
EENS 388 Writing Practicum (1)
Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.
EENS 398 Environmental Field Study (4-6)
Staff. Prerequisites: EENS 327, approval of undergraduate advisor before enrollment. The application of basic field methods to proactical problems in environmental science. Students typically complete this course at an approved summer field camp offered by another college or university. Students may pursue opportunities in groundwater hydrology, oceanography, remote sensing, environmental field methods, or environmental internships. Offered summer session only.

## EENS 399 Field Geology (3-8)

Staff. Prerequisites: EENS 212 and 340. The application of basic field methods to practical problems in field geology. When not offered by Tulane, students are required to complete this course at another college or university. Offered in the summer session only.
EENS 422 Advanced Oceanography (3)
Mr. Bianchi. A broad survey of biological, chemical, physical, and geological oceanography with a brief historical overview and consideration of current concepts. There will also be an examination of biogeochemical relationships at macroscales, mesoscales, and microscales in the ocean. Same as EEOB 422.
EENS 456, 457 Internship Studies (1-3, 1-3)
Staff. Prerequisites: approval of instructor and department. An experiential learning process coupled with pertinent academic course work. Open only to juniors and seniors in good standing. Registration is completed in the academic department sponsoring the internship on TUTOR. Only one internship may be completed per semester. (Note: A maximum of six credits may be earned in one or two courses.)

## EENS 491, 492 Independent Studies (1 or 3, 1 or 3 )

## EENS H491, H492 Independent Studies (1 or 3, 1 or 3)

EENS H499-H500 Honors Thesis $(3,4)$
EENS 603 Environmental Methods (3)
Mr. Flowers. Prerequisite: CHEM 108 or approval of instructor. A course to introduce laboratory and field methods necessary to the student interested in working in Environmental Geology. Lectures, laboratory, and field applications.
EENS 604 Coastal Marine Geology (3)

Mr. Allison. Prerequisites: EENS 111, 112, and college chemistry. Geomorphic features of estuarine, coastal, and continental shelf environments: erosional, depositional, and geochemical processes; field and laboratory methods; emphasis on dynamic coastal environments of the northern Gulf of Mexico. Offered summers only.

## EENS 605 Natural Disasters (3)

Mr. Nelson. Prerequisite: approval of instructor. An examination of the causes, effects, and options available to mitigate natural disasters, such as earthquakes, volcanic eruptions, landslides, subsidence, coastal erosion, flooding, severe weather, and meteorite impacts.

## EENS 607 Geological Problems (3)

Staff. For qualified students with departmental approval provided appropriate faculty director is available.
EENS 608 Special Topics (3)
Staff. A special course taught by Tulane faculty or visiting faculty. The topic will be listed in the Schedule of Classes.

## EENS 609 Invertebrate Paleontology (4)

Mr. Parsley. Prerequisite: EENS 112, EEOB 614, or approval of instructor. Principles of invertebrate paleontology; a systematic treatment of the fossil invertebrates and their living relatives. Emphasis on functional morphology, ontogeny, and paleoecology. Lectures, laboratory, field trip. Same as EEOB 609.

## EENS 610 Micropaleontology (3)

Staff. Prerequisite: EENS 609 or elementary biology. The foraminifera, ostracoda, nannofossils, conodonts and other groups of microfossils. Lectures and laboratory. Same as EEOB 610.
EENS 613 Principles of Paleobiology (3)
Mr. Xiao. Prerequisite: EEOB 101, EENS 112, EENS 609, or approval of instructor. Selected topics on macroevolutionary theories; Phylogeny and the fossil records of metazoans; Major events in the history of life; Patterns of biodiversity through geological time; Taphonomy; Paleoecology. Same as EEOB 613.

EENS 614 Igneous Petrology (3)
Mr. Nelson. Prerequisites: EENS 212 and approval of instructor. An in-depth study of the origins of igneous rocks from the standpoint of experimental investigations, thermodynamics, trace elements, radiogenic isotopes, and field investigations. Lectures and laboratory.
EENS 619 Marine Geology (3)
Mr. Allison. Prerequisite: EENS 111 or 121. Survey of marine plate boundaries, ocean floor morphology, and paleooceanology and sedimentary history of the ocean basins and the ocean margins. Lectures

## EENS 621 Global Biogeochemical Cycles (3)

Mr. Bianchi. Prerequisite: one year of Organic Chemistry. An introduction to the global biogeochemical cycles in fresh water, marine, and terrestrial ecosystems. Emphasis will be placed on key environmental issues as they relate to perturbations of these global cycles. Open only to seniors and graduate students. Same as EEOB 621.
EENS 622 Major World River Systems: Sedimentary and Biogeochemical Processes (3)
Mr. McKee. Prerequisite: EENS 629 or approval of instructor. Major World Rivers are arguably the single most important environmental features on the surface of the Earth in terms of their direct impact on humans and their vulnerability to negative impact by human activities. They also play an important role in global change especially with regards to the global carbon cycle. The dominant sedimentary and biogeochemical processes are examined for whole river systems (drainage basin to receiving basin) with emphasis given to those that influence global change.
EENS 625 Isotopes in the Environment (3)
Mr. Marcantonio. The use of isotopes as tools to trace the movement of air, water, and sediments through the atmosphere, hydrosphere, biosphere, and lithosphere. Same as EEOB 625.
EENS 626 Paleoclimatology (3)
Mr. Marcantonio. Prerequisite: approval of instructor. Understanding past climatic variation is necessary to fully comprehend present and model future climate. The focus will be on climate change during the late Quaternary Period, with special emphasis on climate reconstruction methods. Same as EEOB 626.
EENS 628 Coastal Strata Formation (3)
Mr. Allison. An examination of the petrology of major terrigenous and carbonate coastal settings including fluvio-deltaic, nearshore, and continental shelf with a focus on the transition from modern sediments to lithified rocks. The course will combine lectures and discussions of pertinent recent literature with laboratory and field examination of sediment grains, thin-sections, and core intervals.

## EENS 629 Sedimentary Geochemistry (3)

Mr. McKee. Prerequisite: EENS 327 or approval of instructor. Quantitative aspects of early sediment diagenesis. The topics examined include: sediment deposition, resuspension, bioturbation and accumulation; redox reactions; diffusion and desorption of dissolved species; and organic matter decomposition and storage. These basic concepts will be used to examine early diagenesis in a range of sedimentary environments.

EENS 630 Groundwater Hydrology (3)
Mr. Flowers. Prerequisite: CHEM 107, 108, MATH 121, 122, or equivalent. Occurrence of water in the near-surface environment; saturated and unsaturated flow in aquifers; aquifer characterization; well hydraulics; and groundwater chemistry.

## EENS 632 Subsurface Geology (3)

Ms. Dawers. Prerequisite: senior standing or approval of instructor. Principles of subsurface mapping with emphasis on 3d seismic interpretation. Utilization of electric logs and other data to construct subsurface maps. Lectures and laboratory.

## EENS 634 The Earth (3)

Mr. Flowers, Mr. Nelson. Prerequisites: MATH 121 and 122, or equivalent, PHYS 121 and 122 or 131 and 132, and approval of instructor. Earth as seen in the light of solid-earth geophysics: age and origin; seismology and structure of the interior; gravity, geodesy, and the geoid; heat budget; generation of the magnetic field and paleomagnetism; and geophysical constraints on plate tectonics. Lectures.

## EENS 668 Volcanology (3)

Mr. Nelson. Prerequisite: approval of instructor. The study of volcanoes including volcanic landforms, eruptive mechanisms, and tectonic environments. Lectures.

## EENS 669 Biochemistry of Estuaries (3)

Mr. Bianchi. Prerequisites: CHEM 242 and MATH 122 or 131. Physico-chemical and biological aspects of the zone interfacing fresh water and marine environments. Emphasis will be place on the biogeochemical cycles of this highly dynamic ecosystem. Field trips to estuarine regions along the Gulf Coast will be required although this is not a laboratory-field course. Same as EEOB 669.

EENS 688 Writing Practicum (1)
Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.

## Ecology, and Evolutionary Biology

Office: 310 Dinwiddie Hall
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Website: www.tulane.edu/~eeob/
Professors
Steven P. Darwin, Ph.D., Massachusetts, Amherst
David C. Heins, Ph.D., Tulane (Chair)
Thomas W. Sherry, Ph.D., California, Los Angeles
Associate Professors
Henry L. Bart, Ph.D., Oklahoma
Lee A. Dyer, Ph.D., Colorado

## Assistant Professors

Duncan J. Irschick, Ph.D., Washington University, St. Louis
Emeritus
Stuart S. Bamforth, Ph.D., Pennsylvania

## MAJOR

The major in ecology and evolutionary biology provides understanding of the structure and function of organisms and their evolution and ecology. Majors must complete a minimum of 34 credits comprising five core courses and five elective courses of three to four credits each. The core courses are EEOB 101/111 and CELL 101 for a total of seven credits, EEOB 308 and CELL 205 for three credits each, and EEOB 404/414 for four credits. Elective courses are selected according to the interests of the student in consultation with the major advisor. Two of the electives must be designated laboratory or field courses. A maximum of one course representing a special project, independent study, or honors thesis may be counted as an elective, but not as a laboratory-field course. In addition, a student may use a maximum of one course from another department as an elective course, based on a list of approved courses which is available from the departmental office or on the departmental web page (www.tulane.edu/~eeob/). Courses representing internship studies and seminars may not count as elective courses. Majors are also required to complete two semesters of mathematics and four semesters of chemistry, including two semesters of general chemistry $107 / 117,108 / 118$, or H109/H111, H110/H112 and two semesters of organic chemistry 241/243, 242/244 or H245/H247, H246/H248. Additional courses in biological statistics and physics are also highly recommended.

## MINOR

Students who minor in ecology and evolutionary biology complete EEOB 101/111 and CELL 101 for seven credits, EEOB 308 for three credits, EEOB 404/414 for four credits, and two additional elective courses of three or four credits each in ecology and evolutionary biology for a minimum of 21 credits. One of the two elective courses must be a designated laboratory or field course. Courses from other departments may not be used as electives for the minor. Because of the interdisciplinary nature of the biological chemistry major, students in that program may not minor in ecology and evolutionary biology.

## COURSES SUITABLE FOR NON-SCIENTISTS

The department offers a number of courses that are especially appropriate for satisfying the science distribution requirements, including the laboratory course requirement. There are no prerequisites for any of these courses which are listed below. These courses will also count toward major or minor requirements in the department unless otherwise indicated. Details are given below and in the course descriptions that follow.

## Lecture Courses

EEOB 123 Diversity in Animal Behavior
EEOB 201 Evolution in Human Health and Disease (does not count toward the major, minor, or LAS laboratory science requirement)
EEOB 211 Tropical Biology

## EEOB 221 Insect Biology

## Lecture-Laboratory Course

EEOB 377 Mississippi River Colloquium (does not count toward the major or minor, or LAS laboratory science requirement.)

## Lecture-Laboratory Courses Fulfilling the LAS Laboratory Science Requirement

EEOB 101/EEOB 111 Diversity of Life
EEOB 318/EEOB 319 Plants and Human Affairs
EEOB 369 Experimental Animal Behavior
EEOB 431 Plant Systematics

## PREREQUISITES

The courses Ecology and Evolutionary Biology 101 and 111 and Cell and Molecular Biology 101 are prerequisites for all courses above the 100 level, except where stated otherwise. Any other prerequisites or corequisites are listed in the course descriptions. The student should be aware that some courses are offered only in alternate years or on demand.

## HONORS COURSES

## EEOB H105 Global Environmental Change (3)

Staff. Prerequisite: approval of department. Special course for superior students covering the material listed for EEOB 105 plus readings and discussion of recent discoveries.
EEOB H491, H492 Independent Studies (1-3, 1-3)
Staff. Laboratory or library research under direction of a faculty member.

## EEOB H499-H500 Honors Thesis $(3,4)$

Staff. For especially qualified juniors and seniors with approval of department and the Honors Committee.

## FRESHMAN INTRODUCTORY COURSES

## EEOB 101 Diversity of Life (3)

Staff. Corequisite: EEOB 111. A survey of plant and animal life emphasizing the diversity among individuals, population, species, communities, and ecosystems.

## EEOB 104 Global Environmental Change (3)

Staff. An introduction to the physical and biological processes that regulate the function of the Earth system. The composition, formation, and stabilization of the Earth's atmosphere and ecosystem will be examined, emphasizing biological processes and ecosystem ecology. With an understanding of the historical rates and mechanisms of natural global change, the means by which human activities alter Earth system function at local to global scales will be explored, along with the consequences of and solutions to human-induced global change. This course meets the college non-laboratory science requirement, but it cannot count toward any major or minor requirements in ecology and evolutionary biology. Students may receive credit for only one of EEOB 104, 105, or 205.

## EEOB 111 Diversity of Life Laboratory (1)

Staff. Corequisite: EEOB 101. Laboratory and field exercises designed to augment the lecture material in 101. Three hours per week.

## EEOB 123 Diversity in Animal Behavior (3)

Staff. Basic concepts in animal behavior, emphasizing diversity among animals and their behaviors and the ecological and evolutionary influences on those behaviors. Course will include discussion of how behaviors are studied, physiological mechanisms of behaviors, animal diversity, and how animals communicate, find mates, reproduce, care for their young, defend and feed themselves and move within their environment. Meets the college non-laboratory science requirement. Does not count toward the requirements for a major or minor in ecology and evolutionary biology.

## LECTURE COURSES

## EEOB 201 Evolution in Human Health and Disease (3)

Mr. Heins. Prerequisite: none. An introduction for non-majors to the study of infectious and noninfectious diseases from an evolutionary perspective. This course meets the college nonlaboratory science requirement, but it cannot count toward any major or minor requirements in ecology and evolutionary biology.

## EEOB 204 Conservation of Biological Diversity (3)

Mr. Sherry. A consideration of biological diversity and its persistence, threats, human value, conservation efforts, and biological bases. Topics include extinction, global change, population viability, habitat loss and degradation, ecosystem management, restoration, agricultural ecosystems, economic and legal considerations, and the human population.

## EEOB 206 Case Studies in Environmental Science (3)

Mr. Bianchi. This course uses case studies to introduce students to interdisciplinary aspects of environmental issues. Emphasis is placed on environmental topics along the Gulf Coast region; past topics have included wetland loss, mercury contamination, and hypoxia events in Louisiana coastal waters.
EEOB 210 Marine Biology (3)
Mr. Bianchi. Prerequisites: EEOB 101, 111. A systematic treatment of the organisms and habitat in the marine environment.

## EEOB 211 Tropical Biology (3)

Mr. Dyer. Prerequisite: none. Introduction to ecological, evolutionary, and organismal studies of living organisms in the neotropics.

## EEOB 221 Insect Biology (3)

Mr. Dyer. Prerequisite: none. Basic insect biology with an emphasis on insect interactions with humans and how insects fit into our culture.

## EEOB 223 Oceanography (3)

Mr. Bianchi. A broad survey of chemical, physical, and geological oceanography with a brief historical overview and a consideration of current concepts. Same as EENS 223.

## EEOB 225 Vertebrate Biology (3)

Mr. Heins. An introduction to vertebrate natural history, including evolution, systematics, zoogeography, population dynamics, behavior, ecology, conservation, and extinction.

## EEOB 245 Darwinian Medicine (3)

Mr. Heins. Corequisite or Prerequisite: CELL 205. An introduction to evolutionary medicine. Consideration of the ultimate (evolutionary) causes of human diseases as contrasted with proximate (e.g., developmental and physiological) causes, including discussions of the comparative method, natural selection, adaptation, phylogeny, immunology, host-pathogen evolution, and selected diseases.

## EEOB 260 Natural Resource Conservation Theory and Practice (3)

Mr. Bart. Corequisite: EEOB 389 Service Learning. This course examines the theory and practice of natural resource preservation in the United States, and the agencies and organizations involved in this endeavor. Students may not apply this course and EEOB 360 toward the course requirements for the EE Biology major.

## EEOB 308 Processes of Evolution (3)

Mr. Heins, Mr. Sherry. Corequisite or prerequisite: CELL 205 or approval of instructor. Patterns and processes in the evolution of species and populations, including discussions of natural selection, gene flow, genetic drift, adaptation, speciation, origins of evolutionary novelty, and selected trends in the fossil record.

## EEOB 318 Plants and Human Affairs (3)

Mr. Darwin. Prerequisite: none. Since ancient times, people have relied on plants for food, clothing, shelter, medicines, and more. This course investigates some of the ways in which plants support and shape human life. Topics include: early ideas about plants and the origin of plant lore; plant domestication and the rise of agriculture; plant products in commercial economies; cultural uses of plants; plants and the future of civilization.
EEOB 333 Human Physiology (3)
Mr. Irschick. A discussion of the functional morphology and physiology of the human body from the molecular to the whole organism level.

## EEOB 360 Forestry, Forested Ecosystems, and Public

Policy (3)
Staff. Prerequisites: EEOB 101 or approval of instructor. This course introduces the practice of forestry and forest management techniques common in the U.S. South, examines forestry's positive and negative environmental impacts, and presents the Federal, State, and local laws and policies that affect the management of forests in the United States. Students will be expected to integrate what they know about biology with what they learn about forestry and public policy. Students may not apply this course and EEOB 260 toward the course requirements for the EE Biology major or minor. Same as ENST 360.

## EEOB 368 Comparative Animal Behavior (3)

Mr. Christenson. Prerequisite: EEOB101 or PSYC 100 or 101. A lecture course to introduce the types of questions asked by animal behaviorists, theoretical disciplines posing these questions, and recent research in three categories: behavior as related to the environment, social behavior, and applied behavior. Designed for PSYC and EEB majors. Same as PSYC 368.

## EEOB 371 Historical Ecology of Amazonia (3)

Mr. Balée. Interactions between local peoples and Amazonian landscapes from prehistory to the present. Amazonian landscapes as an analytic unit will be examined from the interdisciplinary perspective of historical ecology. Changes and development of forests and savannas since the arrival of human beings. Historical, ecological, cultural forces involved in biological and edaphic diversity in modern forests. Long-term effects of prehistoric and historic human occupations and manipulation of landscapes. Implications for conservation and development. Same as EEOB 671 and ANTH 371/671.

## EEOB 404 General Ecology (3)

Mr. Sherry. Corequisite: EEOB 414 (required only for EE Biology majors and minors). A survey of the patterns and mechanisms of interaction among all organisms and their environments, including examples of human impacts on the biosphere. Lectures plus two field trips. EEOB 414 is an optional laboratory for non EE Biology majors.

## EEOB 405 Ecosystem Ecology (3)

Staff. Prerequisites: EEOB 404, CHEM 241, and approval of instructor. An in depth examination of ecosystem structure and function. Emphasis will be placed on processes and how individual organisms affect processes. Human impacts on ecosystem structure and function will be considered.

## EEOB 408 Biostatistics and Experimental Design (3)

Mr. Irschick. This course will teach students how to interpret statistical data in an evolutionary and ecological context. Special emphasis will be placed on understanding the nature of ecological field experiments, and experimental design. In addition, issues regarding how ecological and evolutionary analyses are perceived in the public media will be discussed. We will cover statistical methods for dealing with such problems (regression, correlation, ANOVA, etc.), and also read papers in ecological and evolutionary journals that highlight statistical issues. The class is designed for students who have not had prior experience with statistics.

## EEOB 422 Advanced Oceanography (3)

Mr. Bianchi. A broad survey of biological, chemical, physical, and geological oceanography with a brief historical overview and consideration of current concepts. There will also be an examination of biogeochemical relationships at macroscales, mesoscales, and microscales in the ocean. Same as EENS 422.

## EEOB 424 Host-Parasite Systems (3)

Mr. Heins. Study and discussion of the ecology and evolution of host-parasite systems emphasizing patterns and processes.

## EEOB 427 Population Ecology (3)

Mr. Sherry. Prerequisite: EEOB 404 or approval of instructor. Principles of population dynamics in space and time, population regulation, and population interactions as determined from an integrated study of plants and animals, followed by exploration of the applicability of these principles to an understanding of the contemporary growth and control of the human population.

## EEOB 452 Ecological Physiology (3)

Mr. Irschick. An introduction to the physiological adaptations of plant and animals via study of the interactions between organisms and their environment. The course will focus on animals, but will include examples of plants. An explicitly evolutionary and quantitative perspective will be used. The primary purpose is to provide a general introduction to the field of physiological ecology, including and overview of the field, with an emphasis on recent studies and new techniques in the field. A historical view of the origins of physiological ecology will also be covered.

## EEOB 453 Comparative Animal Physiology (3)

Mr. Irschick. Discussions and readings on selected topics in comparative animal physiology. The different ways diverse organisms perform similar functions are explored.

## EEOB 470 Seminar in Evolution of Reproductive Strategies (4)

Mr. Christenson. Prerequisites: EEOB 368 or PSYC 368, and approval of instructor. Discussion of the evolution and ecology of reproductive strategies. Topics include costs and benefits of sexual reproduction, sexual selection, sperm competition and mating systems. Fulfills the LAS writing requirement. Same as PSYC 470.

## LABORATORY-FIELD COURSES

## EEOB 319 Plants and Human Affairs Laboratory (1)

Mr. Darwin. Prerequisite: none. Corequisite: EEOB 318. Laboratory course to accompany EEOB 318. A survey of plant products and their sources, emphasizing the structure, chemistry, and diversity of economic plants. Demonstrations, exercises, and field trips.

## EEOB 369 Experimental Animal Behavior (4)

Mr. Christenson. Prerequisites: EEOB 368 and approval of instructor. A laboratory course with lectures in animal behavior in which hypothesis generation, experimental design, ethical consideration, methods of observation and data recording, and data analysis and interpretation are explored through experiments and written assignments. Fulfills the college writing requirement. Same as PSYC 369.

## EEOB 377 Mississippi River Colloquium (4)

Mr. Bart. Prerequisite: none. Interdisciplinary course dealing with the Mississippi River Basin. The goal is to give students a broad overview of the important social and environmental issues surrounding the river. This course meets the college non-laboratory science requirement, but it cannot count toward any major or minor in ecology and evolutionary biology. Lectures are supplemented by weekly labs, some day field trips, and one weekend field trip. Same as ENST 377.

## EEOB 406 Stream Ecology (4)

Mr. Bart. Ecology of freshwater stream environments, including physical forces influencing water flow, sediment and solute geochemistry, and composition and interactions of stream biota. Lectures supplemented by weekly labs, some day field trips, and one weekend field trip.
EEOB 410 Introduction to Marine Zoology (4)
Staff. Prerequisite: approval of instructor. Field and laboratory survey of marine animals, particularly those of the Louisiana Gulf Coast, including classification, morphology, physiology, and ecology. Offered summers only. Four weeks at a Louisiana Universities Marine Consortium coastal laboratory.

## EEOB 414 General Ecology Laboratory (1)

Mr. Sherry. Corequisite EEOB 404. Quantitative laboratory and field exercises designed to augment the lecture material. Includes data collection, sampling, experimentation, statistical hypothesis testing, modeling, discussion of research results, and writing up of results in the form of three scientific papers.

## EEOB 420 Ornithology (4)

Mr. Sherry. An introduction to the biology of birds emphasizing their origin, evolution, diversity, zoogeography, functional morphology, behavior, ecology, and conservation. Lectures supplemented by weekly laboratories or short field trips, and occasional weekend field trips. Students must provide own binoculars.

## EEOB 421 Vertebrate Morphology (4)

Mr. Bart. Comparative morphology, evolution, and bionomics of representative vertebrates. Lectures supplemented by weekly labs.

## EEOB 428 Ichthyology (4)

Mr. Bart. Biology of fish-like vertebrates, including taxonomy, evolution, anatomy, physiology, and biogeography. Lectures supplemented by weekly labs, some day field trips, and one weekend field trip.

## EEOB 431 Plant Systematics (4)

Mr. Darwin. Prerequisite: none. A review of the structure and evolution of land plants and a survey of the major families of flowering plants. Laboratory emphasis on structural terminology and plant identification. Field trips required.

## EEOB 433 Entomology (4)

Mr. Dyer. Insect classification and evolution, structure and function, and ecology. Insect collection required. Lectures supplemented by weekly labs.

## SPECIAL TOPICS AND PROJECTS COURSES

## EEOB 389 Service Learning (1)

Staff. Prerequisite: approval of department. Students complete a service activity in the community in conjunction with the content of a three-credit corequisite course.
EEOB 456, 457 Internship Studies (1-3, 1-3)
Staff. Prerequisite: approval of department. An experiential learning process coupled with pertinent academic course work. Open only to juniors and seniors in good standing. Registration is completed in the academic department sponsoring the internship on TUTOR. (Note: A maximum of six credits may be earned in one or two courses.)
EEOB 466 Topics in Biology (1-3)
Staff. Courses offered for undergraduate students by visiting professors and permanent faculty. Consult department for specific description.
EEOB 495, 496 Special Projects in Biology (1-3, 1-3)
Staff. Individual studies in a selected field. Open to qualified juniors and seniors with approval of instructor and advisor.

## EEOB 497 Topics in Marine Science (3)

Staff. Advanced lecture, laboratory, and field work on a selected topic in the marine sciences at a coastal laboratory of the Louisiana Universities Marine Consortium. By arrangement.
EEOB 498 Special Topics in Marine Science (3)
Staff. Directed undergraduate research and study at a coastal laboratory of the Louisiana Universities Marine Consortium. By arrangement.

## ADVANCED UNDERGRADUATE AND GRADUATE COURSES

## EEOB 602 Plant Ecology (3)

Staff. Prerequisite: EEOB 404 or approval of instructor. Survey of vegetation patterns and an investigation of the mechanisms and processes that shape these patterns. Field trips or field projects required although this is not a laboratory-field course.

## EEOB 604 Marine Ecology (3)

Mr. Bianchi. Relationship of marine and estuarine organisms to environmental factors; interactions among organisms; ecological processes of energy and material flow; communities and ecosystems of the Gulf Coast. One weekend field trip required although this is not a laboratory-field course.

## EEOB 607 Restoration Ecology (3)

Staff. Prerequisite: EEOB 404 or approval of instructor. Discussion will focus on applying knowledge from ecology toward understanding how damaged ecosystems differ from relatively undisturbed systems, evaluating ecosystem health and designing plans to restore system integrity.

## EEOB 608 Phylogenetics (3)

Mr. Darwin. Prerequisite: approval of instructor. A consideration of biological homology, species definition, problems of character data analysis, and Hennigian cladistics as a means of reconstructing the evolutionary history of life. The implications of phylogenetic hypotheses for biological classification, biogeography, paleontology, comparative ecology, and conservation biology. Seminars, readings, and projects.

## EEOB 609 Invertebrate Paleontology (4)

Mr. Parsley. Prerequisite: EEOB 614, EENS 112, or approval of instructor. Principles of invertebrate paleontology; a systematic treatment of the fossil invertebrates and their living relatives. Emphasis on functional morphology, ontogeny, and paleontology. Lectures are supplemented by weekly labs. Same as EENS 609.

## EEOB 610 Micropaleontology (3)

Staff. Prerequisite: EEOB 101 or EENS 112. The foraminifera, ostracoda, nannofossils, conodonts, and other groups of microfossils. Same as EENS 610.

## EEOB 611 Tropical Ecology (3)

Staff. Prerequisite: EEOB 404 or approval of instructor. Ecology of tropical plants, animals, and ecosystems with emphasis on the New World tropics.

## EEOB 613 Principles of Paleobiology (3)

Mr. Xiao. Prerequisite: EEOB 101, EENS 112, EENS 609, or approval of instructor. Selected topics on macroevolutionary theories; Phylogeny and the fossil records of metazoans; Major events in the history of life; Patterns of biodiversity through geological time; Taphonomy; Paleoecology. Same as EENS 613.

## EEOB 614 Biology of Invertebrates (4)

Staff. Biology, taxonomy, and distribution of the invertebrates with emphasis on the local fauna. Lectures, laboratory, and field trips.

## EEOB 616 Morphology and Evolution of Vascular Plants (3)

Mr. Darwin. Prerequisite: EEOB 431 or approval of instructor. The evolutionary history of land plants, emphasizing their structural homologies and paleobotany.
EEOB 617 Marine Invertebrate Zoology (4)
Staff. Prerequisite: EEOB 614 or approval of instructor. General study of the classification, structure, function, and ecology of marine and estuarine invertebrates emphasizing field studies on the Louisiana Gulf Coast. Offered summers only. Four weeks at a Louisiana Universities Marine Consortium coastal laboratory.

## EEOB 619 Darwin and Darwinism (4)

Mr. Darwin. Prerequisite: approval of instructor. A consideration of Charles Darwin's theory of Natural Selection, including the history of evolutionary thought before Darwin's time, the circumstances surrounding Darwin's research, and the effect of Darwin's ideas on the development of contemporary biology. Readings, discussions, and written assignments. Satisfies the LAS writing requirement.

## EEOB 621 Global Biogeochemical Cycles (3)

Mr. Bianchi. Prerequisite: one year of Organic Chemistry. An introduction to the global biogeochemical cycles in fresh water, marine, and terrestrial ecosystems. Emphasis will be placed on key environmental issues as they relate to perturbations of these global cycles. Open only to seniors and graduate students. Same as EENS 621.
EEOB 623 Biogeography (3)
Mr. Darwin. Prerequisite: EEOB 308, 404, or approval of instructor. An investigation of the past and present geographical distribution of plants and animals, with consideration of current biogeographical theory.

## EEOB 624 Biology of Fishes (4)

Mr. Heins. Physiology, life history, systematics, ecology, and behavior of the major groups of fishes. Lectures, laboratory, and field trips.

## EEOB 625 Isotopes in the Environment (3)

Mr. Marcantonio. The use of isotopes as tools to trace the movement of air, water, and sediments through the atmosphere, hydrosphere, biosphere, and lithosphere. Same as EENS 625.

## EEOB 626 Paleoclimatology (3)

Mr. Marcantonio. Prerequisite: approval of instructor. Understanding past climatic variation is necessary to fully comprehend present and model future climate. The focus will be on climate change during the late Quaternary Period, with special emphasis on climate reconstruction methods. Same as EENS 626.

## EEOB 630 Marine Vertebrate Zoology (4)

Staff. Prerequisite: 16 credits of EEOB or approval of instructor. General study of the marine chordates with particular emphasis on the fishes, including classification, structure, function, and ecology. Offered summers only. Four weeks at a Louisiana Universities Marine Consortium laboratory.

## EEOB 633 Plant-Animal Interactions (3)

Mr. Dyer. Prerequisite: EEOB 404. Ecological, evolutionary, and applied approaches to the studies of herbivory, ant-plant interactions, pollination, and seed dispersal.

## EEOB 634 Ecological Analysis (3)

Mr. Dyer. Prerequisite: EEOB 408 or PSYC 611. Study of powerful methods for designing ecological studies and analyzing ecological data, assuming a knowledge of basic parametric and nonparametric statistics.

## EEOB 659 Limnology (3)

Staff. Biological, chemical, and physical characteristics of the inland aquatic environment.
EEOB 666 Special Topics in Biology (1-3)
Staff. Courses offered by visiting professors or permanent faculty. For description, consult department.

## EEOB 667 Ecology of Fishes (3)

Mr. Heins. The study of topics and issues in fish ecology in relationship to general ecological and evolutionary theory. Emphasis will be placed on research in community and evolutionary ecology and the historical background from which it developed.

## EEOB 669 Biochemistry of Estuaries (3)

Mr. Bianchi. Prerequisites: CHEM 242, and MATH 122 or 131. Physico-chemical and biological aspects of the zone interfacing fresh water and marine environments. Emphasis will be place on the biogeochemical cycles of this highly dynamic ecosystem. Field trips to estuarine regions along the Gulf Coast will be required although this is not a laboratory-field course. Same as EENS 669.

## EEOB 671 Historical Ecology of Amazonia (3)

See EEOB 371 for course description.

## EEOB 681 Journal Review in Ecology and Evolutionary Biology (1)

Staff. Prerequisite: graduate standing or approval of instructor. Discussion of significant new publications in ecology, evolutionary biology, and related fields.

## EEOB 685 Current Topics in Ecology and Evolutionary Biology (2)

Staff. Prerequisite: graduate standing or approval of instructor. In-depth examination of a selected topic in ecology and evolutionary biology.

## EEOB 691, 692 Independent Studies (1-3, 1-3)

Staff. Prerequisite: junior or senior standing and approval of instructor. Advanced independent studies in a selected field of biology.

## INTERDEPARTMENTAL COURSES

Any one of these courses, which are not taught by the faculty of the Department of Ecology and Evolutionary Biology, is acceptable as one of the electives in the required program for the EE Biology major.
Anthropology
314 The Primates
650 Human Evolution

## Cell and Molecular Biology

301/302 Cell Biology/Laboratory
311/312 Molecular Biology/Laboratory
411 Cells and Tissues
412 Embryology
416 Developmental Biology
422/423 Microbiology/Laboratory
441 Molecular Basis of Human Genetic Disease

## Chemistry

250 Environmental Chemistry
383 Introduction to Biochemistry
385 Introduction to Biochemistry Laboratory

## Economics

Office: 206 Tilton Hall
Phone: (504) 865-5321
Fax: (504) 865-5869
Website: www.tulane.edu/~economic/
Professors
Scott S. Cowen, Ph.D., George Washington (President of the University)
Yutaka Horiba, Ph.D., Purdue
David A. Malueg, Ph.D., Northwestern
Douglas R. Nelson, Ph.D., North Carolina
William H. Oakland, Ph.D., M.I.T.
Associate Professors
Ila Semenick Alam, Ph.D., Rice
John H. Edwards, Ph.D., Maryland
Jonathan B. Pritchett, Ph.D., Chicago (Chair)
Emilson C.D. Silva, Ph.D., Illinois

## Assistant Professors

Manfred Dix, Ph.D., Illinois
Christopher Wheeler, Ph.D., Wisconsin
Myeong-Su Yun, Ph.D., Rutgers
Students wishing to major in economics during the course of their undergraduate studies can choose between two programs: The Bachelor of Arts in economics and the Bachelor of Science in economics.

Each of these programs shares a common core in economic theory and quantitative methods but is tailored to the diverse interests and career goals of students. The B.A. in economics combines economic science with broad liberal arts training, providing an excellent background for postgraduate work in business, public policy, or law, and also for the student who will enter the labor force upon graduation. The B.S. in economics provides a rigorous quantitative background for advanced study in economics or for outstanding postgraduate programs in business.
Students seeking a stronger background in mathematics should consider Mathematical Economics as a possible major. Those students enrolled in the School of Business wishing to emphasize economics should consult their academic advisors.

## REQUIREMENTS FOR THE MAJOR

Students pursuing either the B.A. or the B.S. program are strongly encouraged to complete Economics 101 (or 103) and 102 (or 104) in their freshman year. They are also encouraged to complete Economics 301 (or 303) and 302 during their second year.

## Bachelor of Arts in Economics

Economics 101 (or 103)
Economics 102 (or 104)
Economics 301 (or 303), passed with a grade no lower than C-
Economics 302, passed with a grade no lower than C-
A statistics requirement
Six additional economics courses, excluding Economics 388 and 389, two of which must be completed at the 400 level or above.

## Bachelor of Science in Economics

Economics 101 (or 103)
Economics 102 (or 104)
Economics 301, passed with a grade no lower than C-
Economics 302, passed with a grade no lower than C-
Economics 441
A statistics requirement
Five additional economics courses, excluding Economics 388 and 389, one of which must be completed at the 400 level or above.
Math 121 and 122
We recommend that students take additional courses in mathematics, including Math 221 Several Variable Calculus, Math 301 Probability and Statistics, and Math 309 Linear Algebra.

## Statistics Requirement

The statistics requirement for both Bachelor of Arts and Bachelor of Science majors can be satisfied by completing either Economics 323, Mathematics 301, or the combination of Mathematics 111 and 112. Students should note that Economics 323 may be counted as one of the additional economics courses required for the major.

## MINOR

A minor in economics is to consist of 101 (or 103) and 102 (or 104) plus any three other courses offered in the department except for 301, 302, 303, and 323. The completion of 301 (or 303) is strongly recommended even though it does not count toward the minor. Students who complete 101 (or 103) and 102 (or 104) to fulfill a requirement in their major cannot count these courses toward the minor in economics.

## SPECIAL HONORS

The purpose of the Honors Program in economics is to provide exceptional students with an opportunity to complete an intensive program in their major area and to receive recognition for that work. To be eligible for departmental honors in economics, a student must earn, in courses completed at Tulane, a cumulative grade-point average of at least 3.4 and a grade-point average of at least 3.5 in all courses taken in economics and in related courses serving to fulfill major requirements.
Honors also requires completion of the Honors Thesis (Economics H499, H500). The honors thesis is an additional requirement for the honors candidate in that H 500 will not count as one of the ten economics courses required for the major. The student must select a thesis director from the economics faculty and register for H499 at the beginning of the first semester of the senior year. By mid-semester, the student must submit a prospectus to the Honors Program that has been approved and signed by the thesis director. Subject to departmental approval, the student will register for H 500 during the second semester and complete a draft of the thesis a month before the projected date of graduation. An oral examination is held after all other requirements are met.

## ECON 101 Introductory Microeconomics (3)

Staff. An introduction to theory of prices and the allocation of resources. Topics include the pricing of goods and services, the determination of wages and returns to capital, market structure, and international trade.

## ECON 102 Introductory Macroeconomics (3)

Staff. Prerequisite: ECON 101 or 103. An introduction to theory of aggregate income, employment, and the price level. Topics include unemployment, alternative monetary and fiscal policies, and economic growth.

## ECON 103 Honors Introductory Microeconomics (4)

Staff. No prerequisites. Open to students with an honors standing only. A reading intensive introduction to microeconomics. The course satisfies the ECON 101 requirement. Students can not take both ECON 101 and 103.
ECON 104 Honors Introductory Macroeconomics (4)
Staff. Prerequisite: ECON 101 or 103. Open to students with an honors standing only. A reading intensive introduction to macroeconomics. The course satisfies the 102 requirement. Students can not take both 102 and 104.

ECON 301 Intermediate Microeconomics (3)
Staff. Prerequisite: ECON 101 or 103. An exposition of modern microeconomic theory. Theory of consumer choice, production cost, product markets, and input markets. Students may not receive credit for both Economics 301 and 303.

ECON 302 Intermediate Macroeconomics (3)
Staff. Prerequisite: ECON 102 or 104. An exposition of modern macroeconomic theory. Theory of national income, employment, and the price level. The role of monetary and fiscal policy in economic stabilization and growth.

## ECON 303 Intermediate Microeconomics with

## Calculus (4)

Staff. Prerequisites: ECON 101 or 103 and Mathematics 121. An exposition of modern microeconomic theory using calculus. Topics include theory of consumer choice, firm production cost, competitive and noncompetitive market structures, markets with public goods or externalities, and general equilibrium. Students may not receive credit for both Economics 301 and Economics 303.

## ECON 310 Economics of Money and Banking (3)

Staff. Prerequisite: ECON 102 or 104. Covers both theory of monetary systems and the current structure of United States financial institutions. General topics to be included are monetary systems, financial intermediation and resource allocation, informational value of economy-wide financial markets, the term structure of interest rates, United States financial institutions and their relation to the federal reserve system, regulatory issues, and current tactics in monetary control.

## ECON 323 Economic Statistics (4)

Staff. An introduction to statistics as a tool for description and inference used in economic science. A survey of the techniques of statistical summary. Sampling theory and procedure, index numbers, correlation, and regression models. An introduction to the principles of statistical inference: probability, estimation, and testing hypotheses.

## ECON 332 Urban Economics (3)

Staff. Prerequisite: ECON 101 or 103. A review of the determinants of the location, size, growth, and form of urban areas. Study of the major issues of contemporary urban life: physical deterioration, growth of ghettos, congestion, pollution, transportation, and land use.

## ECON 333 Environment and Natural Resources (3)

Staff. Prerequisites: ECON 101 or 103. An introduction to the economic theory of how and why people make decisions that have consequences for the natural environment and the availability of renewable and nonrenewable natural resources. Analysis will include valuation of pollution damages and controls, the use of environmental valuations to determine optimal levels of pollution, and the evaluation of policy options to achieve those optimal levels. Economic principles will be used to determine optimal rates of extraction and utilization of natural resources. The course will apply analytical results to current environmental and natural resources issues.

ECON 334 Government in the Economy (3)
Staff. Prerequisite: ECON 101 or 103. An analysis and description of the role of government in the economy with specific applications to the United States. Sources of market failures such as public goods, externalities, and non-competitive practices are discussed. Other topics include theories of public choice, anti-trust legislation, regulation, the pricing of public sector output, and cost-benefit analysis.

## ECON 335 Law and Economics (3)

Staff. Prerequisite: ECON 101 or 103. Economic analysis of legal rules and institutions. Topics include property law, tort law, liability rules, the Coase theorem, and accident and nuisance law. Selected applications of current interest.

## ECON 336 Current Economic Issues (3)

Staff. Prerequisite: ECON 102 or 104. An analysis of contemporary macroeconomic and microeconomic issues. Topics will reflect current economic issues.
ECON 337 The World Economy (3)
Staff. Prerequisites: ECON 101, 102 or equivalent. This course offers a non-technical introduction to the analysis of international economic issues. While we will be primarily interested in developing standard economic approaches to these issues we will also offer a variety of other useful approaches from political science, sociology, and less mainstream parts of economics. Among specific issues to be treated: protectionism, multinational firms, debt crisis, international macroeconomic policy coordination and European integration.

## ECON 354 Development Economics (3)

Staff. Prerequisite: ECON 101 or 103 An analysis of the problems of generating economic growth in less developed countries. Alternative strategies for promoting economic growth. The impact of the industrialized Western World on the economic development of poor countries.

## ECON 358 Labor and Population in Latin America (3)

Staff. Prerequisite: ECON 101 or 103. An examination of labor markets and demographic problems in Latin America. The course explores in more depth some of the topics introduced in 354 such as dual labor markets, labor union activity in Latin America, migration and fertility change. Basic demographic methods to analyze migration and fertility are taught and the demographic experiences of selected Latin American countries reviewed.

## ECON 359 Economic Development of Latin America (3)

Staff. Prerequisite: ECON 102 or 104. An introduction to economic issues that are of particular concern to Latin America. Emphasis is placed on understanding the position of Latin America within the world economy by studying measures of development and poverty, discussing theoretical models of structural economic change, and examining changes in international trading relations. As Economics 359 is a survey course, it is best taken before Economics 358, and 466.

## ECON 372 Contemporary Japanese Economy (3)

Staff. Prerequisite: ECON 102 or 104. The course provides an objective analysis of the causes and consequences of the post-war Japanese economic development. It examines the historical and institutional background of the contemporary Japanese economy and brings global economic perspective to bear on the U.S.-Japan economic relationship. The course concludes with an assessment of the lessons learned from the Japanese model and its relevance to the U.S. economy.

## ECON 374 Asia-Pacific Economic Development (3)

Staff. Prerequisite: ECON 102 or 104. The course analyzes economic development in the AsiaPacific region. It examines the sources of economic growth, financial market conditions, and the nature of growing interdependence in the region.

## ECON 381 The Economics of Labor (3)

Staff. Prerequisite: ECON 102 or 104. A survey and economic analysis of some contemporary labor market issues. Topics include labor force participation and the economics of retirement, the
supply and demand for labor, the demand for education and investment in human capital, unions and collective bargaining, the structure of compensation, occupational choice, job turnover and labor mobility, an introduction to theory of job search as well as various other theories of unemployment. The course focuses on theoretical and empirical aspects of labor economics, and is only peripherally concerned with institutional, legal, or management aspects.

## ECON 388 Writing Practicum (1)

Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.

## ECON 389 Service Learning (1)

Staff. Students complete a service activity in the community in conjunction with the content of the corequisite course.

## ECON 391, 392 Independent Studies (1-3, 1-3)

Staff.

## ECON 397, 398 Special Studies in Economics (1-3, 1-3)

Staff.

## ECON 422 Industrial Organization (3)

Staff. Prerequisite: ECON 301 or 303 . An examination of the extent of competition and monopoly in different industries. The effects of different forms of governmental regulation and control upon industrial performance. Some empirical evidence pertaining to selected industries.

## ECON 423 Econometrics (3)

Staff. Prerequisites: ECON 323 or MATH 301, or MATH 111 and 112. Building on the statistical techniques learned in Economics 323, the course concentrates on the principal methods used to correct violations of the basic assumptions of ordinary least squares.

## ECON 424 Financial Decision Making in Firms (3)

Staff. Prerequisite: ECON 101, 301, 323, or equivalent. Financial analysis, planning and control in modern business firms includes valuation, cost and allocation of capital, and capital markets.

## ECON 433 International Trading Relations (3)

Staff. Prerequisite: ECON 301 or 303. An examination of the principles of international trade and the international arrangements that have been established to guide international trade. Specific topics include comparative advantage, the effects of tariffs and quotas, and the substitution of the movement of goods for the movement of capital and labor.

## ECON 441 Topics in Mathematical Economics (3)

Staff. Prerequisites: ECON 303, MATH 121 and 122, or approval of instructor. A mathematical approach to microeconomic theory with an emphasis on static and dynamic optimization.

## ECON 451 Advanced Topics in Macroeconomics (3)

Staff. Prerequisite: ECON 302. Structure and operation of macroeconomic system, covering both closed and open economies.

## ECON 452 Economics of Public Expenditures (3)

Staff. Prerequisite: ECON 301 or 303. An examination of the economic bases for and evaluation of government expenditure programs. Topics include the rationale for government intervention into the economy, difficulties involved in setting appropriate levels of government activity, and how particular programs should be evaluated and financed.

## ECON 453 Economics of Taxation (3)

Staff. Prerequisite: ECON 301 or 303. An analysis of major tax structures used in or proposed for the U.S. Economy. Each tax and the system as a whole will be judged according to the criteria of economic efficiency and tax equity. While emphasis will be national taxes, the local property tax will also be considered. Major alternatives to the present structure will be evaluated.

ECON 466 Seminar on Latin American Economies (3)
Staff. Prerequisite: ECON 301. A complement to other courses in the Latin American economics sequence focusing on a particular country or sub-region.
ECON H491, H492 Independent Studies (3, 3)
Staff. Open to outstanding juniors and seniors.
ECON 497, 498 Special Studies in Economics (1-3, 1-3)
Staff.
ECON H499-H500 Honors Thesis (3, 4)
Staff. Prerequisites: approval of department and Honors Committee. Credit is not given for H499 until satisfactory completion of H500.

ECON 607 Introduction to Mathematical Economics (3)
Staff. Prerequisites: senior standing and two courses in economics. A presentation of the primary mathematical techniques used in modern economics: calculus, linear algebra, and set theory.
ECON 608 Statistical Methods for Economic Analysis (3)
Staff. Prerequisites: senior standing and two courses in economics. A presentation of the main statistical techniques used in modern economics: probability, probability distributions, estimation, hypothesis testing. An introduction to econometrics.

## Education

see Allied Programs

## Engineering Science

see Allied Programs

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## English

Office: 122 Norman Mayer
Phone: (504) 865-5160
Fax: (504) 862-8958
Website: www.tulane.edu/~english/
Professors
Barry Ahearn, Ph.D., Johns Hopkins
Michael M. Boardman, Ph.D., Chicago
Janice Carlisle, Ph.D., Cornell
Peter J. Cooley, Ph.D., Iowa
Geoffrey G. Harpham, Ph.D., California, Los Angeles
James F. Kilroy, Ph.D., Wisconsin
Roy Liuzza, Ph.D., Yale
J. L. Simmons, Ph.D., Virginia

Associate Professors
Gaurav Desai, Ph.D., Duke
Dale H. Edmonds, Ph.D., Texas
Amy Koritz, Ph.D., North Carolina
Michael P. Kuczynski, Ph.D., North Carolina (Chair)
Cynthia Lowenthal, Ph.D., Brandeis (Dean, Newcomb College)
Rebecca Mark, Ph.D., Stanford
Supriya Nair, Ph.D., Texas, Austin
Molly A. Rothenberg, Ph.D., California, Irvine
Felipe Smith, Ph.D., Louisiana State
Gerald Snare, Ph.D., California, Los Angeles
Maaja A. Stewart, Ph.D., Michigan
Teresa A. Toulouse, Ph.D., Harvard
Molly A. Travis, Ph.D., Ohio State
Assistant Professors
Monique Guillory, Ph.D., New York
Ben Reiss, Ph.D., California, Berkeley

## Emeritus

Donald Pizer, Ph.D., California, Los Angeles (Pierce Butler Professor of English)

## MAJOR

The English major program seeks to expose students to a wide range of texts and methodologies, to develop an awareness of the histories and contexts of literature, and to cultivate the fundamental skills of critical reading and writing.
The major consists of ten courses. Students also have an opportunity, with the approval of their major advisor, to count one course taken in another department as an elective within the English major. There are two distribution requirements. Students must take two courses whose primary emphasis is in literature before 1800, and one course in American or Anglophone literature. A single course cannot fulfill both requirements. At least seven of the ten major courses should be courses at the 400-level or above, also including the following writing courses: ENLS 263, 361, 362, 363, 364, 365, and 367. Two 500-level seminars are required, preferably taken in the junior or senior year.
One of the seminars must be a "capstone" course. These must be chosen from a list of four: Literature in Art, Literature in Culture, Literature in History, Literature in Theory. As these courses will vary in content each semester, students should consult the new course descriptions for the following semester that are on file in the English Department office before enrolling.

## MINOR

Five courses are required for the English minor, one of these a course in literature before 1800 . Two courses may be taken at the 300 -level or below; the remaining three courses, however, must be taken at or above the 400 -level. Students should fulfill their Writing Proficiency Requirement (English 101 or equivalent) before taking courses at the 200-level and above. Exemption from this rule may be requested from the Director of Undergraduate Studies.

## FRESHMAN WRITING

ENGL 101 Writing (4)
Staff. An introduction to the writing of academic arguments, including analytical reading and research techniques. Focus on the goals and skills appropriate to writing in a variety of disciplines in the humanities, sciences, and social sciences.

## LITERATURE BEFORE 1800

ENLS 201 Introduction to British Literature I (3)
Staff. An introduction to the history of British literature from the Anglo-Saxon and medieval periods through the 18th century. Emphasis on the development of genres, literary conventions, and the relations between historical conditions and literary production.

## ENLS 323 Shakespeare: Selected Plays (3)

Mr. Simmons, Mr. Snare. A study of plays in a variety of genres, including tragedy, history, comedy, and romance.

## ENLS 407 Introduction to Old English (3)

Mr. Kuczynski, Mr. Liuzza. A brief introduction to the grammar of Old English and a study of Old English poetry and prose in their cultural contexts. Readings in both Old English and translation.

## ENLS 411 Middle English Literature (3)

Mr. Kuczynski. Major works of Middle English literature 1100-1500, exclusive of Chaucer, from The Owl and the Nightingale through the works of Sir Thomas Malory. Readings in Middle English.

## ENLS 412 Medieval Literature (3)

Mr. Kuczynski, Mr. Liuzza. Major works in Old and Middle English literature, as well as relevant continental literature. Readings in translation.
ENLS 413 Renaissance Literature (3)
Mr. Simmons, Mr. Snare. British poetry, prose and drama of the 16th and early 17th centuries.

## ENLS 414 17th-Century Literature (3)

Mr. Simmons, Mr. Snare. British poetry, prose, and drama to 1660.

## ENLS 415 Early Modern Drama (3)

Ms. Lowenthal, Mr. Simmons, Ms. Stewart. Study of drama, one of the chief genres of the period, from late medieval to late 18th century.
ENLS 417 18th-Century Novel (3)
Mr. Boardman, Ms. Lowenthal, Ms. Stewart. The novel from Defoe through Austen.

## ENLS 419 Restoration and 18th-Century Literature (3)

Mr. Boardman, Ms. Lowenthal, Ms. Stewart. British poetry, prose, and drama from 1660 through 1800.

## ENLS 445 Chaucer (3)

Mr. Kuczynski, Mr. Liuzza. A study of Chaucer’s major works, with emphasis of The Canterbury Tales.

## ENLS 446, 447 Shakespeare I, II $(3,3)$

Mr. Simmons, Mr. Snare. Treatment of plays from different genres and in different historical, literary, and cultural contexts.

## ENLS 448 Milton (3)

Mr. Simmons. A study of Milton's major works in poetry and prose.

## ENLS 449 Earlier Major Authors (3)

Staff. Study of one or two major authors of the period, such as Malory, Spenser, Pope, Fielding, and Austen.

LITERATURE AFTER 1800

## ENLS 202 Introduction to British Literature II (3)

An introduction to the history of British literature from the 19th century to the present. Emphasis on the development of genres, literary conventions, and the relations between historical conditions and literary production.

ENLS 408 Modern Literature (3)
Staff. Introductory study of poets, novelists, and dramatists writing in English since 1900.
ENLS 409 Contemporary Literature (3)
Mr. Ahearn, Mr. Cooley, Mr. Edmonds, Ms. Koritz. British, American, and continental poetry, prose, and drama since 1945.

ENLS 421 19th-Century Novel (3)
Ms. Carlisle, Ms. Nair, Ms. Rothenberg. The British novel from Scott through Hardy.

## ENLS 422 19th-Century Literature (3)

Ms. Carlisle, Ms. Rothenberg. British poetry, prose, and drama of the 19th century.

## ENLS 423 Romantic Literature (3)

Ms. Rothenberg. British poetry, prose, and drama of the early 19th century.

## ENLS 424 Victorian Studies (3)

Ms. Carlisle, Ms. Rothenberg. British poetry, prose, and drama from the 1830s through the end of the century.
ENLS 425 Modern British Literature (3)
Staff. Twentieth-century British fiction, poetry, and drama.

## ENLS 426 Modern Irish Literature (3)

Mr. Kilroy. This course will concentrate for about half the semester on the poetry and plays of W.B. Yeats and the fiction of James Joyce. The remainder of the term will be devoted to the plays of J.M. Synge, Lady Gregory, and Sean O’Casey as well as one or two other writers, such as George Bernard Shaw, James Stephen, Samuel Beckett, or Seamus Heaney. Attention will be given not only to the works themselves but also to their cultural and historical contexts.
ENLS 450, 451 Later Major Authors (3, 3)
Staff. Study of one or two major authors of the period, such as Wordsworth, Dickens, Dickinson, Melville, Eliot, Yeats, Woolf, Faulkner, and Morrison.

## AMERICAN LITERATURE

## ENLS 203 Introduction to American Literature (4)

Staff. An introduction to the history of American literature from the colonial period to the present. Emphasis on the development of genres, literary conventions, and the relations between historical conditions and literary production.
ENLS 373 Introduction to African-American Literature (3)
Ms. Mark, Ms. Nair, Mr. Smith. The historical development of literary traditions of AfricanAmerican writing from slave narratives through contemporary authors. Emphasis on a variety of oral and written genres.
ENLS 375 American Life in American Literature, 1620-1864 (3)
Mr. Reiss, Ms. Toulouse. A study of American literature that emphasizes its reflection of the social, cultural, and intellectual characteristics of American life from the period of colonization up to the Civil War.

ENLS 376 American Life in American Literature, 1865-1940 (3)
Staff. A study of American literature (principally fiction) that emphasizes its reflection of the social, cultural, and intellectual characteristics of American life from the Civil War to the Second World War.

## ENLS 403 Literary New Orleans (3)

Mr. Edmonds. A study of literary works which are set in New Orleans or otherwise have connections with the city.
ENLS 431 American Literature to 1820 (3)
Ms. Toulouse. Representative works from the colonial period to 1820.
ENLS 436 American Renaissance (3)
Ms. Mark, Mr. Reiss, Ms. Toulouse. American literature of the mid-19th century.

## ENLS 437 19th-Century American Literature (3)

Ms. Mark, Mr. Reiss, Ms. Toulouse. American literature of the 19th century.

## ENLS 440 Modern American Literature (3)

Staff. Representative works of the 20th century. Topics include Poetry; The Novel.

## ENLS 441 Contemporary American Literature (3)

Mr. Ahearn, Mr. Edmonds, Ms. Koritz, Mr. Smith. Major tendencies in American poetry, fiction, and drama since 1945.
ENLS 442 Southern Literature (3)
Mr. Edmonds, Ms. Mark. A survey of Southern writers and their works from the period of exploration and settlement to the present.

ENLS 444 Issues in African-American Literature (3)
Ms. Mark, Ms. Nair, Mr. Smith. Analysis of specific issues in relation to works by AfricanAmerican writers, such as: questions of audience, the relation between literary production and its political context, the representation of relations between African-American men and women, the reception and influence of African-American works in American culture.

## ELECTIVES

ENLS 301 Special Topics (3)
Staff. Specific topics announced each semester, such as science fiction, literature and war, etc.
ENLS 311 Introduction to the Novel (3)
Staff. A study of novels written in English representing the variety of fictional techniques and structures.

## ENLS 312 Introduction to the Short Story (3)

Staff. A study of the short story as a genre. Some attention to theories of the short story and to the elements that distinguish it from other forms of narrative prose.

## ENLS 313 Introduction to Drama (3)

Staff. A study of plays written in English representing the variety of dramatic types and forms.
ENLS 314 Introduction to Poetry (3)
Staff. A study of poems, selected from the whole range of poetry in English representing the variety of poetic techniques and structures.
ENLS 389 Introduction to Women's Literature (3)
Staff. A study of the representations of women in 19th- and 20th-century literature in a variety of genres, with emphasis on texts written by women.
ENLS 390 Service Learning (1)
Staff. Students complete a service activity in the community in conjunction with the content of the three-credit corequisite course.

## ENLS 401 Special Topics (3)

Staff. Specific topics announced each semester, such as literature and the Bible or the epic tradition.
ENLS 402 Structure of the English Language (3)
Staff. An introduction to the structures of language and its subsystems, phonology, semantics, and syntax with special attention to current linguistic approaches to grammar. Students enrolled in the English Teacher Education Program may use 402 in place of one 500-level course.
ENLS 405 History of the Language (3)
Mr. Kuczynski, Mr. Liuzza. Consideration of general linguistic processes and the social history of the language in the earlier periods.

## ENLS 410 Literature and Film (3)

Mr. Boardman. Study of the relationship between written narratives, principally short stories and novels, and film, with special attention to the distinctive effects and limitations of each medium and to the problems that screenwriters and directors encounter in adapting a written work to a visual form. Consideration of theoretical literature on the problem of adaptation.

ENLS 443 Caribbean Literature (3)
Ms. Nair. A study of the literatures from the Caribbean, primarily anglophone, although texts from other areas of the Caribbean may be studies in translation. The Caribbean will be explored as part of the Americas, and connections will be made with New Orleans in particular and the American South in general.
ENLS 457 Internship Studies (1-3)
Staff. Prerequisite: approval of department. An experiential learning process coupled with pertinent academic course work. Open only to juniors and seniors in good standing. Registration is completed in the academic department sponsoring the internship on TUTOR. Only one internship may be completed per semester. (Note: A maximum of six credits may be earned in one or two courses.)
ENLS 471 Introduction to Literary Theory (3)
Mr. Desai, Mr. Harpham, Ms. Rothenberg. Investigation of assumptions and methods of selected ancient and modern critics. Some practical criticism to allow the students to become more aware of the implications of their own assumptions about literature and criticism.

## ENLS 472 Feminist Literary Theory (3)

Ms. Nair, Ms. Rothenberg, Ms. Travis. An examination of the major projects of feminist literary theory: uncovering or rediscovering women’s literature; engaging in feminist re-readings of canonical texts; describing a feminist poetics. Attention to the history of feminist criticism.
ENLS 476 Topics in Literary Theory (3)
Mr. Harpham, Ms. Rothenberg. Sustained study of topics such as representation, interpretation, intention, theories of language, and literary theory and philosophy.

## ENLS 481 Introduction to Cultural Criticism (3)

Mr. Desai, Ms. Nair, Ms. Rothenberg, Ms. Stewart. Examination of the major concepts of culture from the late 19th century to the present as they relate to the analysis of cultural practices and literary texts. Specific emphasis on the interdisciplinary nature of cultural analysis, the relation between elite and popular cultures, dominant formations and the resistance to them, and intercultural encounters.

ENLS 482 Colonial and Post-Colonial Discourse (3)
Mr. Desai, Ms. Nair, Mr. Smith, Ms. Stewart. Methods of analysis appropriate to the study of the literature produced by intercultural exchanges between Western and non-Western cultures. Specific emphasis on the Anglophone literature of the Caribbean, Africa, and India.

## ENLS 483 Race, Class, and Gender (3)

Ms. Carlisle, Mr. Desai. Study of the textual representations of three forms of difference-race, class, and gender-and their intersections with issues of power and agency.
ENLS 484 Performance Studies (3)
Ms. Koritz, Ms. Mark. Study of the various categories that encompass performance, such as dance, drama, ritual, festival, and parade, and of texts that embody, describe, or enact performances.

## ENLS 485 Cultural Politics and Practice (3)

Staff. Study of the intersections and negotiations between cultural production and political institutions. Specific topics include literary representations of disease or poverty, and literature and the law.

ENLS 486 Topics in Cultural Studies (3)
Staff. Sustained study of topics such as nationality, popular culture, cultural institutions, and postmodernism.
ENLS 491, 492 Independent Studies (1-3, 1-3)
Staff. Prerequisites: approval of instructor and chair of department.
ENLS H499-H500 Senior Honors Thesis $(3,4)$
Staff. Prerequisite: approval of department.

## WRITING

All of the writing courses listed below may count as electives toward the major.
ENLS 263 Expository Writing (4)
Staff. A course in methods of written analysis.

## ENLS 361 Introduction to Creative Writing (3)

Mr. Cooley, Mr. Edmonds. A craft class in the writing of short fiction and poetry. Exercises to develop each student's personal voice. Group criticism of student work.
ENLS 362 Workshop in Creative Writing (3)
Staff. Intensive workshop in creative writing, usually with a visiting professor.
ENLS 363 Advanced Expository Writing (4)
Staff. A course in written analysis on social and cultural concerns.
ENLS 364 Screenwriting (3)
Ms. Rothenberg. Prerequisite: ENLS 361 or 410. Expressive strategies and formal considerations relevant to writing for television and cinema. Workshop format requires sustained analysis of professional screenplays as well as student work.

ENLS 365 Persuasive Writing (4)
Staff. Emphasis on principles of reasoning and strategies of written argument. This course satisfies the Louisiana State Department of Education's requirement of advanced composition for certification in English.
ENLS 367 Technical Writing (3)
Staff. Communicating technical information in abstracts, executive summaries, technical memoranda, process descriptions, amplified technical definitions, progress reports, feasibility studies and proposals. Major emphasis given to research reports and editing procedures.
ENLS 388 Writing Intensive Practicum (1)
Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.
ENLS 461 Advanced Fiction Writing Workshop (3)
Mr. Russell. Prerequisites: ENLS 361 or 362, and approval of instructor. A seminar focused on production and criticism of student work, including reading and analysis of fictional models. May be repeated for credit.
ENLS 462 Advanced Poetry Writing Workshop (3)
Mr. Cooley. Prerequisite: ENLS 361 or 362, and approval of instructor. A seminar focused on production and criticism of student work, including reading and analysis of poetic models. May be repeated for credit.

## EMPHASIS IN CREATIVE WRITING

Students choosing this option will be held to the same requirements as those in the regular major except they will choose four creative writing courses as focus of their study. All the creative writing courses may count as electives, too, toward the major.
ENLS 361 Introduction to Creative Writing
ENLS 362 Workshop in Creative Writing
ENLS 364 Screenwriting
ENLS 462 Advanced Poetry Writing Workshop

## SEMINARS

ENLS 501, 502 Seminars (3, 3)
Staff. Prerequisite: approval of instructor, which normally is given to English majors in their junior or senior year, or to non-majors with at least two previous courses in English above the 300 level, with an overall grade-point average of B or higher and no grade below B in English. Specific subjects are announced each semester. Course enrollment limited to 15.

ENLS 511 Seminar in British Literature to 1800 (3)
ENLS 531 Seminar in American Literature to 1820 (3)
CAPSTONE COURSES

## ENLS 550 Capstone Seminar: Literature in Theory (3)

Staff. Prerequisite: approval of instructor, which is normally given to English majors in their junior or senior year. This course is designed to integrate the study of literature into theory. A complete description is available each semester. Course enrollment is limited to 15.
ENLS 551 Capstone Seminar: Literature in Art (3)
Staff. Prerequisite: approval of instructor, which is normally given to English majors in their junior or senior year. This course is designed to integrate the study of literature into art. A complete description is available each semester. Course enrollment is limited to 15.

ENLS 552 Capstone Seminar: Literature in Culture (3)
Staff. Prerequisite: approval of instructor, which is normally given to English majors in their junior or senior year. This course is designed to integrate the study of literature into culture. A complete description is available each semester. Course enrollment is limited to 15.
ENLS 553 Capstone Seminar: Literature in History (3)
Staff. Prerequisite: approval of instructor, which is normally given to English majors in their junior or senior year. This course is designed to integrate the study of literature into history. A complete description is available each semester. Course enrollment is limited to 15 .

## Environmental Studies

Office: 201B Alcée Fortier
Phone: (504) 862-3155
Fax: (504) 862-8455
Website: www.tulane.edu/~env_stud/
Program Administrator
Michael Zimmerman, Philosophy (Director)

Faculty Associates<br>William S. Balée, Anthropology

Henry L. Bart, Ecology and Evolutionary Biology
Joan W. Bennett, Cell and Molecular Biology
Thomas Bianchi, Earth and Environmental Sciences
Lee Dyer, Ecology and Evolutionary Biology
George C. Flowers, Earth and Environmental Sciences
Bruce Fleury, Ecology and Evolutionary Biology
Scott Frickel, Sociology
David C. Heins, Ecology and Evolutionary Biology
Tristram R. Kidder, Anthropology
Franco Marcantonio, Earth and Environmental Sciences
John McLachlan, Center for Bioenvironmental Research
Gary L. McPherson, Chemistry
Brian Potter, Political Science
Molly A. Rothenberg, English
Thomas W. Sherry, Ecology and Evolutionary Biology
Emilson Silva, Economics
Laura Steinberg, Civil and Environmental Engineering
Teresa Toulouse, English
Scott W. Wall, Architecture

## COORDINATE MAJOR

The major in Environmental Studies must be coordinated with a separate major in a traditional discipline. This traditional discipline is the primary major which determines whether a student earns a B.A. or a B.S. degree. The Environmental Studies major is interdisciplinary, seeking to inform students of the scientific, political, economic, social, historical, and cultural dimensions of ecological issues.
The Environmental Studies curriculum has core areas in which courses must be taken. Though a number of courses within each core are required of all students, other courses satisfying the core requirements, as well as electives, are selected in consultation with the advisor. Students choose between two tracks, Environmental Science or Environmental Policy. Students must complete all courses in each major for a total of at least 18 different courses in the two majors.

## ENVIRONMENTAL SCIENCE

The Environmental Science Track (ENSS) consists of 13 courses, eight from science and five from social science and humanities.

Natural Science
All of the following:
CHEM 107/117 General Chemistry I
CHEM 108/118 General Chemistry II
CHEM 241/243 and CHEM 242/244 Organic Chemistry I \& II or CHEM 250 Environmental Chemistry
EEOB 101/111Diversity of Life
EEOB 404/414 General Ecology

## Physical Science

Two of the following:
EENS 111 Physical Geology
EENS 202 Environmental Geology
PHYS 121\& 122 Introductory Physics I \& II or PHYS 131\& 132 General Physics I \& II

## Natural Science Elective

One of the following:
EENS 625 Isotopes in the Environment
EEOB 204 Conservation of Biological Diversity
EEOB 420 Ornithology
EEOB 406 Stream Ecology

## Social Science

## Both of the following:

ECON 101 Introduction to Microeconomics
ECON 333 Environment and Natural Resources
Public Policy and Regulation
One of the following:
(Social Science)
POLA 423 Environmental Politics
POLC 434 Latin American Environmental Politics
POLI 462 Global International Env Politics
(Science)
EEOB 260 Natural Resource Conservation Theory and Practice
EEOB 360 Forestry and Policy
Social Science and/or Humanities
Two of the following:
(Humanities)
COLQ H301 Science and Human Values
COMM 351 Environmental Communications
COMM 420 Organizational Issues Management
ENLS 486 Nature Writing: American Nature/American Culture
PHIL 334 Humanity's Place in Nature
PHIL 652 Environmental Ethics
(Social Science)
ANTH 370 Ecological Anthropology
SOCI 160 Environmental Sociology
(One of the following may be substituted for a course in the Social Science and/or Humanities group).
ENST 401 Special Project
ENST 456, 457 Internship
ENST 491, 492 Independent Studies
ENST 499, 500 Honors Thesis
See ENST advisor for additional offerings.

## ENVIRONMENTAL POLICY

The Environmental Policy Track (ENSP) consists of 13 courses, five from the math/science and eight from social science and humanities.

## Mathematics

One of the following:
MATH 111 Introduction to Probability and Statistics
MATH 121/131 Calculus

## Science

Four of the following; two at the $\mathbf{2 0 0}$ level or above
CHEM 107/117 General Chemistry I
CHEM 108/118 General Chemistry II
CHEM 250 Environmental Chemistry
EENS 202 Environmental Geology
EENS 223 Oceanography
EEOB 101/111 Diversity of Life
EEOB 204 Conservation of Biological Diversity
EEOB 377 Mississippi River Basin Colloquium
Social Science
Both of the following:
ECON 101 Introduction to Microeconomics
ECON 333 Environment and Natural Resources
Public Policy, Political Economy, and Regulation
Four of the following:
(Science)
EEOB 260 Natural Resource Convservation Theory and Practice
EEOB 360 Forestry and Policy
(Social Science)
PECN 304 Economics and Policy Making
PECN 301 Intro to Political Economy
POLA 420 Science, Technology and Public Policy
POLA 423 Environmental Politics
POLI 462 Global Environmental Politics
POLC 434 Latin American Environmental Politics
ENST 456, 457 Internship

## Social Science and/or Humanities

Two of the following:
(Humanities)
COLQ H301 Science and Human Values
COMM 351 Environmental Communications
ENLS 486 Nature Writing: American Nature/American Culture
PHIL 334 Humanity's Place in Nature
PHIL 652 Environmental Ethics
(Social Science)
ANTH 370 Ecological Anthropology
COLQ H301 Science and Human Values
SOCI 160 Environmental Sociology
See ENST advisor for additional offerings.

## ENVIRONMENTAL STUDIES MINOR

(18+ Credits)
One of the following:
EEOB 101/111 Diversity of Life
EEOB 204 Conservation of Biological Diversity
EEOB 404 General Ecology (lecture only)

## Both of the following:

ECON 101
ECON 333

## Three of the following:

One environmental science
Two environmental social science or humanities course
ENST 360 Forestry, Forested Ecosystems, and Public Policy (3)
Staff. Prerequisites: EEOB 101 or approval of instructor. This course introduces the practice of forestry and forest management techniques common in the U.S. South, examines forestry's positive and negative environmental $i_{j} m p a c t s$, and presents the Federal, State, and local laws and policies that affect the management of forests in the United States. Students will be expected to integrate what they know about biology with what they learn about forestry and public policy. Students may not apply this course and EEOB 260 toward the major. Same as EEOB 360.
ENST 377 Mississippi River Colloquium (4)
Staff. Interdisciplinary course dealing with the Mississippi River Basin. The goal is to give students a broad overview of the important social and environmental issues surrounding the river. Same as EEOB 377.

## ENST 378 Integral Ecology (3)

Mr. McLachlan, Mr. Zimmerman. This course seeks to provide students with a framework for integrating the organic, ecosystemic, organizational, economic, social, cultural, and individual dimensions of ecological problems. After studying the framework itself, students will utilize it to
examine major environmental problems, such as hormone disruptors, urban lead pollution, and introduced species.
ENST 388 Writing Practicum (1)
Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.
ENST 401 Special Projects (1-3)
Staff. Prerequisite: eight courses in Environmental Studies, usually four from each core. Open to qualified juniors and seniors. Individual studies on an environmental problem.
ENST 456, 457 Internship Studies (3, 3)
Staff. Prerequisites: approval of instructor and Program Director. An experiential learning process coupled with pertinent academic course work. Open only to juniors and seniors in good standing. Registration is completed in the academic department sponsoring the internship on TUTOR. (Note: A maximum of six credits may be earned in one or two courses.)
ENST 481, 482 Special Topics (3, 3)
Staff. Courses offered by visiting professors or permanent faculty. For description, consult department.

## ENST 491, 492 Independent Studies (3, 3)

Staff. Independent studies in the field of environmental studies.
ENST H499-H500 Honors Thesis (3, 4)
Staff. For especially qualified juniors and seniors with approval of department and the Honors Committee.

* Non-LAS course. See the college SPC restrictions.


## Exercise and Sport Sciences

See Allied Programs

## Film Studies

(Note: minor program only)
Office: 219 Newcomb Hall
Phone: (504) 865-5730
Fax: (504) 862-8728
Program Administrator
Ana M. Lopez, Communication (Director)
Faculty Associates
Constance Balides, Communication
Michael M. Boardman, English
Felicia M. McCarren, French and Italian
MINOR
A minor in film studies requires the successful completion of six film studies courses. All students working toward the minor will be required to take Communication 215 (Introduction to Film Studies) and Communication 427 (Film Theory). The four film studies electives are to be selected from among the approved list. Currently, those courses include:

## Communication

COMM 327 Authors and Genres
COMM 358 Film History
COMM 435 Gender and the Cinema
COMM 455 Film and Politics
COMM 481, 482 Special Topics in Communication
Note: only when film related topic. Advisor approval required.

## English

ENLS 410 Literature and Film

## French

FREN 311 The French Cinema

## History

HISB 322 Africa and Hollywood: Myth, Romance, and Savage Imagery Spanish
SPAN 419 Introduction to Spanish Film
*SPAN 772 Spanish Film Directors
*by special permission

## French and Italian

Office: 311 Newcomb Hall
Phone: (504) 865-5115
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Professors
Linda L. Carroll, Ph.D., Harvard
Hope H. Glidden, Ph.D., Columbia (Kathryn B. Gore
Professor), (Chair)
Elizabeth W. Poe, Ph.D., Princeton
Associate Professors
Ann H. Hallock, Ph.D., Harvard
Thomas Klingler, Ph.D., Indiana
Erec Koch, Ph.D., Yale
Anne E. McCall, Ph.D., Université de Strasbourg
Felicia M. McCarren, Ph.D., Stanford
Vaheed K. Ramazani, Ph.D., Virginia
Assistant Professors
Deborah McGrady, Ph.D., California, Santa Barbara
Richard Watts, Ph.D., Yale

## French

The major in French introduces students to the literature, culture, and thought of France and the Francophone world, including North Africa, Sub-Saharan Africa, Asia, and the Caribbean. Students may also explore Creole and Cajun languages in linguistics classes and field work. The junior year and semester abroad programs are integral to the majors in French and Italian and are also encouraged for non-majors.

## PLACEMENT

Entering freshmen are placed at the appropriate level by assessment of their high school records. Successful completion of French 203 or H203, placement above the 200 level, a score of 4 or 5 on the Advanced Placement examination or a score of 640 or better on the College Board examination fulfills the language requirement for graduation.

## MAJOR

(ten courses, 30 credits)
Group I Basic Core Courses ( $\mathbf{1 5}$ credits)
FREN 313 French Media and oral Performance (3)
FREN 314 Phonetics (3) or FREN 307 Linguistics (3)
FREN 315 Advanced Grammar and Translation (3)
FREN 321 Introduction to Literary Analysis (3)
FREN 325 French Society and Institutions (3)

## Gateway Course (3 credits)

FREN 401 The French Short Story

## Group II Advanced Courses (four courses, 12 credits)

Three advanced courses at the 400- or 600-level which may include one literature in translation course at the 300 level. These three courses may also include an elective at the advanced level in a related field outside the department, e.g., a course in French art or French history. JYA students must take at least one of these advanced courses on Tulane campus.
FREN 595 Senior Seminar: required for all majors. Offered fall semester only.

## MINOR

(six courses, 18 credits)
Three required courses: 307 or 313 or 314 and 315, 321
One of: 325- or 401.
Two or more courses at the 400/600level One of these may be a literature in translation course at the 300 level.

## FREN H101 Elementary French I (4)

Staff. An introduction to the skills of speaking, understanding, reading, and writing French and to Francophone cultures.
FREN 101 Elementary French I (4)
Staff. An introduction to the skills of speaking, understanding, reading, and writing French and to Francophone cultures.

## FREN H102 Elementary French II (4)

Staff. A continuation of the objectives presented in French I. Offered every spring semester. Open to students with B+ or better in French 101.

## FREN 102 Elementary French II (4)

Staff. Prerequisite: FREN 101. A continuation of the objectives presented in French I.

## FREN H203 Intermediate French (4)

Staff. Prerequisite: FREN 102, or admission by departmental placement. Intermediate French language with emphasis on reading, conversation, and composition.

## FREN 203 Intermediate French (4)

Staff. Prerequisite: FREN 102 or admission by departmental placement. Intermediate French language with emphasis on reading, conversation, and composition.

## FREN 213 Intermediate French Conversation (2)

Staff. Prerequisite: FREN 203 or equivalent. Designed to improve the ability to understand spoken French through the use of audio tapes, videos and multi-media, interactive computer assisted instruction. Course meets twice a week. May not be used to fulfill the language proficiency requirement.
FREN 301 Topics in French Cultural Studies (3)
Staff. Topics of literary, cultural, and historical interest are offered on a regular basis by departmental faculty. The course is designed to introduce students to France from a variety of critical perspectives. These may include social space, Le Grand Siècle, autobiography, Paris as myth and reality, civility, food, institutions of schooling or the cultural production of "Frenchness." Offered in translation. A writing practicum is available for students who wish to fulfill the college writing requirement with this course.

FREN 302 French Feminisms (3)
Ms. Glidden. This course attempts to provide a basic vocabulary for the discussion of gender and sexuality. It introduces the philosophical notion of difference, thus encouraging reflection on women as a category of thought. Finally, it explores the peculiarly French approach to feminism, so that a culture in its specificity may be better known. Throughout the course, the richness of feminism as a historical, cultural, and theoretical movement will be discussed. Offered in translation. A writing practicum is available for students who wish to fulfill the college writing requirement with this course.

## FREN 303 Women Writers of the French and Francophone Worlds in Translation (3)

Ms. McCall, Ms. McGrady. Introduction to works by major French and/or Francophone women writers in translation. The course may focus on works by contemporary women writers, or examine texts from a range of historical periods. The issues raised in this course may include: the material conditions in which women have written; problems of publication; the specificity of women's writing; the conceptualization of gender: gender, race, and class. A writing practicum is available in conjunction with this course.
FREN 304 African and Caribbean Literature (3)
Mr. Watts. An introduction to the African and Caribbean literary movements that emerged in the 1930s as a reaction to European theories of culture and colonial practices. Readings and discussion entirely in English. A writing practicum is available for students who wish to fulfill the college writing requirement with this course.

## FREN 305 Literature in Exile (3)

Mr. Watts. A presentation of recent works by writers born in the French-speaking former colonies of Africa and the Caribbean, but living and writing elsewhere (e.g., Paris, Montreal, Brooklyn). Some of the questions the course will endeavor to answer are: What happens to cultures when they are displaced? How does one conceive of "home" when in exile, and is it possible to return? Is "rootlessness" a source of creativity, or a detriment to it? Reading and discussions entirely in English. Option for the major and minor in French.

## FREN 307 French Around the World (3)

Mr. Klingler. A linguistic survey of the Francophone world, with particular focus on French outside of France. The course begins with a historical look at the spread of French within and beyond Europe, then examines in turn the major French-speaking populations of Europe, North America, the Caribbean, Africa, the Indian Ocean, Southeast Asia, and the Pacific. While linguistic variation in each region will be considered, the main emphasis will be on sociolinguistic issues such as bilingualism and language contact, language politics and planning, linguistic insecurity, and language in education. Option for the major and minor in French.

FREN 311 French Cinema (3)
Ms. McCarren, Mr. Ramazani. French film from its origins in 1895 to the present. Early film, technology, and physiology: the Lumières, Marey, Meliès; classic French cinema: Renoir, Gance. The French New Wave: Resnais, Truffaut, Godard, and others. Avant-garde, surrealist, and science fiction films; postmodernity, film and video; women filmmakers and feminist film theory. Attendance at screening is required. Taught in English; films in French with English subtitles.
FREN 313 French Media and Oral Performance (3)
Staff. Prerequisite: FREN 203 or equivalent. Students will improve their listening comprehension of French, improve their oral performance, and gain familiarity with aspects of contemporary French society through the study of film, television, the news media, etc. Students will acquire an active knowledge of new vocabulary and develop a greater sensitivity to the distinctions between various levels of language. Required for the major.
FREN 314 French Phonetics (3)
Mr. Klingler. Prerequisite: FREN 203 or equivalent. The study of the sound system of French for improving pronunciation. Students learn the fundamental concepts of phonetics, phonemics, and contrastive analysis while also practicing French pronunciation and learning to convert French spelling into phonetic transcription using the International Phonetic Alphabet. Independent work in the language laboratory is an important component of the course. Option for the major and minor in French.

## FREN 315 Advanced Grammar and Composition (3)

Staff. Prerequisite: FREN 203 or equivalent. French 203 may be taken concurrently. A thorough and comprehensive review of French grammar, including principles and distinctions not usually covered in lower and intermediate courses. Mastery of principles will be reinforced through oral and written class drill, frequent testing, and directed composition. Required for the major and minor.

## FREN 321 Introduction to Literary Analysis (3)

Staff. Prerequisites: completion of language requirement, FREN 315, or departmental approval. The course provides students with the requisite tools of literary interpretation and analysis. By reading closely a variety of literary texts drawn from different periods and genres, students will become familiar with the fundamentals of criticism and poetics. Regular writing assignments are required. Required for the major and minor.

## FREN 325 French Society and Institutions (3)

Staff. Prerequisites: completion of the language requirement, FREN 315, or approval of department. An introduction to French society and the institutions that shaped it. Using periodization to define particular historical movements such as the Gallo-Roman period, the Middle Ages, the Renaissance, Enlightenment, revolutionary France, and the Third Republic, the course focuses on historical and architectural sites in Paris and the provinces to consider issues of French identity. Required for the major.

## FREN 333 French Literature in Translation (3)

Staff. Subject varies with instructor. May treat a particular literary period, a genre, or a subject, e.g., fatal love in French literature. May be repeated for credit. A writing practicum is available for students who wish to fulfill the college writing requirement with this course.

## FREN 388 Writing Practicum (1)

Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Writing practicum in English or French. Fulfills the college intensive-writing requirement for non-majors.
FREN 401 The French Short Story (3)
Staff. Prerequisite or Corequisite: FREN 321. Gateway course required for French majors and minors. Selected stories by some of the masters of the genre: Marie de France, Bonaventure des

Periers, Charles Perrault, Voltaire, Guy de Maupassant, Albert Camus. The emphasis in this course will be placed on reading comprehension, vocabulary building, and development of oral and written proficiency as well as on the application of the analytic skills learned in French 321.

## FREN 410 French in Louisiana (3)

Mr. Klingler. Prerequisite: 300 level or equivalent. An introduction to the French-related language varieties spoken in Louisiana: Cajun, Creole and Colonial French. Examines the history of their implantation and development in Louisiana, their basic structural features, and the main sociolinguistic issues surrounding their use. Attention will also be given to language planning measures currently being taken to revitalize the French language in the state. A writing practicum is available. French majors may use it to fulfill the college writing requirement. Same as FREN 610.

## FREN 411 Field Research on French in Louisiana (3)

Mr. Klingler. No prerequisites but FREN 314, 410, and/or courses in linguistics are highly recommended. Students will interview and record speakers of Cajun, Creole, and Colonial French in various parts of Louisiana. Working individually and in groups, they will then transcribe the recordings for purposes of linguistic description and analysis. A writing practicum is available. French majors may use it to fulfill the college writing requirement. Same as FREN 611

## FREN 416 Translation Theory and Practice (3)

Mr. Watts. Prerequisite: 300 level or equivalent. This course will provide students with the tools to translate a variety of types of texts (mostly literary, but also legal, journalistic, commercial, etc.) and to introduce them to translation theory as it relates to the problem of translating cultural difference and to the issues of originality, authorship, and the "ownership" of the text. Students will translate from French to English as well as from English to French. Course taught principally in English. Reading knowledge of French required. Same as FREN 616.

FREN 422 Medieval French Literature (3)
Ms. McGrady, Ms. Poe. Prerequisite: 300 level or equivalent. Readings in modern translation of such works as La Chanson de Roland, Chrétian de Troyes’ Perceval, Béroul’s Tristan, Aucassin et Nicolette and the poetry of Guillaume de Machaut, Christine de Pizan, and François Villon. A writing practicum is available. French majors may use it to fulfill the college writing requirement. Same as FREN 622.

FREN 423 Late Medieval French Literature (3)
Ms. McGrady. Intensive readings in Middle French of representative authors of the 13th through the 15th centuries: Jean de Meun, Machaut, Deschamps, Christine de Pizzan, Chartier. Same as FREN 623
FREN 424 Women in the Middle Ages (3)
Ms. McGrady. A study of the socio-political role of women in France from the twelfth to the fifteenth centuries through an examination of their image in literature, art, church doctrine, historical writings, and law. Same as FREN 624.

## FREN 432 Renaissance Literature (3)

Ms. Glidden. Prerequisite: 300 level or equivalent. A survey of representative works of outstanding authors of the period: Marot, Rabelais, Ronsard, DuBellay, Montaigne, and D'Aubigné. Both poetry and prose will be studied against the backdrop of the history and civilization of the Renaissance in France. A writing practicum is available. French majors may use it to fulfill the college writing requirement. Same as FREN 632.

## FREN 434 Parchment, Print and PC's: A History of the Book and Its Forms (3)

Ms. McGrady. Prerequisite: 300 level or equivalent. An introduction to the history of the book from medieval manuscripts to modern hypertext through a study of literary, historical, and critical readings. The course focuses on the impact that the medium, whether it be the traditional book or the computer screen, has an authorship, the writing process, and reading practices. A writing practicum is available. Same as FREN 634

## FREN 441 17th-Century French Literature (3)

Mr. Koch. Currents of French Classicism, with particular emphasis on Moralists and aesthetics. Authors include Boileau, Descartes, Pascal, La Bruyere, La Fontaine, and La Rochefoucauld. Same as FREN 641.

FREN 442 17th-Century Drama (3)
Mr. Koch. Prerequisite: 300 level or equivalent. Corneille, Molière, Racine. Utilizes videos of Comédie-Française performances. Development of critical sense through discussion. A writing practicum is available. French majors may use it to fulfill the college writing requirement. Same as FREN 642.

## FREN 452 18th-Century Literature (3)

Staff. Prerequisite: 300 level or equivalent. An introduction to the Enlightenment through readings in the experimental genres developed in the 18th century. Authors include Marivaux, Prévost, Montesquieu, Rousseau, Voltaire, Diderot, and Beaumarchais. A writing practicum is available. French majors may use it to fulfill the college writing requirement. Same as FREN 652.

## FREN 456, 457 Internship Studies (1-3, 1-3)

Staff. Prerequisites: approval of instructor and department. An experiential learning process coupled with pertinent academic course work. Registration is completed in the academic department sponsoring the internship on TUTOR. (Note: A maximum of four credits may be earned in one or two courses for French internship.)
FREN 462 Novel of the 19th Century (3)
Ms. McCall, Mr. Ramazani. Prerequisite: 300 level or equivalent. Representative novels of such authors as Chateaubriand, Constant, Stael, Stendhal, Balzac, Sand, Hugo, Nerval, Flaubert, the Goncourts, Zola. A writing practicum is available. French majors may use it to fulfill the college writing requirement. Same as FREN 662.

## FREN 472 20th-Century French Literature (3)

Ms. McCarren. Prerequisite: 300 level or equivalent. An introduction to major poets, playwrights and novelists of the 20th century, from Proust and Valéry through Beckett, Robbe-Grillet, and Duras. Readings include whole novels and plays, selected poetry, and excerpts from other works. A writing practicum is available. French majors may use it to fulfill the college writing requirement.

## FREN 474 20th-Century Drama (3)

Ms. McCarren. An exploration of French theater writing and practice from the turn-of-the-century avant-garde through the new theater forms invented across the century, including the so-called Theater of the Absurd, film scenarios, and post-modern operas. Readings include works by Jarry, Artaud, Cocteau, Sarte, Ionesco, Beckett, Genet, Duras, Cixous, and Le Clezio. Same as FREN 674.

## FREN 480 Survey of Francophone Literature (3)

Mr. Watts. Prerequisite: 300 level or equivalent. A lecture and discussion course on the historical and aesthetic evolution of the Francophone literature of Africa, the Maghreb, and the Caribbean. The creative works will be explored in the socio-political framework of colonization and decolonization as well as in terms of their own intrinsic qualities. A writing practicum is available. French majors may use it to fulfill the college writing requirement.
FREN 481, 482 Special Topics (3, 3)
Staff. A writing practicum is available. French majors may use it to fulfill the college writing requirement.

FREN 488 Writing Practicum (1)
Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement for French majors.
FREN H491, H492 Independent Studies (3, 3)
Staff. Open to outstanding students provided approval of department is granted and an appropriate faculty director is available.
FREN H499-H500 Honors Thesis (3, 4)
Staff. Admission by departmental and Honors Committee approval.

## FREN 595 Senior Seminar (3)

Staff. Prerequisite: senior standing. Content is consistently broad in scope and either thematic or generic in orientation, e.g., theme of the quest from the Middle Ages to the 20th century; the evolution of genre, i.e., the lyric poem, from its medieval beginnings to the present. Offered each fall. Required for the major.
FREN 610 French in Louisiana (3)
See FREN 410 for course description.
FREN 611 Field Research on French in Louisiana (3)
See FREN 311 for course description.

## FREN 615 Introduction to Critical Theory (3)

Mr. Ramanzani, Staff. Exploration of some of the principal linguistic, anthropological, psychoanalytic, philosophical, and sociological currents informing recent approaches of literature and culture
FREN 616 Translation Theory and Practice (3)
See FREN 416 for course description.
FREN 621 History of the French Language (3)
Ms. Poe. The development of Latin into French and subsequent evolution of the latter through the Old French period.
FREN 622 Medieval French Literature (3)
See FREN 422 for course description.
FREN 623 Late Medieval French Literature (3)
See FREN 423 for course description.

## FREN 624 Women in the Middle Ages (3)

See FREN 424 for course description
FREN 631 Renaissance Poetry and Drama (3)
Ms. Glidden. Careful analysis of the works of the major poets: Marot, the Ecole Lyonnaise, the Pléiade, and D'Aubigné. Special attention is devoted to lyric poetry and to the defense of the French language as a viable literary medium. Special attention is given to poetic violence as experienced in desire, national conquest, and religious strife, so that verse is defined in tension with poetic form. The course privileges Renaissance sonnets, while also including the genres of elegy, dizain, epic, epigrams and political satire.
FREN 632 Renaissance Prose (3)
See French 432 for description.

## FREN 434 Parchment, Print and PC's: A History of the Book and Its Forms (3)

See FREN 434 for course description.
FREN 641 17th-Century Literature I (3)
See FREN 441 for description.

FREN 642 17th-Century Literature II (3)
See FREN 442 for course description.
FREN 651 Topics in 18th-Century Literature (3)
Staff. Advanced study of 18th-century literature and culture focussing on a specific theme, genre, or problematic. In addition to addressing a specific theme or area of study, this course offers fairly broad coverage of the canonical works of the period. A writing practicum is available in conjunction with this course. Taught in French unless noted in the Schedule of Classes.

FREN 652 18th-Century Literature (3)
See FREN 452 for course description.

## FREN 661 19th-Century Prose I (3)

Ms. McCall. Prose writers of the first half of the 19th century, including Chateaubriand, Balzac, Stendahl, Sand, Sainte-Beuve, and Mme de Stael. Emphasis on the social and political context of post-revolutionary France.

## FREN 662 19th-Century Prose II (3)

Mr. Ramazani. Prose writers of the second half of the 19th century, with emphasis on Flaubert, the Goncourts, Zola, Maupassant, Daudet, and Anatole France. Critical theories of Taine and Zola. Lectures on the history, especially political, of the period insofar as it has a bearing upon the literature.

## FREN 663 19th-Century Poetry (3)

Mr. Ramazani. Romantic, Parnassian, and Symbolist movements, with emphasis on Lamartine, Hugo, Musset, Vigny, Gautier, Hérédia, Baudelaire, Verlaine, Rimbaud, Mallarmé, and Laforgue with the doctrines that each movement adhered to and promulgated.

## FREN 664 19th-Century Drama (3)

Ms. McCarren. The scandalous and spectacular French theater of the 19th century: melodrama and Romanticism, the economics of the Théâtre du Boulevard, the Opéra de Paris; the poetic theater of Symbolisme; the impact of Wagner in France. The course will include historical and literary texts of the theater and videos of contemporary productions of some plays. The course will include works by Hugo, Gautier, Dumas fils, and Oscar Wilde’s French play Salomé.
FREN 665 Romanticism (3)
Ms. McCall. Study of Romantic authors including: Bernardin de Saint-Pierre, Stael, Chateaubriand, Desbordes-Valmore, Balzac, Tristan, Sand.
FREN 673 20th-Century Poetry (3)
Staff. An intensive textual study of major poets from Apollinaire through Yves Bonnefoy. Some familiarity with French symbolism is assumed. The method of explication de texte is utilized.
FREN 674 20th-Century Drama (3)
See FREN 474 course description.
FREN 691 Special Problems in French Linguistics (1-3)
Mr. Klingler, Ms. Poe. Subject varies with instructor. Principally reading and research.
FREN 692 Special Problems in French Literature (1-3)
Staff. Subject varies with instructor. Principally reading and research.

## Italian

Entering freshmen are placed at the appropriate level by assessment of their high school records.

## MAJOR

A major in Italian consists of nine courses beyond Intermediate Italian 203. The student is required to take the following courses: 300, 313, 325; four courses devoted to literature on the 400 or 600 level; and two electives.

## MINOR

A minor in Italian consists of six courses above 203, including 300, 313, and 325.

## ITAL 101 Elementary Italian I (4)

Staff. Development of the skills of speaking, understanding, reading, and writing Italian both in the classroom and the language laboratory. Four class meetings and one language laboratory session per week.
ITAL 102 Elementary Italian II (4)
Staff. A continuation of the objectives presented in Italian I with special emphasis on reading. Four class meetings and one language laboratory session per week.
ITAL 203 Intermediate Italian (4)
Staff. A complete second-year course. Intensive grammar review with readings from standard Italian texts. Comprehension and conversational skills are stressed. Written expression also emphasized. Four class meetings and one laboratory session per week.

## ITAL 300 Introduction to Italian Literature (3)

Ms. Hallock, Ms. Carroll. Prerequisite: ITAL 203. An introduction to Italian literature, including readings from Dante, Petrarch, Boccaccio, Poliziano, Machiavelli, Ariosto, Castiglione, Goldoni, Manzoni, Pirandello, Benedetto Croce, among others. This course will be taught in Italian.
ITAL 313 Advanced Conversation and Composition (3)
Ms. Carroll. Prerequisite: ITAL 203 or equivalent. The course aims primarily at perfecting the student's speaking and writing ability. Articles taken from newspapers, periodicals, etc., serve as a basis for discussion and familiarize students with contemporary Italy. The course presupposes a solid grammatical foundation and any grammar review is given only on an individual basis.

ITAL 325 Italian Language and Culture (3)
Ms. Hallock, Ms. Carroll. Prerequisite: ITAL 313 or approval of department. The course aims at improving the speaking and writing ability of students while familiarizing them with the development of Italian culture and history from the Middle Ages to the 20th century. Students discuss historical events and answer questions using the grammar and idioms learned in the grammar review. Writing assignments are based on the historical and cultural component of the course.
ITAL 333 Italian Literature in Translation (3)
Staff. Subject varies with instructor. A study of the major contributions of Italian literature to Western thought. The course emphasizes particularly those authors whose works have interdisciplinary ramifications, e.g., Dante, Machiavelli, Galileo. May be repeated for credit, provided that a different topic is covered.

## ITAL 401 Topics in Origins and Masterpieces of 13th- and 14th-Century Italian Literature

 (3)Ms. Hallock, Ms. Carroll. Prerequisite: 300-level course. Topics may include St. Francis and early minor authors, Dante's Divine Comedy and early works, Boccaccio's Decameron and minor works, Petrarca's Canzoniere and minor works. May be repeated for credit provided a different topic is covered. Same as ITAL 601

## ITAL 402 Topics in Renaissance Literature (3)

Ms. Hallock, Ms. Carroll. Prerequisite: 300-level course. Topics may include the literati of the Medici court, Michelangelo, lyric poetry of the Petrarchisti, the drama, the epic poem, political and social treatises. May be repeated for credit provided a different topic is covered. Same as ITAL 602.
ITAL 403 Topics in 17th- and 18th-Century Italian Literature (3)
Ms. Carroll. Prerequisite: 300-level course or approval of instructor. Works of various literary and philosophical writers will be studied. Topics may include the effect of the Inquisition, the Petrarchan and Arcadian traditions, theater as social and political laboratory, the beginnings of the Risorgimento in the works of such authors as Galileo, Bruno, Campanella, Marino, Vico, Metastasio, Alfieri, Gozzi, Goldoni, Parini, and Foscolo. May be repeated for credit provided a different topic is covered.
ITAL 404 Topics in 19th- and 20th-Century Italian Literature (3)
Ms. Hallock, Ms. Carroll. Prerequisite: 300-level course. Topics may include Manzoni, Verga, Leopardi, Carducci, D’Annunzio, Pascoli; 20th-century poetry, novel or drama. May be repeated for credit provided a different topic is covered. Same as ITAL 604.

## ITAL 456, 457 Internship Studies (1-2, 1-2)

Staff. Prerequisites: approval of instructor and department. An experiential learning process coupled with pertinent academic course work. Open only to juniors and seniors in good standing. Registration is completed in the academic department sponsoring the internship on TUTOR. Only one internship may be completed per semester. (Note: A maximum of three credits may be earned in one or two courses.

## ITAL H499-H500 Honors Thesis $(3,4)$

Staff. Admission by department and Honors Committee approval.

## ITAL 601 Topics in Origins and Masterpieces of 13th- and 14th-Century Italian Literature

 (3)See Italian 401 for description.
ITAL 602 Topics in Renaissance Literature (3)
See Italian 402 for description.
ITAL 604 Topics in 19th- and 20th-Century Italian Literature (3)
See Italian 304 for description.
ITAL 615 Concepts of Literary Criticism (3)
Staff. Theories of literature and their application in practical criticism: textual, historical, structural, thematic, etc. Emphasis on contemporary schools of criticism. Same as FREN 615.

ITAL 691 Special Problems in Italian Literature (3)
Ms. Carroll, Ms. Hallock. Subject varies. Principally reading and research.
ITAL 692 Special Problems in Italian Language and Literature (3)
Ms. Carroll. Subject varies. Principally reading and research.

## Arabic

## ARBC 111 Arabic I (3)

Staff. Basic introduction to the Arabic language. Emphasis on listening, speaking, reading, and writing. Does not count toward the foreign language proficiency requirement.
ARBC 112 Arabic II (3)
Staff. Prerequisite ARBC 111 or equivalent. Second semester of Arabic language. Ability to read and write Arabic required. Does not count toward the foreign language proficiency requirement.

## Haitian Creole

## HACR 111 Haitian Creole I (3)

Staff. This course introduces the basic to intermediate-level vocabulary and grammar of Haitian Creole. No previous knowledge of Creole is required, but some familiarity with French or Spanish is desirable. Does not count toward the foreign language proficiency requirement.

## Germanic and Slavic Studies

Office: 305 Newcomb Hall
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Website: www.tulane.edu/~germruss
Professors
William C. Brumfield, Ph.D., California, Berkeley
Karlheinz Hasselbach, Dr. phil., Philipps-Universität, Marburg
Associate Professor
George M. Cummins III, Ph.D., Harvard, (Chair)
Assistant Professors
Elio Brancaforte, Ph.D., Harvard
Jaimey Fisher, Ph.D., Cornell

## Emeritus

Bodo K. Gotzkowsky, Ph.D., Rice (John T. Krumplemann Professor of German)

## Germanic Studies

Germanic Studies provides students a wide range of opportunities to explore the culture and literature of German-speaking countries. Such studies can serve as part of their general education, as a major in German Studies or a double major involving another discipline, as well as preparation for graduate school or an international professional career. Courses are offered in English as well as German, and range from medieval to contemporary literature, from film and visual culture to intellectual history and European Studies. In addition to language, the department offers, among others, courses on German film, representations of the Holocaust, the German Baroque period, travel literature, intellectual history in the twentieth century.

## GERMAN LANGUAGE AND LITERATURE MAJOR

The major in German Language and Literature consists of at least nine courses of German beyond 203 Intermediate German, one of which must be at the 600 level. These courses are organized in three thematic groups: language, literature, and culture.

## I. Language (two courses)

GERM 204 Intermediate II (required)
GERM 372 Translation Theory and Practice
GERM 425 Advanced Composition

## II. Literature (five courses)

GERM 303 Introduction to Literature (required)
GERM 441 Novelle
GERM 443 Drama
GERM 447 Romanticism
GERM 449 Shorter Prose
GERM 481, 482 Special Topics
GERM 603, 604 Survey of Literature
GERM 615 Nineteenth Century
GERM 618 Goethe and Schiller
GERM H491, H492 Independent Studies
GERM 440/640 Advanced Undergraduate Seminar

## III. Culture (two courses or two courses from Language or Literature)

GERM 325 and 326 Language and Culture
GERM 340 Deviates and Nazis
GERM 344 Holocaust
GERM 351 Culture and Civilization
GERM 354 Marx, Nietzsche, and Freud
GERM 355 Literature in Translation
RUSS 607 Linguistics
All major programs are designed individually by the student in consultation with a departmental advisor. Language and Literature majors are encouraged to include among their electives related courses in history, history of art, philosophy, and other national languages and literatures.

## GERMAN CULTURAL STUDIES MAJOR

The major in German Cultural Studies consists of at least nine courses of German beyond 203, one of which must be at the 600 level. These courses are organized in three thematic groups.

## I. Language (two courses)

GERM 204 Intermediate II (required)
GERM 372 Translation Theory and Practice
GERM 425 Advanced Composition
II. Literature (two courses)

GERM 303 Introduction to Literature (required)
GERM 441 Novelle
GERM 443 Drama
GERM 447 Romanticism
GERM 449 Shorter Prose
GERM 481, 482 Special Topics
GERM 603, 604 Survey of Literature
GERM 615 Nineteenth Century
GERM 618 Goethe and Schiller
GERM H491, H492 Independent Studies
GERM 440/640 Advanced Undergraduate Seminar
III. Culture (five courses)

Advanced Literature Courses
GERM 441 Novelle
GERM 443 Drama
GERM 447 Romanticism
GERM 449 Shorter Prose
GERM 481, 482 Special Topics
GERM 603, 604 Survey of Literature
GERM 615 Nineteenth Century
GERM 618 Goethe and Schiller
GERM H491, H492 Independent Studies
GERM 440/640 Advanced Undergraduate Seminar
German or Russian Courses in Cultural Studies
GERM 325 and 326 Language and Culture
GERM 340 Deviates and Nazis
GERM 344 Representing the Holocaust: Literary and Filmic Depictions of the Undepictable
GERM 351 Culture and Civilization
GERM 354 Marx, Nietzsche, and Freud
GERM 355 Literature in Translation
RUSS 607 Linguistics

## Cultural Theory Electives From Other Departments

## ARHS 321 Art and Experience in the Middle Ages

ARHS 342 Baroque Art
HISA 604 The High Middle Ages
HISE 321 Modern Germany
HISE 329 Origins of the Second World War
HISE 610 Renaissance and Reformation, 1450-1660
HISE 621 The First World War
HISE 642 Readings in the Holocaust
MUSC 337 Studies in Great Composers
PHIL 310 19th Century European Philosophy
PHIL 628 Kant
PHIL 633 Nietzsche
POLI 459 The Holocaust System: A Political Analysis
POLT 479 Contemporary Political Philosophy

All major programs are designed individually by the student in consultation with a departmental advisor. Cultural majors are encouraged to include among their electives related courses in history, history of art, philosophy, and other national languages and literatures.

## MINOR

The department also encourages students with an active interest in German to minor in German. A minor in German consists of five courses above 203 Intermediate I. Two of these five courses are required: 204 Intermediate II and 303 Introduction to Literature. The remaining three may be selected from literature, advanced language, or culture, in consultation with a departmental advisor.

## STUDY ABROAD

For both major and minors, the department strongly recommends at least a semester of study in Germany. The department's exchange program with Jena is a Tulane accredited Junior Year and Junior Semester Abroad, and courses taken in Jena or Hamburg will receive credit at Tulane toward the Germanic studies majors. Other exchange programs may receive credit upon departmental review.

## GERM 101 Elementary German I (4)

Staff. Introduction to German grammar. Development of basic language skills with particular emphasis on the active use of present-day German. For students with little or no previous knowledge of German. Meets four times a week.

## GERM 102 Elementary German II (4)

Staff. Prerequisite: GERM 101 or placement. Continuation of the work begun in 101. Completes the student's introduction to German grammar and provides further practice in speaking, writing, and reading German. Prepares for 203. Meets four times a week.
GERM 112 Elementary German, Grammar Review (4)
Staff. Similar to GERM 102 but includes review of grammar and vocabulary of 101. For incoming students who have had about two years of high school German, but who are not placed at second-year level. Prepares for 203. Meets four times a week. Offered fall semester only.
GERM 203 Intermediate German (4)
Staff. Prerequisite: GERM 102, 112, or placement. An occasional review of German grammar, extensive reading, and considerable attention to building an active vocabulary sufficient for most conversation and general writing. Conducted in German except for explanations of grammar. Prepares for courses on the 300 level. Meets four times a week. Offered both semesters.

GERM 204 Intermediate German II (4)
Mr. Brancaforte, Mr. Fisher. Prerequisite: GERM 203 or placement. German 204 is the fourth semester of intermediate language study, following 203, and is the first required course for German majors and minors. Advanced practice in all discourse skills. Conducted entirely in German. Class discussion of readings, grammar review, composition, theatrical exercises. Student-driven communicative approach. Offered both semesters.

## GERM 303 Introduction to Literature (3)

Mr. Brancaforte, Mr. Fisher, Mr. Hasselbach. Prerequisite: GERM 204 or placement. Conducted in German. Reading of representative works of German prose, drama, and poetry. Introduction to techniques of literary analysis. Designed to introduce the student to a critical approach to literature. Discussion of content and explication of literary aspects of the text as well as textual analysis are stressed.

## GERM 304 Introduction to Literature (3)

Mr. Brancaforte, Mr. Fisher, Mr. Hasselbach. Prerequisite: GERM 203 or placement. Conducted in German. Similar to 303, but with different texts. Offered in spring semester only. German 303 and 304 may both be taken, with departmental approval, by those students needing further practice at this level.

## GERM 325 German Language and Culture I (3)

Staff. Prerequisite: GERM 203, or equivalent, or placement. Conducted in German. Survey of German history from its beginning through the Age of Enlightenment, with emphasis on cultural and social aspects unique to Germany. Practice in the speaking and writing of German through discussions, debates and oral reports by individual students. Grammar review as needed. Offered in fall semester only.

## GERM 326 German Language and Culture II (3)

Staff. Prerequisite: GERM 203, 303, or 325. Conducted in German. Survey of German history from the end of the 18th century to the present including a discussion of institutions and problems of contemporary German life and civilization. Majors are advised to take both 325 and 326. One of the two is required for prospective Junior Year Abroad students going to Germany.

## GERM 372 Translation: Theory and Practice of an Impossible Art (3)

Mr. Fisher. Prerequisite: approval of instructor. Proficiency in German required. Course introduces students to both practical and theoretical problems posed by translation in general and by English-German translation in particular. This class will learn by practicing translation and by reading theoretical texts about translation. Texts will include literature, news reports, and film subtitles.

GERM 425 Advanced Composition, Conversation, and Phonetics (3)
Staff. Prerequisite: approval of instructor. An intensive course stressing style both in academic and in current idiomatic German.

GERM 440 Advanced Undergraduate Seminar (3)
Mr. Brancaforte, Mr. Fisher. Prerequisite: approval of instructor. Topics vary from year to year. Typically an intensive study of an individual writer, a limited genre, a literary movement or a thematic problem. Germany’s Roaring 1920s; German Culture after WW II; Youth and the German Nation; Post-1989 Literary and Visual Culture; Travels to Foreign Lands, 16th Century Style; Early Modern Maps and Images. May be repeated for credit provided the topic is different. Same as GERM 640.
GERM 441 The German Novelle (3)
Mr. Hasselbach. Prerequisite: GERM 303, 304, or equivalent. Study of Novellen by Goethe, Kleist, Arnim, E.T.A. Hoffmann, Gotthelf, Droste-Hülshoff, Keller, Storm, Hauptmann, Hofmannsthal, Zweig, and Th. Mann, illustrating the historical development of the German Novelle as a literary form.
GERM 443 German Drama (3)
Mr. Fisher. Prerequisite: GERM 303, 304, or equivalent. A study of the German dramatic tradition through close analysis of representative plays by such writers as Lessing, Schiller, Goethe, Kleist, Hebbel, Grillparzer, and Büchner.
GERM 481, 482 Special Topics (3, 3)
Courses offered by visiting professors or permanent faculty. For specific offering, see the Schedule of Classes. For description, consult department.
GERM H491, H492 Independent Studies (3, 3)
Staff. Open to superior students with the approval of the department.
GERM H499-H500 Honors Thesis (3, 4)
Staff. Approval of department and Honors Committee required.
GERM 603 Survey of German Literature I (3)
Mr. Brancaforte, Mr. Hasselbach. Literary documents from the Middle Ages through the 17th century. Selected readings and study of early literary movements.
GERM 604 Survey of German Literature II (3)
Mr. Brancaforte, Mr. Fisher, Mr. Hasselbach. Readings and study of literary history from the Enlightenment to the present day.
GERM 615 Studies in 19th-Century German Literature (3)
Mr. Hasselbach. Topic varies and is announced each semester. Study of a genre, a literary movement, or an author. May be repeated for credit.
GERM 618 The Age of Goethe and Schiller (3)
Mr. Brancaforte, Mr. Hasselbach. The literature of German classicism.

GERM 640 Advanced Undergraduate Seminar (3)
See GERM 440 for description.
GERM 691 Independent Studies (3)
Staff. Open to superior students with the approval of the department.

## COURSES TAUGHT IN ENGLISH

GERM 340 Deviates, Nazis, and Radicals: An Introduction to German Film (3)
Mr. Fisher. An intensive introduction to the study of German film, the course offers both a survey of German film history and in-depth analyses of representative films. It also covers many essentials of film analysis in general. May be counted toward a major in German only with departmental approval and provided all reading is done in German.
GERM 344 Representing the Holocaust: Literary and Filmic Depictions of the Undepictable (3)

Mr. Fisher. This course examines the Holocaust from various perspectives, disciplines, and media (including history, literature, and film) to investigate the conditions and limitations of representations of the Holocaust. May be counted toward a major in German only with departmental approval and provided all reading is done in German.
GERM 351 German Culture and Civilization (3)
Mr. Brancaforte. The emergence of art, music, and philosophy of the German-speaking peoples, primarily as reflected in their national literatures. Proficiency in German not required. May be counted toward a major in German only with departmental approval and provided all reading is done in German.
GERM 354 Marx, Nietzsche, and Freud (3)
Mr. Fisher. Course introduces three philosophical revolutionaries who have exerted enormous influence on literature, philosophy, psychology, and politics. With its intellectual-historical approach, the course will examine key terms and analytic models in these thinkers as well as the intersection points among them. May be counted toward a major in German only with departmental approval and provided all reading is done in German.
GERM 355 German Literature in Translation (3)
Staff. Subject varies and is announced each semester. Typically a study of literary movements, genres, individual authors, or themes, e.g., the treatment of the Faust theme in German literature, Fairy Tales. May be repeated for credit. May be counted toward a major in German only with departmental approval and provided all reading is done in German.

## Russian

Entering students who have had Russian elsewhere are placed at the appropriate level by assessment of their high school records. Each student must enroll at the level commensurate with ability. Successful completion of Russian 203 or placement above the 203 level fulfills the language requirement for graduation.

## MAJOR

A major in Russian consists of nine courses totaling 27 credits above 203. It is expected that each major will plan a balanced program. Approval by the departmental advisor of each semester's program is required.

## MINOR

A minor in Russian consists of five courses above 203 or its proficiency equivalent (i.e., five courses on the 300 level, selected with departmental consultation and approval, are required).

RUSS 101 Elementary Russian I (4)
Staff. Introduction to Russian grammar. Development of basic language skills.
RUSS 102 Elementary Russian II (4)
Staff. Prerequisite: RUSS 101 or equivalent. Continuation of the study of basic Russian grammar. Practice in reading, speaking, and writing.
RUSS 203 Intermediate Russian (4)
Staff. Prerequisite: RUSS 102 or equivalent. Review of grammar. Practice in speaking, understanding, and writing Russian. Readings of graded literary texts.
RUSS 204 Advanced Conversation and Composition (4)
Staff. Prerequisite: RUSS 203 or 12 credits of Russian or approval of instructor. This course is a continuation of second-year Russian. Discussion of and essays on subjects related to Russian history, culture, and contemporary life. Grammar review and advancement of skills.
RUSS 303 Masterpieces of Russian Literature I (3)
Mr. Cummins. Prerequisite: RUSS 204 or equivalent. Selected readings from among the most outstanding works of Russian literature from its beginnings through the 19th century. Advancement of all language skills through study and analysis of literary texts.
RUSS 304 Masterpieces of Russian Literature II (3)
Mr. Cummins. Prerequisite: RUSS 204 or equivalent. Selected readings from the most outstanding works of 20th-century Russian literature. Advancement of all language skills through study and analysis of literary texts.

RUSS 325 Advanced Russian Grammar (3)
Mr. Brumfield. Mr. Cummins. Prerequisite: 24 credits of Russian or equivalent. Phonemic, grammatical, and syntactical patterns of standard literary Russian.
RUSS 333 Oral Discussion in Russian (3)
Mr. Cummins. Prerequisite: RUSS 204 or equivalent. Discussion of topics from contemporary Russian politics and history. Students learn syntax and vocabulary aimed at building discourse competence. Hypothesization, narration, questioning, contradicting, speaking in paragraphs. Reading, listening, speaking.

## RUSS 345 Tolstoy and Dostoevsky in English Translation (3)

Mr. Brumfield, Mr. Cummins. Readings and discussions of the major novels. Comparative study of literary method, theme and structure, modern critical approaches. No knowledge of Russian required. May be counted toward major.

## RUSS 353 Survey of Russian Art (3)

Mr. Brumfield. An introduction to the art and architecture of Russia, from the 12th century to the present. The first part of the course deals with the medieval period (church architecture, icons, frescoes). The second part begins with the assimilation of western European styles during the 17th century, and concludes with a survey of current developments in Russia. No knowledge of Russian required. Same as ARHS 353.
RUSS 370 Russian Poetry (3)
Mr. Brumfield, Mr. Cummins. Prerequisite: RUSS 204. Readings in Russian poetry, including Pushkin, Lermontov, Tyutchev, and the symbolists. Lectures, discussions, and compositions in Russian.
RUSS 481, 482 Special Topics (3, 3)
Staff. Courses offered by visiting faculty or permanent faculty. For specific offering, see the Schedule of Classes. For description, consult department.
RUSS H491, H492 Independent Studies (3, 3)
Staff. Open to superior students with the approval of the department.

## RUSS H499-H500 Honors Thesis (3, 4)

Staff. Approval of department and Honors Committee required.

## RUSS 607 Slavic Contributions to Linguistics (3)

Mr. Cummins. Lectures, readings and discussions, in English, of the Prague and Moscow schools of linguistics. Markedness theory, child language, discourse theory, formalist criticism, pragmatics and related topics. Open to juniors, seniors and graduate students in linguistics, literary theory, and allied disciplines. May be counted toward the major with departmental approval. Includes a unit on the structure of German. May be counted toward a German Cultural Studies major.

## History

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Professors
Sylvia R. Frey, Ph.D., Tulane
Kenneth W. Harl, Ph.D., Yale
Richard B. Latner, Ph.D., Wisconsin (Chair)
Colin M. MacLachlan, Ph.D., California, Los Angeles
Linda A. Pollock, Ph.D., University of St. Andrews (Associate Dean, Faculty of the Liberal Arts and Sciences)
Lawrence N. Powell, Ph.D., Yale
Susan Schroeder, Ph.D. California, Los Angeles
Richard F. Teichgraeber III, Ph.D., Brandeis
Associate Professors
Marc Baer, Ph.D., University of Chicago
Roseanne Adderley, Ph.D., Pennslyvania
George L. Bernstein, Ph.D., Chicago
James Boyden, Ph.D., Texas
James N. Hood, Ph.D., Princeton
Samuel C. Ramer, Ph.D., Columbia
Randy Sparks, Ph.D., Rice
Gertrude Matyoka Yeager, Ph.D., Texas Christian
Assistant Professors
Marc Baer, Ph.D., University of Chicago
Rachel Devlin, Ph.D., Yale
Daniel Hurewitz, Ph.D., California, Los Angeles
F. Thomas Luongo, Ph.D., Notre Dame

Marline Otte, Ph.D., Toronto
Steven Pierce, Ph.D., Michigan
Justin Wolfe, Ph.D., California, Los Angeles

## MAJOR

A history major ordinarily consists of a total of 30 credits distributed among three fields of history as follows: a minimum of four courses in the first field, three courses in the second field, and two courses in the third field. The approved fields are as follows: Ancient and Medieval Europe, The Middle East/North Africa, Africa, Modern Europe, United States, and Latin America and Caribbean. No more than four courses numbered 199 and below (and no more than two in one field) may be selected. A minimum of three courses numbered 400 and above are required, with at least one of these being in the first field. In addition, two alternative tracks in Mediterranean World and Atlantic World are also offered. See Mediterranean World and Atlantic World in area listings for detailed course requirements.

## MINOR

A minor in history consists of at least 18 credits, one-half of which must be numbered 200 and above, with one course numbered 400 and above. They must be distributed among at least two fields, with a minimum of two courses in each field. The approved fields are as defined in the requirements for the major.

## HONORS COURSES

Honors courses and honors sections of regular courses are open to students in the Honors Program or by approval of the instructor. Enrollment is limited, and there is an emphasis on intensive reading and discussion. Topics vary except where descriptions are provided.

## SELECTING THE CORRECT LEVEL CLASS

Courses listed at the 100, 200, and 300 level are considered introductory classes. All of them emphasize analysis and interpretation. They are not prerequisites for further course work in the area. Courses listed at the 600 level are not ordinarily suitable for freshmen.

## ANCIENT AND MEDIEVAL EUROPE

## HISA 100 The Ancient Near East and Greece (3)

Mr. Harl. Not open to senior history majors. In the light of the growth of civilization in the Near East, this survey course covers Greek political, intellectual, and cultural developments to 323 B.C. Emphasis is given to the archaic and classical periods of Greece. Same as CLAS 100.

## HISA 101 The Rise of Rome (3)

Mr. Harl, Mr. Kehoe. Not open to senior history majors. This survey devotes itself to the emergence of Hellenistic civilization and the growth of Roman power in the Mediterranean. Special attention is given to the Hellenistic impact upon Rome, the evolution of Roman institutions, and the transition from Republic to Empire. Same as CLAS 101.

HISA 102 The Barbarian West (3)
Mr. Luongo. A survey of the period from the fall of Rome to the establishment of feudal kingdoms.
HISA 103 Medieval Europe, 1100-1450 (3)
Mr. Luongo. A survey of the period in which Western Europe became the center of medieval civilization.

HISA 291, 292 Special Topics in Medieval and Ancient History (3, 3)
Staff. Courses offered by visiting professor or permanent faculty. For specific offering see the Schedule of Classes.

## HISA 302 The High Roman Empire (3)

Mr. Harl, Mr. Kehoe. This course introduces the institutional, social, and cultural changes of the empire from Augustus to Diocletian. Stress is placed upon the birth of imperial administration, cultural change and continuity, and the rise of Christianity. Same as CLAS 302.
HISA 303 Early Medieval and Byzantine Civilization from Constantine to the Crusades (3)
Mr. Harl. The course examines the birth of a medieval Christian civilization after the collapse of Roman power, the achievements of Byzantine civilization, the conversion of Eastern Europe, and the impact of the Crusades. Same as CLAS 303.

HISA 304 Law and Society in Ancient Rome (3)
Mr. Kehoe. This course investigates the social and cultural values of the Roman world by studying Roman private law. The course also examines the development of Roman courts in the empire and the influence of Roman law on modern legal systems. Same as CLAS 309.
HISA 305 Ancient Historiography (3)
Mr. Kehoe. Readings and discussions of selected topics concerning the major classical historians, especially Herodotus, Thucydides, Polybius, Livy, and Tacitus, studying the development of history writing and its relationship to changing historical conditions. Same as CLAS 305.
HISA 308 Ancient Greek Tyranny and Democracy (3)
Mr. Naiden. This course examines the origins and characteristics of basic Greek forms of government in their historical context, concentrating on tyranny and democracy in the archaic and classical periods. The course stresses the development of Greek political institutions and political thought. Same as CLAS 331.

## HISA H310 Honors Seminar in Greek History (4)

HISA 310 Select Topics in Greek History (4)
Mr. Harl. Readings and discussion of select topics in Greek history: Homer and the Trojan War; Athenian Empire (480-404 B.C.); Sparta and Macedon in the Age of Hegemonies (404-323 B.C.); or Greek Leagues and Macedonian Kings in the Hellenistic World (323-133 B.C.) Same as CLAS 310.

## HISA H311 Honors Seminar in Roman History (4)

## HISA 311 Select Topics in Roman History (4)

Mr. Harl. Readings and discussion of select topics in Roman history: The Making of Roman Italy (509-264 B.C.); The Punic Wars (264-146 B.C.); Roman Revolution (133-27 B.C.); or Rome and the Jews (167 B.C.- A.D. 135). Same as CLAS 311.

## HISA 313 Egypt Under the Pharaohs (3)

Ms. Carter. The culture of ancient Egypt from the pre-dynastic period through the end of the New Kingdom. The course emphasizes the sculpture, architecture, and painting of the pharaonic periods. Other areas covered are: Egyptian literary and historical documents, Egyptian religion, and major social developments. Same as ARHS 313, CLAS 313.
HISA 316 The Aegean Bronze Age (3)
Ms. Carter. The cultures of the Cycladic Islands, Crete, and the Greek mainland during the Bronze Age (ca. 3200-1150 B.C.) Emphasis will be on the major and minor arts of the Minoans and Mycenaeans and how this material can be used to reconstruct the societies, cultures, and religions of the Aegean Bronze Age. Same as ARHS 316, CLAS 316.

## HISA 318 Greek Religion (3)

Mr. Naiden. This course examines Greek religion in its social and historical context, utilizing an interdisciplinary approach incorporating archaeological, artistic, literary, and epigraphic evidence. The course begins with a survey of the major concepts connected with Greek religion, including the types of beings offered worship, the delineation of sacred space, and the forms of ritual. Emphasis is placed on the social and political function of ritual, that is, on ritual as the enacted representation of cultural values and social roles. The second section of the course investigates the major Greek divinities, their iconography, mythology, and cult. The course concludes with a study of the phenomenon of mystery cults, surveying the forms of these cults in the Greek world and discussing their continuation under the Romans. Same as CLAS 320.

## HISA 319 Pompeii: Roman Society and Culture in Microcosm (3)

Staff. A survey of Roman culture through the study of the town destroyed by Mt. Vesuvius in A.D. 79. The focus is on the society, politics, religion, domestic life, entertainment, economy, and art of Pompeii and the surrounding region in the early imperial period. Same as ARHS 319 and CLAS 319.

HISA 331 Medieval England (3)
Ms. Pollock. A survey of the political, social, and intellectual development of England from the Anglo-Saxon period to 1485.

HISA 335 Society and Culture in Medieval Italy, 1000-1400 (3)
Mr. Luongo. A survey of the political, social, and cultural developments in Italy from the eleventh century to the early fifteenth century, with special attention to the development of institution and culture in the city-states of central and northern Italy.
HISA 388 Writing Practicum (1)
Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.
HISA 397, 398 Special Offerings in Ancient/Medieval History (3, 3)
Staff. Courses offered by visiting professors or permanent faculty. For specific offering, see the Schedule of Classes. For description, consult the department.
HISA H400 Colloquium in Ancient History (4)
Mr. Harl. Interdisciplinary seminar compares classical civilization of Greece or Rome with contemporary civilization of Near East, Central Asia, and East Asia. Stress is on political and military contact, cultural exchange, and comparison of institutions. Topics include The Birth of City-States in the Mediterranean and Near East (1000-500 B.C.); Greeks, Macedonians, and Persians: Birth of the Hellenistic World (600-250 B.C.); The Greeks in Iran and India (500 B.C.A.D. 200); or Imperial Rome and Imperial China (200 B.C.- A.D. 200). Fulfills the college intensive-writing requirement. Same as CLAS H400.

## HISA H401 Colloquium in Late Antiquity (4)

Mr. Harl. Interdisciplinary seminar on the transformation of classical civilization into the institutions and values of early Medieval and Byzantine societies. Topics include Rome and the Northern Barbarians (100 B.C.- A.D. 700); Rome and Iran (100 B.C.- A.D. 650); The Conflict of Pagans and Christians in the Roman Empire (A.D. 30-565); or the Great Transformation of Society and Economy (A.D. 100-1100). Fulfills the college intensive-writing requirement. Same as CLAS H401.
HISA 402 Topics in Medieval and Renaissance History (3)
Staff. A reading seminar designed to explore in depth some aspect of late medieval history that is of interest to students and instructor.
HISA H403 The Great Captains, Masters of Innovation in Warfare (4)
Mr. Harl. Interdisciplinary colloquium on how the careers of great commanders have altered warfare and society. Stress is on changes in political, economic, and social institutions that stood behind these careers as well as the impact of innovations in technology, tactics, and strategy. Commanders include Alexander the Great, Hannibal, Scipio Africanus, Belisarius, Gustavus Adolphus, Frederick the Great, and Napoleon. Fulfills the college intensive-writing requirement. Same as CLAS H403.

HISA 408 Seminar in Ancient Society and Economy (3)
Mr. Kehoe, Mr. Naiden. Topics include: The Family in Ancient Rome, Roman Imperial Society and Economy; Greeks, Romans, Barbarians. Same as CLAS 408.

## HISA H410 Colloquium and Field Work in Ancient and Medieval Mediterranean Civilizations (4)

Mr. Harl. Directed research on the cultural exchange and continuity of a major region of the Mediterranean world; Anatolian Civilizations; Aegean Civilization; or Rome, Campania and Sicily. This interdisciplinary seminar examines interaction between Hellenic civilization and neighboring cultures in Anatolia, Italy, Sicily, and Africa, the impact of Rome, and the emergence of Western, Greek Orthodox, and Islamic civilization in the medieval and early modern ages. Students conclude their study with a one-month academic excursion. Fulfills the college intensive-writing requirement Same as CLAS H409.
HISA 417 Seminar in Ancient Religion (3)
Staff. This course examines various topics in the history of Greek and Roman religion through readings and discussion of literary and epigraphical sources and examination of archaeological evidence. Topics include Mystery Cults of Greece and Rome; History of Roman Religion; Magic and the Supernatural in the Ancient World; Death and the Afterlife in the Ancient World; Problems in the Iconography of Greek and Roman Religion. Same as CLAS 418.

## HISA 418 Medieval Spain (3)

Mr. Boyden. Readings, discussion, and essays examine the sweep of Iberian history from the late Roman empire until the early 16th century, with particular attention to the Visigothic monarchy, the society and culture of Islamic al-Andalus, the reconquest and development of the Christian kingdoms of Castile-León, Portugal, and Aragon, and the interaction of Christians, Jews, and Muslims in peninsular society. The development of a distinctive Castilian culture, later transplanted in large part to Spanish America, will be studied through close attention to legal codes, domestic arrangements, military organization, the Inquisition, and the classics of medieval Castilian literature. Same as HISE 418.
HISA 488 Writing Practicum (1)
Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.

HISA 600 Seminar in Select Topics in Greek History (4)
Mr. Harl. Research seminar on select topics in Greek history: Archaic Greece (750-480 B.C.); Athenian Constitutional History; or Alexander the Great. Same as CLAS 600.

HISA 601 Seminar in Select Topics in Roman History (4)
Mr. Harl. Research seminar on select topics in Roman history: Roman Imperialism and Transmarine Expansion (264-50 B.C.); Roman Principate; Roman Provinces; Roman Imperial Army; or Later Roman Empire. Same as CLAS 601.
HISA 605 The Italian Renaissance (3)
Staff. An examination of cultural, religious, and political developments in Renaissance Italy and their impact on the rest of Europe. Same as HISE 605.

HISA 608 Seminar in Ancient Society and Economy (3)
Mr. Kehoe. Selected topics in ancient social and economic history. Same as CLAS 608.

## HISA 609 Seminar in Select Topics in Byzantine History (4)

Mr. Harl. Research seminar on select topics in Byzantine history: The Age of Justinian (518-565); The Byzantine Dark Age (610-1025); The Iconoclastic Controversy; or Byzantium and the Crusades (1025-1204). Same as CLAS 609.
HISA 623 Medieval Cities (3)
Mr. Luongo. This seminar explores the cities of medieval Europe, particularly in the high and late medieval period (roughly 1100-1500), and the ways in which urban space shaped the social, political, and cultural experience of medieval city-dwellers. Themes for readings and discussions include the idea of the city; sacred space and civic religious culture; governments, their institutions and physical sites; commerce and guilds; the gendering of urban space; and poverty and disease.

## HISA 625 Medieval Religious Culture (3)

Mr. Luongo. This seminar explores a variety of aspects of medieval religious beliefs and practices, raising questions about the specific character of medieval religious culture and about how historians study it. Themes addressed include the cult of the saints; monastic life and intellectual culture; gender and models of sanctity; art and religious meaning; relations between majorities and minorities; and "popular" religion.

## HISA 627 Women and Gender in the Middle Ages (3)

Mr. Luongo. This seminar addresses the construction of gendered identities in the Middle Ages, and on the experience of medieval women and men in relation to those identities. Seminar readings and discussions explore topics such as changes in attitudes towards women's authority during the Middle Ages; the experience of religious women and the meaning of female imagery in religious writings; women's opportunities and experiences in politics and the economy; the lives and writings of illustrious medieval women; and the relationship between medieval conceptions of femininity and masculinity, and their articulation of gender differences in medieval literature and science.

HISA 639 The Early Development of the Anglo-American Common Law (3)
Mr. Bonfield. A survey of the English legal system from the Anglo-Saxon period through the Age of Blackstone. Among the topics considered are the growth and development of such institutions as the central courts, the itinerant justices, the justices of the peace, and the jury. Attention also is given to the substantive development of civil and criminal law and the process of legal change in England. Same as HISE 639, Law 588.
HISA 697, 698 Special Offerings in Ancient/Medieval History (3, 3)
Staff. Courses offered by visiting professors or permanent faculty. For specific offering, see the Schedule of Classes. For description, consult the department.

## THE MIDDLE EAST / NORTH AFRICA

HISM 120 The Contemporary Middle East (3)
Mr. Baer. An introduction to the Middle East that emphasizes problems of topical interest presented in their historical context. Stress is upon developments since 1970.

## HISM 320 History of Islam (3)

Mr. Baer. A survey of the major themes and development of Islamic society from the 7th to the 16th century.
HISM 321 Modern Middle East (3)
Mr. Baer. A comparative survey of major political, social, and economic developments in the Middle East (including Iran) from the 16th century to about 1970, with emphasis upon the 19th and 20th centuries.

HISM 322 The Arab-Israeli Conflict (3)
Mr. Baer. This seminar traces the course of the Arab-Israeli conflict from the rise of Zionism, through the various Arab-Israeli wars, and up to the recent peace negotiations. Emphasis is on presenting the perspectives of all the parties to the Arab-Israeli conflict, and placing it in the context of the history of the Middle East as a whole.
HISM 388 Writing Practicum (1)
Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.
HISM 397, 398 Special Offerings in Middle Eastern History (3, 3)
Staff. Courses offered by visiting professors or permanent faculty. For specific offering, see the Schedule of Classes. For description, consult the department.

HISM 405 Medieval Northwest Africa (3)
Staff. A survey of the major themes and issues in the history of the Maghreb (650-1600), viewed both as an autonomous unit and as part of the eastern Islamic and Mediterranean worlds. Lands to be covered include Islamic Spain, Morocco, Algeria, Tunisia, and Libya.
HISM 414 Islam and the Western Mediterranean World, 1000-1900 (3)
Staff. Taking as its point of departure the Mediterranean as a single unit, this seminar has two objectives: to examine the historic encounter between North African Islam and the Christian societies of Spain, France, and Italy from the Middle Ages through modern times; to explore divergent approaches to the study of Mediterranean societies from the global vision of Fernand Braudel, to the pluralistic emphasis of Andrew Hess, to the concept of honor and shame as a value transcending religious divisions. Core course for history department's Mediterranean World track. Same as HISM 614.
HISM 488 Writing Practicum (1)
Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.
HISM 606 Seminar in the Modern Middle East and North Africa (3)
Staff. Readings and research on the society, economy, and politics of the Middle East and North Africa since the 16th century.

HISM 614 Islam and the Western Mediterranean World, 1000-1900 (3)
See HISM 314 for description.
HISM 697, 698 Special Offerings in Middle Eastern History (3, 3)
Staff. Courses offered by visiting professors or permanent faculty. For specific offering, see the Schedule of Classes. For description, consult the department.

## AFRICA

## HISB 130 Africa to 1880 (3)

Mr. Pierce. This course examines selected topics in the history of sub-Saharan Africa from antiquity to the period immediately preceding colonial conquest. It provides an overview of historical developments in particular regions, considers the implications of "Africa" as a unit of analysis, and provides a point of departure for more specialized courses in African history.
HISB 131 Africa Since 1880 (3)
Mr. Pierce. This course considers the history of sub-Saharan Africa under colonialism and after: the responses of people to governments very different from those they had previously, changes in African societies, the challenges of the postcolonial period. Topics covered include gender relations, peasant agriculture, wage labor, politics, and development.
HISB 312 West African Culture and Society (3)
Mr. Pierce. An in-depth exploration of social, political, and cultural developments in West Africa from the 7th century. Using primary and secondary sources, the course surveys origins, the growth of kingdom states, and Muslim influence. The consequences of externally induced social change will be discussed by focusing on the slave trade, colonialism, African nationalism, and current economic patterns.
HISB 313 Southern Africa (3)
Mr. Pierce. This course examines southern African history from 1652 to the present. It explores the particular political and cultural patterns which arose in the region as a result of contact and conflict between indigenous African societies and European settler communities.

HISB 323 The Atlantic Slave Trade (3)

Ms. Adderley. An exploration of the cultural, economic, and social history of the African slave trade into the Americas from the sixteenth to the nineteenth centuries. Emphasis is on the nature of this forced migration as a unique process of cultural interaction and cultural change.

## HISB 388 Writing Practicum (1)

Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.

HISB 397, 398 Special Offerings in African History (3, 3)
Staff. Courses offered by visiting professors or permanent faculty. For specific offering, see the Schedule of Classes. For description, consult the department.

## HISB 422 Prison, Medicine, and Madness in Africa (3)

Mr. Pierce. This seminar will consider various African societies’ techniques for dealing with individual and collective experiences of dealing with hurt, distress, and aberrance. We will go on to examine how these have been altered by colonialism and European institutions the prison, psychiatry, and allopathic medicine. Emphasis will be place on the work of the philosopher Michel Foucault and how his theories might apply to Africa.

## HISB 423 Gender and Sexuality in Modern Africa (3)

Mr. Pierce. This course will consider the histories of gender and sexuality in sub-Saharan Africa during the colonial and post colonial periods. Institutions like woman-woman marriage and various gender-transgressive identities suggest many African cultures do not divide "men" and "women" in the same way Western cultures have. We will consider gender and sexuality as a set of practices and as part of larger questions of work, domesticity, and social control.
HISB 488 Writing Practicum (1)
Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.

HISB 607 Africa and Gender Theory (3)
Mr. Pierce. This seminar will consider the question of how recent forms of gender theory might be applied to African societies. Readings will include Foucaultian, psychoanalytic, and political theory, as well as historical and enthnographic studies of particular societies.
HISB 611 Colonialism, Freedom, and the Problem of Difference (3)
Mr. Pierce. This course focuses on the legacy of colonialism for key political concepts such as citizenship and freedom. We will consider the construction of categories of difference like race, gender, and ethnicity and look at their changing meaning in the context of colonialism, slave emancipation, and freedom struggles in Africa and elsewhere in the colonial world.

HISB 697, 698 Special Offerings in African History (3, 3)
Staff. Courses offered by visiting professors or permanent faculty. For specific offering, see the Schedule of Classes. For description, consult the department.

## MODERN EUROPE

## HISE H121 Europe and a Wider World to 1789 (3)

## HISE 121 Europe and a Wider World: From the Renaissance to 1789 (3)

Staff. Not open to senior history majors. European history from the Middle Ages to the French Revolution: the Renaissance and the Reformation, the origin of the modern state and of capitalism, the beginnings of colonialism, the scientific revolution, and the Enlightenment.

## HISE H122 The Emergence of the Contemporary World Since 1789 (3)

HISE 122 The Emergence of the Contemporary World Since 1789 (3)
Staff. Not open to senior history majors. The impact of the French Revolution and Napoleon; reaction and revolt; the growth of nationalism; the industrial revolution and the rise of socialism; international rivalry, imperialism, and the coming of World War I; rise of totalitarianism and the failure of international security; World War II and postwar developments.
HISE 291, 292 Special Offerings in European
History (3, 3)
Staff. Courses offered by visiting professors or permanent faculty. For specific offering, see the Schedule of Classes. For description, consult the department.

HISE 314 Household, Gender, and Sexuality in Early Modern Europe (3)
Ms. Pollock. This course examines the structure, function, and emotional content of families in Europe from the Renaissance to the 18th century. The construction of gender as well as attitudes to and the regulation of sexuality will also be discussed.

## HISE 316 Europe in the 18th Century (3)

Mr. Hood. Examines developments in human ecology and power, critiques of tradition from diverse groups, and efforts to implement novel models, both cosmopolitan and nationalistic, for a rational and just society.
HISE 317 Europe in the 19th Century (3)
Mr. Hood. Explores the quest for popular and national security in an age of radically shifting material circumstances deeply influenced by concepts of political and social equality.
HISE 321 Modern Germany (3)
Ms. Otte. A survey of the political, social, and economic development of Germany from the revolution of 1848 to the aftermath of the Second World War. Topics include unification, Bismarckian Germany, the Weimar Republic, and the Third Reich.
HISE 323 The Chernobyl Catastrophe: Energy and Environment in the Soviet Union (3) Mr. Michaelides, Mr. Ramer. An interdisciplinary study of the causes and consequences of the Chernobyl disaster. Topics include nuclear energy: the structure and operation of nuclear reactors; science, energy, and engineering in the Soviet Union; the Soviet atomic bomb and nuclear power industry; the Chernobyl explosion and its impact on population and environment; the impact of Chernobyl on Soviet politics and society; problems of remediation. Same as MECN 410.
HISE 324 Russian History from the 9th to the Mid-19th Centuries (3)
Mr. Ramer. Political, social, and economic developments in Russia from the earliest times to the mid-19th century. Kievan and Muscovite background, reforms of Peter the Great, and the effects of westernization. First semester.
HISE 325 Russian History: The End of the Empire and the Soviet Period (3)
Mr. Ramer. The Great Reforms and industrialization in Russia and their effect upon political, social, and economic developments. The Russian revolutions of 1905 and 1917. The establishment, development and collapse of the Soviet regime. Second semester.

HISE 327 Literature and Society in Russia, 1800-1917 (3)
Mr. Ramer. An exploration of the central role that writers and literature played in the culture and society of nineteenth and early twentieth-century Russia. Readings include selected novels, poetry, critical essays, and memoirs as well as secondary historical literature. The course focuses upon the role of literature in Russian society and the relationship between literary representations and history.
HISE 328 Literature and Society in Russia, 1917-1991 (3)
Mr. Ramer. An exploration of the role that literature and writers played in the history and culture of the Soviet Union from its inception to its collapse in 1991. Readings include selected novels, poetry, and memoirs as well as secondary historical literature. The course focuses on the relationship between writers and the state and society in the Soviet period and the relationship between literary representations and history.
HISE 329 Origins of the Second World War, 1919-1939 (3)
Staff. European international affairs from the treaty of Versailles to Hitler's invasion of Poland, emphasizing the diplomatic, political, and military forces that contributed to the outbreak of the Second World War.
HISE 332 Early Modern England (3)
Ms. Pollock. A survey of the political, social, economic, and cultural development of England from the founding of the Tudor dynasty to the rebellion of the American colonies (1485-1776).

Topics include the Reformation, the civil war, relations with Scotland and Ireland, political thought, crime and riot, education, and domestic industry.

## HISE 333 Modern Britain (3)

Mr. Bernstein. A survey of the political, social and economic development of Britain from 1760 to the present. The course will examine how and why Britain became the world's greatest economic and imperial power, and in what ways it may have suffered a decline in the 20th century.

HISE 334 Topics in British History (3)
Mr. Bernstein, Ms. Pollock. Selected topics in British history from the 16th to the 20th centuries. Examples include: English Novel and English Society.
HISE 335 Britain in Decline? (3)
Mr. Bernstein. This is a history of Britain since 1945. The course will focus on perceptions of Britain's decline and the debates that have developed around that subject. These include not only Britain's decline as a great power, but also the debate over economic decline and whether there was some sort of failure, and the debate over cultural decline and the influence of Americanization and mass culture. Special attention will be paid to social and cultural developments as indications of dramatic improvement rather than decline, as well as the more traditional issues surrounding Britain's economy and its role in the world.

HISE 339 Europe Since 1939 (3)
Staff. A survey of European history since the outbreak of the Second World War, covering all major states. Topics will include the war and its aftermath, the division of the continent in the Cold War, the development of welfare states and socialist systems, the emergence of the idea of a united European community, and the collapse of Communism in eastern Europe.

HISE 341 Spain, 1369-1716 (3)
Mr. Boyden. Surveys the course of Spanish history from the completion of the medieval Reconquest and the rise of the Trastámara dynasty in the fourteenth century until the end of Habsburg Spain in the early eighteenth century, with particular attention to state formation and the role of Spain as a great European power in the sixteenth and seventeenth centuries. Besides politics, the course examines central topics in the social, religious and cultural history of late medieval and early modern Spain.

## HISE 342 The Age of Reformation (3)

Mr. Boyden. Surveys the transformation of Western Christendom (c. 1400-1700), with emphasis on: late medieval religious practice; discontent and reform currents within the Church; the Protestant Reformations of Luther, Zwingli, Calvin, anabaptists, and others; and Catholic response and Counter-Reformation.

## HISE 388 Writing Practicum (1)

Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.
HISE 391, 392 Special Offerings in European
History (3, 3)
Staff. Courses offered by visiting professors or permanent faculty. For specific offering, see the Schedule of Classes. For description, consult the department.

## HISE 418 Medieval Spain (3)

Mr. Boyden. Readings, discussion, and essays examine the sweep of Iberian history from the late Roman empire until the early 16th century, with particular attention to the Visigothic monarchy, the society and culture of Islamic al-Andalus, the reconquest and development of the Christian kingdoms of Castile-León, Portugal, and Aragon, and the interaction of Christians, Jews, and Muslims in peninsular society. The development of a distinctive Castilian culture, later transplanted in large part to Spanish America, will be studied through close attention to legal codes, domestic arrangements, military organization, the Inquisition, and the classics of medieval Castilian literature. Same as HISA 418.
HISE 419 The Spanish Civil War (3)
Mr. Boyden. The Civil War of 1936-39 considered both as the watershed of modern Spanish history and as an event of major international significance. Readings and discussion focus on the causes and course of the conflict, and on its consequences down to the present.

HISE H421 Topics in European Social History 1500 to 1800 (3)
Ms. Pollock. Readings, discussion, and a research paper focussing on a selected topic. These include: "Death, Disease, Destitution and Despair in Early Modern Europe": an in-depth seminar on the experience of and social reaction to illness, insanity, poverty, and death in Western Europe.
"Crime and Punishment in Hanoverian England": an in-depth seminar on crime and the justice system in eighteenth-century England.

## HISE 488 Writing Practicum (1)

Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.

## HISE 605 The Italian Renaissance (3)

Staff. An examination of cultural, religious, and political developments in Renaissance Italy and their impact on the rest of Europe. Same as HISA 605.
HISE 610 Renaissance and Reformation, 1450-1660 (3)
Mr. Boyden. Examines religious and secular aspects of the breakdown of Christian unity from the Renaissance to the mid-17th century. Topics include the decline of the Church; philosophical and doctrinal conflict; dissent and renewal in the Protestant Reformation; the Catholic Reformation; ideology, politics, and wars of religion; Counter-Reformation; and foreign intervention in France and the Netherlands.
HISE 614 Revolutionary-Napoleonic Europe, 1789-1815 (3)
Mr. Hood. This course explores the questioning of traditions throughout Europe, the exchange of concepts of social organization among regions, and the emergence of an imperial power that redirected civilization.
HISE 625 The Russian Revolution and the Soviet Regime (3)
Mr. Ramer. Russia on the eve of World War I; the revolution of 1917 and the new Soviet regime; the origins and consequences of Stalinism; Khrushchev's de-Stalinization and the Brezhnev era; the origins of perestroika and the collapse of the Soviet regime. Previous exposure to Russian history recommended but not required.
HISE 631 France Since 1815 (3)
Mr. Hood. This course focuses on tensions between the quest for social justice and the aspiration to national grandeur, with particular attention to popular protest, passive as well as active.

HISE 633 Imperial Spain, 1469-1716 (3)
Mr. Boyden. Examines the rise and decline of Spanish power in Europe and the Atlantic world and the internal development of the Spanish kingdoms from unification under Fernando and Isabel through the reigns of Charles V and Philip II to the end of the Habsburg dynasty. Besides politics and diplomacy, reading and discussions will address religious practice and the Spanish Inquisition, the art and literature of the Golden Age, and the cult of honor with its consequences for social structure, economic life and gender relations.
HISE 636 English Civil War (3)
Ms. Pollock. This course explores the causes, conduct, and consequences of the English Civil War from 1603-1660.

## HISE 637 Seminar in Early Modern England (4)

Mr. Bernstein, Ms. Pollock. Readings, discussion, and research paper will focus on a selected topic of English history between 1485 and 1789. Topics will include Religion and Society and Georgian England 1714-1783.

## HISE 638 Seminar in Modern British History (4)

Mr. Bernstein. Readings, discussion, and a research paper focusing on one of the following periods of modern British history: Britain in the Age of Revolution, 1760-1850; The Victorian

Era, 1830-1900; Britain in the Age of World War, 1900-1945. On occasion, the seminar might focus on a topic rather than a period.
HISE 639 The Early Development of Anglo-American Common Law (3)
Mr. Bonfield. A survey of the English legal system from the Anglo-Saxon period through the Age of Blackstone. Among the topics considered are the growth and development of such institutions as the central courts, the itinerant justices, the justices of the peace, and the jury. Attention also is given to the substantive development of civil and criminal law and the process of legal change in England. Same as HISA 639, Law 588.

## HISE 642 Readings in the Holocaust (3)

Mr. Powell. Examines the origins and development of the Nazi "Final Solution"; the experience of the victims, perpetrators, rescuers, and bystanders; and the relationship between history and memory.
HISE 691, 692 Special Offerings in European History (3, 3)
Staff. Courses offered by visiting professors or permanent faculty. For specific offering, see the Schedule of Classes. For description, consult the department.

## UNITED STATES

HISU H141 History of the United States from Colonization to 1865 (3)
HISU 141 The United States from Colonization to 1865 (3)
Staff. Not open to senior history majors. An analysis of the major forces and events that shaped American history from its beginnings through the Civil War.
HISU H142 History of the United States from 1865 to the Present (3)
HISU 142 The United States from 1865 to the Present (3)
Staff. Not open to senior history majors. An analysis of the forces and events that shaped American history from the Civil War to the present.

HISU 291, 292 Special Offering in United States History (3, 3)
Staff. Courses offered by visiting professors or permanent faculty. For specific offering, see the Schedule of Classes. For description, consult the department.

## HISU 334 Early American Jewish History (3)

Mr. Latner. This class focuses on the period from the earliest Jewish settlers in mid-seventeenth century colonial America through the establishment of viable Jewish communities and institutions by the latter part of the nineteenth century. It covers the so-called "Sephardic" and "Germanic" periods of American Jewish history, prior to the wave of Eastern European immigration. Among the themes explored are the tension between Jewish identity and the pressures of assimilation; the transformation of the synagogue; the emergence of Jewish social and cultural institutions; changing religious practices and the rise of Reform Judaism. Events and themes are placed within the broader context of American history. Same as JWST 324
HISU 340 Women and Gender in U.S. History to 1830 (3)
Ms. Devlin. This course focuses on the construction of gender roles in the formative years of American history. It will approach the subject from two different perspectives: the ways in which women have had a different past from men, and the ways in which women have participated in the more complex experiences of the entire society. The course will also focus on differences between women according to race, class, and ethnicity both in the private sphere of the home and family, and in the public sphere of work and politics.

HISU 341 Women and Gender in U.S. History: 1830 to the Present (3)
Ms. Devlin. This course is a survey of women and gender in the United States from 1830 through the present. The class will examine the political and social history of women and girls, as well as the role played by ideologies of gender-both masculinity and femininity-in shaping historical events. Topics will include the transformation of women's identities over time; slavery and the family; the winning of the vote; intersections between gender and race; the rebirth of feminism; sexuality and popular culture; and the "post-feminist" decades.

## HISU 343 History of American Religion (3)

Mr. Sparks. This lecture course surveys the development of the many different religious traditions in the United States from the seventeenth through the twentieth centuries. The diverse origins of America's early settlers and the guarantees of religious freedom embedded in the Constitution encouraged the development in the United States of the most religiously diverse society in the Western world. We will explore that diversity and also seek commonalities between religious movements and their impact on the larger society. In such a survey, the emphasis will necessarily be on those formal religious movements that have made a major impact on American culture, but the importance of less "mainline" groups and popular belief will also be discussed. The course is non-denominational, non-creedal, and taught as cultural/intellectual/social history.

## HISU 344 African-American Religious History (3)

Mr. Williams. This course surveys the history of African-American religious institutions, leaders, and beliefs from slavery to the present. The course examines the diversity of African-American religious expressions within the larger context of black social and political life. Topics include the transmission of African culture to the New World, slave religion, independent black churches, race relations, black nationalism, as well as gender and class, social reform and everyday resistance.

## HISU 345 Salem Witchcraft (3)

Mr. Latner. Primarily relying on contemporary documents such as trial records, tax lists, maps, ministers' sermons, diaries, and narrative accounts, students reconstruct the events of Salem in 1692. Readings and discussions explore the demographic basis of New England communities, town politics, Puritanism, and the relationship between religion and the occult in early modern society. Most semesters, microcomputers will be used to analyze information. No previous computer experience is required or necessary.
HISU 346 History of the American West (3)
Staff. The Trans-Mississippi West is central to the American nation's experience and identity. This course will examine its rapid development in the nineteenth and twentieth centuries. Recurrent themes studied will include cycles of boom and bust, the conflicts among diverse peoples, and the interactions between westerners and their arid environment.
HISU 347 Colonial Louisiana, 1700-1812 (3)
Staff. A survey of the history of the Province of Louisiana and the Louisiana Territory under French, Spanish, and United States rule from its discovery and settlement through establishment of the State of Louisiana in 1812. Combining lecture and seminar format, the course explores social, economic, political, and cultural developments and institutions that have contributed to the heritage and characteristics of the region. Louisiana offers a unique opportunity for the study of comparative colonial patterns, 1700-1812. Same as HISL 347.
HISU 348 Louisiana History (3)
Staff. A survey of the history of Louisiana from its settlement to the present.
HISU 349 The Coming of the Civil War: United States, 1830-1861 (3)
Mr. Latner. An examination into the origins and causation of the Civil War. Emphasis is placed on the political, social, and economic background of the Civil War, particularly the party system, abolitionism, slavery, and race relations. The course ends with the firing on Fort Sumter.
HISU 350 The Civil War and Reconstruction (3)
Mr. Powell. The course treats military, political and economic developments during the American Civil War, and examines the postwar consequences of emancipation for Southern and American history.
HISU 353 War and National Policy in United States History, 1689-1898 (3)
Staff. Focusing on the formative years, 1689 through 1898, this course examines United States policies leading to involvement in war, wartime strategic decisions, and the allocation of national
resources. Particular attention is given to the role of leaders in making critical decisions, the impact of war upon domestic affairs, and the organization of American military forces.

## HISU 355 American Political Traditions: Foundations, 1776-1860 (3)

Staff. An examination of the sources of American political thought and of the processes which transformed principles into laws and institutions. The course focuses on the philosophies and the statesmen who contributed both to the spirit of the new republic and to the shape of its political institutions.

## HISU 358 Slavery and Freedom in the Antebellum

South (3)
Staff. The course surveys the colonial origins of American racial attitudes; African adaptations to bondage; the historical evolution of plantation slavery as a social institution, labor system, and method of racial control; the nature of white antislavery sentiment; the content and meaning of proslavery ideology; and the status of the free Negroes in slave society.
HISU 359 War and National Policy in United States History, 1898 to the Recent Past (3)
Staff. Focusing on the years from 1898 to the recent past, this course examines United States policies leading to the involvement in war, wartime strategic decisions, and the allocation of national resources. Particular attention is also given to the role of leaders in making critical decisions, the impact of war upon domestic affairs, and the organization of American military forces.

HISU 360 The History of Early American Law (3)
Ms. Schafer. The major developments in American legal history from the colonial settlements to the Civil War with primary emphasis on the period 1776-1865.
HISU 361 U.S. Identity Politics, 1945-Present
Mr. Hurewitz. This course focuses on three major social and political movements of the last fifty years: black civil rights, women's liberation, and gay liberation. The class examines the social and cultural forces that motivated each movement, the struggles each faced (both internally and externally), and some portion of their legacies. More broadly, the course will also ask why "identity" has come to seem so significant in American social and political life.

## HISU 369 African-American History to 1865 (3)

Ms. Adderley. A survey of the history of people of African descent in the United States from the 17th century to the end of the Civil War. The course will explore the development of a distinct African-American experience within the context of colonial North America and the early United States. Emphasis will be placed on understanding the origins and nature of slavery not simply as a system of forced labor, but as a system of unique cultural relationships.

## HISU 370 African-American History, 1865 to the Present (3)

Ms. Adderley. This course surveys the history of people of African descent in the United States from the end of the Civil War until the late twentieth century. A central theme of the course will be the varying ways in which African-Americans sought, both successfully and unsuccessfully, to achieve political, social, and economic freedom in the wake of emancipation.
HISU 381 Southern Folk Culture (3)
Mr. Sparks. An examination of the culture of the Southern folk over a 200 -year period stressing the transition made by the plain folk from rural, agricultural life to urban, working-class existence. Primary emphasis will be devoted to ethnic composition, music and entertainment, work and recreation, folklore and customs, religion and violence.
HISU 382 The Mythic South in Film and Television (3)
Mr. Sparks. Hollywood's portrayal of the South stands as one of the nation's central cultural myths and revolves around the tension between a mythic ideal and a tragically flawed reality. Initially, film makers beginning with the advent of epic films focused on the South's idyllic image as an idealistic and genteel civilization ravaged by the Civil War and Reconstruction. After World War II, film makers explored the region's seamier side in southern Gothic portrayals of the region's decadence and depravity. From hillbillies to slaves, from plantation mistresses to redneck politicians, no southern stereotype has escaped film and television. This course will use these productions as primary sources in cultural history to explore the mythic South.

HISU 383 The Fifties (3)
Ms. Devlin. This course examines the intersection between the Cold War, domestic politics, and cultural change in America during the decade of the 1950s. Topics will include McCarthyism, conformity and rebellion, youth culture, the beginnings of the civil rights movement, the rise of television, and the transformation of the American family.

HISU 393, 394 Special Offerings in United States History (3, 3)
Staff. Courses offered by visiting professors or permanent faculty. For specific offering, see the Schedule of Classes. For description, consult the department.

## HISU 449 The 1850's: Union in Peril (3)

Mr. Latner. This seminar examines in detail the sectional crises of the 1850 's, secession, and the outbreak of the Civil War. A major portion of the course focuses on the period between the election of Abraham Lincoln, in November 1860 and the Battle of Fort Sumter in April 1861. The class will utilize a multimedia computer program to analyze the critical decisions made by Lincoln during this period.
HISU 452 Rise and Fall of the Plantation South (3)
Mr. Sparks. This reading and research seminar will explore major topics in the social, cultural, economic, and political history of the plantation South. The course will begin with the origins of the plantation system in the colonial era to its eventual decline in the 20th century. We will consider regional variations tied to the production of export crops including tobacco, rice, cotton, and sugar. Major themes will include issues of race and class, changing labor systems, comparative history, and the impact of the planting system on the region’s history.
HISU 462 Autobiography and Southern Identity (3)
Staff. Prerequisite: one prior course in Southern history or literature or approval of instructor. An interdepartmental seminar that employs autobiography to explore the relationship between regional culture and individual experience in the 20th-century American South. While recognizing the place of autobiography as a literary genre, the seminar will subordinate the concerns of critical theory to the more immediate task of evaluating the strengths and limitations of autobiographical testimony as a form of historical evidence. Class members will read and discuss one book-length autobiography each week.

HISU 488 Writing Practicum (1)
Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.
HISU 641 Colonial British American History (3)
Staff. Study of 17th- and 18th-century British America. Emphasis is on settlement, political development, and social origins.

HISU 642 The Era of the American Revolution, 1763-1787 (3)
Staff. Emphasis is on the origins and development of the American Revolution and the subsequent rise of state and national government under the Articles of Confederation.
HISU 645 Jacksonian America, 1815-1848 (3)
Mr. Latner. Political developments of the second American party system. Among themes treated are nationalism, sectionalism, Jacksonian Democracy, and reform movements.

HISU 649 Sexuality and the Advent of Modern American Culture (3)
Ms. Devlin. An exploration of the different ways in which sexuality and culture have intersected in the United States over the course of the modern period. Topics include perspectives on prostitution with special attention to the "vice crusaders" of the late nineteenth century; the politics of homosexuality; the effects of mass culture and consumer values on the popular meaning of sexuality; the "sexual revolution" of the nineteen seventies; the rise of the romance novel and its relationship to gender; and the question of the role of sexuality in identity formation at the end of the century.
HISU 650 Emergence of the Modern U.S., 1917 to 1945 (3)
Mr. Hurewitz. Covers U.S. domestic history and role in world affairs from World War I through World War II. Topics include the Twenties: myths and realities; Depression America; Franklin and Eleanor Roosevelt and the emergence of the modern presidency; World War II, at home and abroad.

HISU 651 Recent U.S. from 1945 to the Present (3)
Mr. Hurewitz. U.S. domestic history and role in world affairs from 1945 to the present. Topics include the Cold War at home; the Vietnam War; politics and protest in the turbulent 60's; the civil rights and women's movements; and the presidency from Truman to Clinton.
HISU 652 Ideas and Thinkers in American History, 1607-1865 (3)
Staff. This course explores the evolution of American thought, examining ideas and thinkers in full historical and biographical context. Topics include European perceptions of the New World, Puritan theology, the American Enlightenment, the political thought of the Revolution and the Constitution, antebellum social reform, New England transcendentalism, and the impact of the Civil War.

## HISU 654 African-American Cultural History (3)

Ms. Adderley. An exploration of the formation of distinctive African-American cultural forms in the United States from the years of African enslavement up to the present day. The course will embrace a broad definition of culture to include religion and other community institutions, folklore and folk belief, various leisure activities as well as more obvious cultural manifestations such a music and the arts.

## HISU 661 The Old South (3)

Mr. Sparks. Economic, cultural and political history of the South from the settlement of Jamestown through the Civil War. Emphasis is on those factors that made the South a unique section of the nation.

## HISU 662 The New South, 1865-Present (3)

Mr. Sparks. An examination of the economic, political, cultural, and intellectual forces that have shaped the American South since the Civil War. Central themes include the rise of sharecropping and tenancy, the struggle for civil rights, the emergence of the two-party politics, and the metamorphosis of popular values and social norms triggered by the events of the 1960s. The course will explore the paradox of continued self-conscious regional identity in the face of constant internal change.
HISU 675 Africans in the Americas: Comparative Social and Cultural History of the African Diaspora (3)
Ms. Adderley. This seminar will explore the dispersion and fate of African peoples and their descendants in the United States, the Caribbean, and Central and South America with a view to developing an understanding of African-American culture as a diverse regional phenomenon rather than one confined to the United States. Same as HISL 675.

HISU 693, 694 Special Offerings in United States History (3, 3)
Staff. Courses offered by visiting professors or permanent faculty. For specific offering, see the Schedule of Classes. For description, consult the department.

## LATIN AMERICA AND CARIBBEAN

HISL 171 Introduction to Latin American History (3)
Staff. Not open to senior history majors. Main currents of Latin American civilization from the European conquest to the present, with special attention to the historical background of present controversies.
HISL 172 Introduction to Caribbean History (3)
Ms. Adderley. This course provides a survey introduction to the history of the Caribbean basin including the island territories located in the Caribbean Sea as well as those Atlantic island and regions of mainland Central and South America which have shared similar historical experience with the Caribbean basin. The course covers the period from the mid fifteenth century immediately before European arrival up the present day. Major themes will include European conquest and colonialism, African enslavement, East Asian immigration, the development of multi ethnic societies, U.S. relations with the Caribbean region, and the role of tourism in recent Caribbean history.
HISL 295, 296 Special Offerings in Latin American

## History (3)

Staff. Courses offered by visiting professors or permanent faculty. For specific offering, see the Schedule of Classes. For description, consult the department.

## HISL 347 Colonial Louisiana, 1700-1812 (3)

Staff. A survey of the history of the Province of Louisiana and the Louisiana Territory under French, Spanish, and United States rule, from its discovery and settlement through establishment of the State of Louisiana in 1812. Combining lecture and seminar format, the course explores social, economic, political, and cultural developments and institutions which have contributed to the heritage and characteristics of the region. Louisiana offers a unique opportunity for the study of comparative colonial patterns, 1700-1812. Same as HISU 347.
HISL 371 Seminar: The Colonial Heritage of Latin America (3)
Ms. Schroeder. Readings and research on topics in the Hispanic period aimed at developing an understanding of Latin American society and institutions as they developed from the 16th to the 19th century.
HISL 372 Seminar: Topics in Modern Latin America and Caribbean History (3)
Staff. Selected topics in Latin American and Caribbean history from 1800 to the present. Religion in Latin America; Dictators; Evita.

HISL 374 Caribbean Cultural History (3)
Ms. Adderley. This course explores the development of distinctive cultural forms and patterns in the Caribbean basin from the arrival of Europeans at the end of the 15th century up to the present day. Emphasis will be placed on understanding the diverse origins and particular social contexts from which different aspects of Caribbean culture have developed.
HISL 378 Women in Latin American History (3)
Ms. Yeager. An exploration of the pivotal role Latin American women have played in the area's historical development. Attention is given to how women acquired and exercised power in a male-dominated society and how class, race, sex and sex roles, and traditions have influenced and shaped women's roles.
HISL 380 Colloquium: Caribbean Revolutions (3)
Staff. Weekly readings and discussions of popular revolutions in the Caribbean region. Some attention is paid to the revolutionary tradition in Middle America before concentrating on the 20th-century revolutions there. In a search for common factors, attention is devoted not only to countries where significant revolutions have occurred already such as in Guatemala, Cuba, and Nicaragua, but also the others where revolutionary potential exists.
HISL 388 Writing Practicum (1)
Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.
HISL 395, 396 Special Offerings in Latin American History (3, 3)
Staff. Courses offered by visiting professors or permanent faculty. For specific offering, see the Schedule of Classes. For description, consult the department.
HISL H420 History of Voodoo and Other African Derived Religions in the Americas (3)
Ms. Adderley. Using works of anthropology, folklore, history, and literature, this course examines the history of voodoo in both New Orleans and Haiti, as well as the history of similar religions such as Brazilian candomble, Cuban santeria and Trinidadian orisha worship. Students will explore the development of these religious systems from slavery to the present day.
HISL 488 Writing Practicum (1)
Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.
HISL 674 Latin American Social History (3)
Ms. Yeager. A specific topic is chosen each year. The course has dealt with slavery, race relations, and social revolutions in previous years. Future topics include the history of the peasantry and peasant movements in Latin America and the development of the Latin American urban working class. Lectures, readings and discussions.
HISL 675 Africans in the Americas: Comparative Social and Cultural History of the African Diaspora (3)
Ms. Adderley. This seminar will explore the dispersion and fate of African peoples and their descendants in the United States, the Caribbean, and Central and South America with a view to developing an understanding of African-American culture as a diverse regional phenomenon rather than one confined to the United States. Same as HISU 675.

HISL 676 Colonial Mexico (3)
Ms. Schroeder. Social, intellectual, and institutional history of colonial Mexico.
HISL 677 Modern Mexico (3)
Mr. MacLachlan. Political, economic, and social history of Mexico during the national period.

## HISL 678 Readings in Caribbean History (3)

Ms. Adderley. A historigraphical course focusing on major texts, major themes, and major trends in the historical literature of the Caribbean, including the island territories along with Belize and the Guianas.

## HISL 679 Central America (3)

Mr. Wolfe. The history of Central America since 1800 with particular attention to the establishment of political independence, economic colonialism, the transfer of hegemony over the region from Europe to North America, problems of chronic political and social instability, and popular revolutions in the 20th century.
HISL 681 Colonial Brazil (3)
Mr. MacLachlan. Brazilian colonial history from 1500 to 1822. Emphasis on major economic, social, and political developments in the context of the Portuguese Empire. Contrasts and similarities with other imperial systems receive particular attention.
HISL 682 Modern Brazil (3)
Mr. MacLachlan. Brazilian history from 1822, including the first and second empires and the republic. Attention is given to the liquidation of slavery, the replacement of imperial values by the establishment of the republic, and the military question.
HISL 683 The Andean Nations (3)
Ms. Yeager. A survey of the development of South America's Andean region beginning with the Inca Empire, through the establishment of the vice-royalty of New Castile and emphasizing the modern nations of Chile, Peru, and Bolivia.
HISL 684 History of Argentina (3)
Ms. Yeager. Political, economic, and social history of Argentina from 1516 to the present.

HISL 685 United States-Latin American Relations (3)
Staff. Traces the diplomatic, economic, and cultural relations between the United States and Latin America from the American Revolution to the present. This course seeks to demonstrate the interrelated roles of diplomacy, commerce, and inter-American cultural relations throughout the 19th and 20th centuries. Same as HISU 685.

HISL 695, 696 Special Offerings in Latin American History (3, 3)
Staff. Courses offered by visiting professors or permanent faculty. For specific offering, see the Schedule of Classes. For description, consult the department.

## MEDITERRANEAN WORLD

This track requires a six-course concentration with eligible courses to be drawn from the list below. Among the six courses, two must be numbered 400 or above; there must be at least one course each from Ancient/Medieval Europe, Modern Europe, and Middle East/North Africa; and no more than three courses may be in any one area. Students majoring in this field may offer only one of the following lecture courses: HISA 100, HISA 101, HISA 302, HISA 303. Students choosing this track will also be required to offer a second field of three courses and one additional history course as defined above under Major requirements.
HISA H400 Colloquium in Ancient History
HISA H401 Colloquium in Late Antiquity
HISA H410 Colloquium and Field Work in Ancient and Medieval Mediterranean Civilizations
HISA 100 Ancient Near East and Greece
HISA 101 Rise of Rome
HISA 103 Medieval Europe, 1100-1450
HISA 302 High Roman Empire
HISA 303 Early Medieval and Byzantine Civilization from Constantine to the Crusades
HISA 310 Select Topics in Greek History
HISA 311 Select Topics in Roman History
HISA 318 Greek Religion
HISA 330 Italy and Spain in the Age of the Renaissance
HISA 418 Medieval Spain
HISA 600 Seminar in Select Topics in Greek History
HISA 601 Seminar in Select Topics in Roman History
HISA 605 Italian Renaissance
HISA 608 Seminar in Ancient Society and Economy
HISA 609 Seminar in Select Topics in Byzantine History
HISA 619 Seminar in Ancient Religion
HISA 623 Medieval Cities
HISA 627 Women and Gender in the Middle Ages
HISE 330 Italy and Spain in the Age of the Renaissance
HISE 341 Spain 1369-1716

HISE 418 Medieval Spain
HISE 419 Spanish Civil War
HISE 605 Italian Renaissance
HISE 631 France Since 1815
HISE 633 Imperial Spain, 1469-1716
HISM 320 History of Islam
HISM 321 Modern Middle East
HISM 322 History of Arab-Israeli Conflict
HISM 404 Modern North Africa, 1516-1914
HISM 405 Medieval Northwest Africa

## ATLANTIC WORLD

This track requires seven courses for the concentration; a traditionally defined second field of three courses is required to complete the major. Within the Atlantic World track, the eligible courses are listed below. The concentration must include: at least two courses numbered 400 or above, at least three courses in one topical field (see below), and two courses in a second topical field. Each of these topical fields must include courses from at least two geographical areas (HISB, HISE, HISL, HISU) and at least three geographical areas must be represented in the concentration as a whole.

## TOPICAL FIELDS

## Topical Field A: Slavery and Emancipation

HISB 312 West African Culture and Society
HISB 323 The Atlantic Slave Trade
HISL 675 Africans in the Americas
HISU 347 Colonial Louisiana, 1700-1812
HISL 347 Colonial Louisiana, 1700-1812
HISU 349 Coming of the Civil War: United States, 1830-1861
HISU 350 The Civil War and Reconstruction
HISU 358 Slavery and Freedom in the Antebellum South
HISU 369 African-American History to 1865
HISU 661 The Old South

## Topical Field B: Atlantic Empires

HISB 313 Southern Africa
HISB 323 The Atlantic Slave Trade
HISE 332 Early Modern England
HISE 333 Modern Britain
HISE 334 Topics in British History: the British Empire
HISE 614 Revolutionary-Napoleonic Europe, 1789-1815
HISE 633 Imperial Spain
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HISE 637 Seminar in Early Modern British History: Georgian England HISL 676 Colonial Mexico
HISL 679 Central America
HISL 681 Colonial Brazil
HISL 684 History of Argentina
HISU 641 Colonial British American History

## Topical Field C: Social and Economic Structure

HISB 607 Africa and Gender Theory
HISE 314 Household, Gender, and Sexuality in Early Modern Europe HISE 334 Topics in British History: English Novel and English Society HISE H421 Topics in European Social History 1500 to 1800
HISE 610 Renaissance and Reformation, 1450-1660
HISL 378 Women in Latin American History
HISL 674 Latin American Social History
HISL 675 Africans in the Americas
HISL 678 Readings in Caribbean History
HISU 345 Salem Witchcraft
HISU 652 Ideas and Thinkers in American History, 1607-1865

## OTHER APPLICABLE COURSES

These courses may be applied toward the geographical area requirement or toward the threecourse requirement from the traditionally defined second field.
HISB 130 Africa to 1880
HISE 121 Europe and the Wider World From the Renaissance to 1789
HISE 316 Europe in the 18th Century
HISL 171 Introduction to Latin American History
HISL 371 Seminar: The Colonial Heritage of Latin America
HISU 141 The United States from Colonization to 1865

## SPECIAL COURSES

## HIST 391, 392 Special Offerings in History (3, 3)

Staff. Courses offered by visiting professors or permanent faculty. For specific offering, see the Schedule of Classes. For description, consult the department.

## HIST 456, 457 Internship Studies (1-3, 1-3)

Staff. Prerequisites: approval of instructor and department. An experiential learning process coupled with pertinent academic course work. Open only to juniors and seniors in good standing. Registration is completed in the academic department sponsoring the internship on TUTOR. Only one internship may be completed per semester. (Note: A maximum of six credits may be earned in one or two courses.)

## HIST 491, 492 Independent Studies (1-3, 1-3)

Staff. Prerequisite: departmental approval. Qualified students may arrange for independent study with approval of an instructor (dependent upon area of study) and their faculty advisor. Details of each student's program will vary, but all will involve some combination of readings, oral reports, and written work. Only one course of 491 or 492 is accepted toward a major in history.
HIST H499-H500 Honors Thesis $(3,4)$
Staff. For senior honors candidates. Intensive reading, research, and writing in a selected field of history. Students should discuss their honors thesis with a prospective director during the semester prior to that in which they take H499.
HIST 691, 692 Special Offerings in History (3, 3)
Staff. Courses offered by visiting professors or permanent faculty. For specific offering, see the Schedule of Classes. For description, consult the department.

## International Development

Office: The Payson Center for International Development and Technology Transfer, 300 Hébert Hall

Phone: 504-865-5240
Fax: 504-865-5241
Website: www.payson.tulane.edu/
Program Administrator
Eamon Kelly, Payson Center (Director of Academic Programs)

## COORDINATE MAJOR

The major in International Development must be coordinated with a separate major in a traditional discipline. This traditional discipline is the primary major which determines whether a student earns a B.A. or a B.S. degree. The coordinate major in International Development provides students with an education firmly rooted in the liberal arts tradition, while also providing them with a focused and international framework for analysis of current international events. A student in the ID program will graduate with a sophisticated understanding of contemporary global issues, especially as they pertain to the developing world.
International Development is a social science that embraces the theory and practice of improving the quality of life of people in the developing world. The program emphasizes a comprehensive approach to standard international development analysis by incorporating not just economic, but social, environmental, and cultural dimensions as well. ID, as a field of study, is relatively new. It emerged from critiques of post-World War II programs designed to alleviate poverty and promote economic, democratic and social development in second and third world countries after independence. ID studies, therefore, promote a cross-disciplinary understanding of economics, sociology, political science, anthropology and language, among others. Courses will be taken in various departments in the Liberal Arts and Sciences as well as in at the Payson Center for International Development and Technology Transfer.
Students will declare the major with a member of the faculty. Faculty will meet with students in the program at least once a semester to discuss their degree status in order to ensure progress toward the completion of the degree. Students will then have the option of choosing from one of several thematic tracks listed below. The core curriculum will provide students with a comprehensive understanding of world issues and the appropriate foundation to design the rest of their program.

## MAJOR REQUIREMENTS

## (minimum 42 credit hours)

18 credits required from the International Development curriculum

12 credits required of a foreign language (above 203 level)**
12 credits required for "track" studies (at least two courses at the 600 level or above)
** The number of required credits will vary depending on participation in summer, semester or year abroad study programs.

## MINOR REQUIREMENTS

(18 credit hours)
INDV 101 Introduction to International Development
ECON 101 Introductory Microeconomics
ECON 102 Introductory Macroeconomics
INDV 320 Approaches to Sustainable Development
INDV 400 The Geo-Politics of Global North-Global South Relations
INDV 410 Information Technology and International Development
REQUIRED COURSES FOR THE MAJOR

## I. International Development ( 18 credits)

INDV 101 Introduction to International Development
ECON 101 Introductory Microeconomics
ECON 102 Introductory Macroeconomics
INDV 320 Approaches to Sustainable Development
INDV 410 Information Technology and International Development
INDV 490 International Development Capstone Seminar

## II. Foreign Language (12 credits)

12 credits required of a foreign language (above 203 level)
We strongly encourage students to study a foreign language abroad in a summer, semester or year long program. Depending on program participation, the number of credits for a foreign language will vary. The goal is a spoken proficiency in a foreign language, preferably one that is spoken in many countries of the developing world (e.g. French, Spanish, Portuguese, Mandarin, etc). Spoken proficiency is defined according to criteria established by ACTFL and the Payson Center. Students will be tested in the same fashion as they currently are at Tulane for meeting proficiency requirements. Students who do not study abroad must take at least 12 credits of a foreign language above the 203 level; however, students who enter into the program already fluent in a foreign language may test out of this requirement although they will be encouraged to attempt a third language.

## III. One of the following Tracks ( 12 credits)

## Social Issues in Development Track

ANTH 338 Cultural Dynamics
ANTH 339 Peasant Society and Culture
COMM 464 Communication and Culture in the Caribbean
HISB 312 West African Culture and Society
HISB 607 Africa and Gender Theory
HISB 611 Colonialism, Freedom, and the Problem of Difference
PHIL 334 Humanities Place in Nature
PHIL 652 Environmental Ethics
SOCI 160 Environmental Sociology
SOCI 690 Sociology of Development in Latin America
SOCI 694 Political Sociology of Latin America
SOCI 696 Urban Latin America

## Geo-Politics of Development Track

ANTH 319 Economic Anthropology
COMM 450 Political Communication
ECON 333 Environmental Economics
ECON 337 The World Economy
ECON 359 Economic Development of Latin America
ECON 365 Agricultural and Rural Development in Latin America
ECON 374 Asia-Pacific Economic Development
ECON 466 Seminar on Latin American Economies
*ENHS 675 Politics and Environmental Policies
INDV 400 The Geo-Politics of Global North-Global South Relations
PECN 301 Introduction to Political Economy
POLC 335 Latin American Governments
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POLC 336 Environmental Politics of Latin America
POLC 338 Asian Governments
POLC 354 International Political Economy
POLC 442 State and Society in Developing Countries
POLI 461 Africa in International Politics
PECN 600 Major Seminar
POLC 641 Approaches to Latin American Politics
POLI 642 Global Environmental Politics
POLI 651 International Politics
SOCI 690 Sociology of Development in Latin America
SOCI 694 Political Sociology of Latin America
SOCI 696 Urban Latin America

## Information Technology, Education and Development Track

*APPD 635 Information Systems for Developing Countries
*APPD 650 Learning How To Learn With Technology
*APPD 663 Information Technology Assisted Individual and Organizational Learning
COMM 281 Introduction to Communication on the Internet
COMM 460 Intercultural Communication
COMM 482 New Technologies
INDV 450 Intro to Geographic Information Systems: Applications for International Development
*ISDS 473 Database Management
*ISDS 478 Information Systems
*ISDS 480 Intranets and Extranets
Environment and Development Track
ANTH 370 Ecological Anthropology
ANTH 371 Historical Ecology of Amazonia
COMM 351 Environmental Communication
ECON 333 Environmental Economics
ECON 365 Agricultural and Rural Development in Latin America
EEOB 211 Tropical Biology
EEOB 318 Plants and Human Affairs
EEOB 404 General Ecology
EEOB 408 Biostatistics and Experimental Design
EEOB 621 Global Biogeochemical Cycles
*ENHS 668 Risk Communication
*ENHS 675 Politics and Environmental Policies

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ENST 481 Special Topics
HISE 323 The Chernobyl Catastrophe
PHIL 652 Environmental Ethics
POLC 434 Latin American Environmental Politics
POLI 642 Global Environmental Politics
SOCI 160 Environmental Sociology
SOCI 628 Comparative Latin American Demography

## Gender Issues in Development Track

COMM 460 Intercultural Communication
COMM 462 Communication, Women, and Development in the Caribbean
*HCED 618 Gender, Race and Ethnicity in Health Education
*HCED 682 Maternal and Child Health Education
HISB 607 Women in Africa
HISL 328 Women in Latin American History
PORT 414 Women of Lusophone World
SOCI 606 Issues in the Sociology of Gender

## Geographic Area Concentrations

## Asia

ANTH 304 Peoples and Cultures of S.E. Asia
ANTH 307 Contemporary Chinese Society
ANTH 316 Peoples of the Pacific
ASTA 318 Peoples of South Asia
ASTA 391 Special Offerings in Asian Studies
ECON 374 Asia-Pacific Economic Development
POLC 338 Asian Governments

## Africa

ADST 320 Issues in African Studies
ANTH 311 Cultures of Sub-Saharan Africa
HISB 312 West African Culture and Society
HISB 607 Africa and Gender Theory
HISB 611 Colonialism, Freedom, and the Problem of Difference
POLI 461 Africa in International Politics

## Latin America

ANTH 306 South American Indians
ANTH 618 Middle American Indians
ECON 359 Economic Development of Latin America

ECON 365 Agricultural and Rural Development in Latin America
ECON 466 Seminar on Latin American Economies
HISL 372 Seminar: Modern Latin America
HISL 685 United States-Latin American Relations
POLC 335 Latin American Governments
POLC 336 Environmental Politics of Latin America
POLC 641 Approaches to Latin American Politics
SOCI 690 Sociology of Development in Latin America
SOCI 694 Political Sociology of Latin America
SOCI 696 Urban Latin America

## Appropriate Elective Courses Within the Major

COMM 421 Persuasion
ECON 333 Environmental Economics
ECON 337 The World Economy
EENS 111 Physical Geology
EENS 202 Environmental Geology
EENS 204 Natural Disasters
EENS 206 Introductory Geography
EENS 603 Environmental Methods
EENS 630 Groundwater Hydrology
EENS 668 Volcanology
EEOB 201 Evolution in Human Health and Disease
EEOB 204 Conservation of Biological Diversity
EEOB 245 Darwinian Medicine
*ENHS 668 Risk Communication
ENST 481 Special Topics
HISE 323 The Chernobyl Catastrophe
INDV 300 Health and Development

INDV 101 Introduction to Development (3)
Staff. This course is designed to give the students a broad-based understanding of the international issues and the goals and methods of international development since World War II.
INDV 300 Health and Development (3)
Staff. Prerequisite: INDV 101. This course is designed to introduce development issues which impact human health in the developing world.
INDV 320 Approaches to Sustainable Development (3)
Staff. Prerequisites: INDV 101, ECON 101 and 102. This course is designed to examine the impact of macroeconomic policy and political structure on environment, gender, communications, modernization and cultural change, basic needs, democratization, and appropriate technologies.
INDV 400 The Geo-Politics of Global North-Global South Relations (3)
Staff. Prerequisites: INDV 101, ECON 101 and 102. This course investigates the political, economic and cultural determinants of relations between the industrialized nations of the "North" and developing nations of the "South". The perspective is that of the global south nations.
INDV 410 Information Technology and International Development (3)
Staff. This course is designed to introduce students to contemporary issues in information technology pertaining to international development and to understand its impact by investigating the existence, importance, and direction of information technology in the developing world.

## INDV 450 Introduction to Geographic Information Systems: Applications for International Development (3)

Staff. This course is offered to those students interested in International Development from the perspective of geography and spatial analysis. Students enrolled in this course are encouraged to analyze social, economic and demographic data using state-of-the-art software for the development of Geographic Information Systems (GIS). Students are required to develop a GIS around a specific subject (topic). For the most part, this is a lab-based course where students learn the use of GIS software to perform basic spatial analysis in the context of international development issues.
INDV 490 International Development Capstone Seminar (3)
Staff. Prerequisites: INDV 101, ECON 101, 102, and INDV 320. This course is designed to give students the opportunity to develop the leadership and management skills necessary for International Development policy and field work.

INDV 491, 492 Independent Study (3, 3)
Staff. Open to upper-level students with approval of instructor.
INDV 495 Special Topics (3)
Staff. Courses offered by visiting professors or permanent faculty. For specific offering, see the Schedule of Classes. For description, consult the department.
$\dagger$ By special permission.

* Non-LAS course. See the college SPC restrictions.


## Italian Studies

## French and Italian

Office: 311 Newcomb Hall
Phone: (504) 865-5115
Fax : (504) 865-5367

## Art History

Office: 202 Woldenberg Art Center
Phone: (504) 865-5327
Fax: (504) 862-8710

## Program Administrators

Linda Carroll, French and Italian (Co-director)
William Tronzo, Art History (Co-director)
Faculty Associates
Lloyd Bonfield, Law
James Boyden, History
Anthony Cummings, Music
Ann Hallock, French and Italian
Kenneth Harl, History
John Joyce, Music
Dennis Kehoe, Classical Studies
F. Thomas Luongo, History

Elizabeth Poe, French and Italian
Joe Poe, Classical Studies
Gary Remer, Political Science
Richard Tuttle, Art
MAJOR
A major in Italian Studies consists of 30 credits which must include the year-long course Italian Studies 201-202 or 203-204, Italian 313 and 325, and Italian Studies 651 Senior Seminar. The balance of the credits will be selected from the list of courses offered in a range of departments and from the second year-long course. At least one course must be taken from two different time periods: ancient, medieval, Renaissance, and modern; and at least one course must be taken from three different fields: art history, classics, history, Italian, music, and political science. Students will design their program of study in consultation with an advisor in the department of their principal interest assigned to them by one of the co-directors after an initial interview. Students are required to complete Italian 203 or equivalent.

## MINOR

A minor in Italian Studies consists of 18 credits which must include the year-long course Italian Studies 201-202 or 203-204 and Italian 313. The balance of the credits will be selected from the

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list of courses offered in a range of departments and from the second year-long course. At least one course must be taken from two different time periods: ancient, medieval, Renaissance, and modern; and at least one course must be taken from two different fields: art history, classics, history, Italian, music, and political science.
Students will design their program of study in consultation with an advisor in the department of their principal interest assigned to them by one of the co-directors after an initial interview. Students are required to complete Italian 203 or equivalent. N.B. In the case of courses with multiple possible topics, topics concerning Rome or Italy will apply to the Italian Studies major and minor.

ITST 201-202 Introduction to Italian Studies I (3, 3)
Staff. Year-long introduction to the central issues and underlying structure of Italian civilization. ITST 201 is a prerequisite to ITST 202.

## ITST 203-204 Introduction to Italian Studies II (3, 3)

Staff. Year-long introduction to the central issues and underlying structure of Italian civilization. ITST 203 is a prerequisite to ITST 204.
ITST 395, 396 Special Topics in Italian Studies (3, 3)
Staff. This course will cover special topics in Italian Studies offered by one of the cooperating departments in the Italian Studies program. The course may be repeated for credit with a different topic.

## ITST 488 Writing Practicum (1)

Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.

## ITST 491, 492 Independent Study (3)

Staff. Prerequisite: approval of program director. Open to students provided that the appropriate faculty director is available.

## ITST 495, 496 Special Topics in Italian Studies (3, 3)

Staff. This course will cover special topics in Italian Studies offered by one of the cooperating departments in the Italian Studies program. The course may be repeated for credit with a different topic.

## ITST H499-H500 Honors Thesis (3, 4)

Admission by approval of the program director and the honors committee.
ITST 651 Seminar in Italian Studies (3)
Staff. A seminar in methodology. Students present proposals for their senior thesis and receive responses from the faculty of the program.

## Ancient

## Art History

ARHS 318 Roman Art and Archaeology (CLAS 318)
ARHS 319 Pompeii: Roman Society and Culture in Microcosm (CLAS 319 \& HISA 319)
ARHS 624 The Use of Antiquity in the Middle Ages

## Classics

CLAS 302 The High Roman Empire (HISA 302)
CLAS 305 Ancient Historiography (HISA 305)
CLAS 309 Law and Society in Ancient Rome (HISA 304)
CLAS 311 Select Topics in Roman History (HISA 311)
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CLAS 318 Roman Art and Archaeology (ARHS 318)
CLAS 319 Pompeii: Roman Society and Culture in Microcosm (ARHS 319 and HISA 319)
CLAS H400 Colloquium in Ancient History (HISA H400)
CLAS 408 Seminar in Ancient Society and Economy (CLAS 608, HISA 608)
CLAS H409 Colloquium and Field Work in Ancient and Medieval Mediterranean Civilizations (HISA H410)

CLAS 418 Seminar in Ancient Religion (HISA 618)
CLAS 420 Seminar in Roman Art and Archaeology (CLAS 620, ARHS 620)
CLAS 501 Special Readings in Classics
CLAS 601 Seminar in Select Topics in Roman History (HISA 601)
CLAS 608 Seminar in Ancient Society and Economy (CLAS 408, HISA 608)
CLAS 620 Seminar in Roman Art and Archaeology (ARHS 620)
CLAS 681 Special Topics

## History

HISA 291, 292 Special Topics in Medieval and Ancient History
HISA 302 The High Roman Empire (CLAS 302)
HISA 304 Law and Society in Ancient Rome (CLAS 309)
HISA 305 Ancient Historiography (CLAS 305)
HISA 311 Select Topics in Roman History (CLAS 311)
HISA 319 Pompeii: Roman Society and Culture in Microcosm (ARHS 319 and CLAS 319)
HISA H410 Colloquium and Field Work in Ancient and Medieval Mediterranean Civilizations (CLAS H409)
HISA 417 Seminar in Ancient Religion (CLAS 418)
HISA 601 Seminar in Select Topics in Roman History (CLAS 601)
HISA 608 Seminar in Ancient Society and Economy (CLAS 408)
HISA 619 Seminar in Ancient Religion (CLAS 618)

## Political Science

POLT 472 Ancient and Medieval Political Theory

## Medieval

## Art History

ARHS 321 Medieval Art
ARHS 624 The Use of Antiquity in the Middle Ages
ARHS 625 Word and Image in Early Italian Painting

## Classics

CLAS 303 Early Medieval and Byzantine Civilization from Constantine to the Crusades (HISA 303)

CLAS H409 Colloquium and Field Work in Ancient and Medieval Mediterranean Civilizations (HISA H410)

## History

HISA 291, 292 Special Topics in Medieval and Ancient History
HISA 335 Society and Culture in Medieval Italy, 1000-1400
HISA H410 Colloquium and Field Work in Ancient and Medieval Mediterranean Civilizations (CLAS H409)
HISA 604 The High Middle Ages
HISA 623 Medieval Cities
HISA 625 Medieval Religious Culture
HISA 627 Women and Gender in the Middle Ages

## Italian

ITAL 401 Topics in Origins and Masterpieces of 13th- and 14th-century Italian Literature
ITAL 601 Topics in Origins and Masterpieces of 13th- and 14th-century Italian Literature Music

MUSC 608 Notation of Medieval and Renaissance Music
Political Science
POLT 472 Ancient and Medieval Political Theory

## Renaissance and Baroque

## Art History

ARHS 331 Art of the Early Renaissance in Italy
ARHS 332 16th-Century Italian Art
ARHS 333 Italian Renaissance Architecture
ARHS 342 Northern Baroque Art
ARHS 635 Seminar in Michelangelo

## History

HISA 330 Italy and Spain in the Age of the Renaissance (HISE 330)
HISA 605 The Italian Renaissance (HISE 605)
HISE 610 Renaissance and Reformation, 1450-1660

## Italian

ITAL 402 Topics in Renaissance Literature
ITAL 403 Topics in 17th- and 18th-century Italian Literature
ITAL 602 Topics in Renaissance Literature
Music
MUSC 608 Notation of Medieval and Renaissance Music

## Political Science

POLT 477 Transition to Modernity

## Modern

History
HISE 708 Topics in Early Modern European History
Italian
ITAL 404 Topics in 19th- and 20th-Century Italian Literature
ITAL 604 Topics in 19th- and 20th-Century Italian Literature

## Music

MUSC 245 Introduction to Opera

## Courses Not Focused on Any One Time Period

## Italian

ITAL 325 Italian Language and Culture
ITAL 333 Italian Literature in Translation
ITAL 456, 457 Internship Studies
ITAL H491, H492 Independent Study
ITAL 691 Special Problems in Italian Literature
ITAL 692 Special Problems in Italian Language
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## Jewish Studies

Office: 210D Jones Hall
Phone: (504) 865-5349
Fax: (504) 862-8736
Website: www.tulane.edu/~jwst
Program Administrator
Chris M.M. Brady, Classics, Jewish Studies (Director)

## Faculty Associates

John Herschel Baron, Music
Richard B. Latner, History
Lawrence N. Powell, History

## MAJOR

A major in Jewish studies has as a prerequisite one year of Modern Hebrew (HBRW 101 and 102, or the equivalent). The major consists of at least 30 credits in Jewish Studies courses, Hebrew courses, or courses in related fields. The major must include JWST 201 Introduction to Judaism, as well as one course in each of the ancient, medieval, and modern periods. At least one course should be at the 400 level or above. Courses taken to fulfill Tulane's foreign language proficiency requirement cannot be counted toward the major.

## MINOR

A minor in Jewish Studies consists of 21 credits in Jewish Studies courses and must include JWST 201 Introduction to Judaism, as well as one course in each of the ancient, medieval, and modern periods. The minor does not require courses in Hebrew Language.
JWST 201 Introduction to Judaism (3)
Staff. This course will introduce the student to the variety of religious expression and understanding in the Jewish tradition. The focus of the course is the biblical texts and their interpretations which are relevant to Jewish understandings of issues such as creation, revelation, redemption and community. We will also study the social, literary, historical and cultural influences that helped shape the varieties of Jewish traditions throughout the ages.
JWST 210 Introduction to the Hebrew Bible - Old Testament (3)
Mr. Brady. In this course we will attempt to understand the Hebrew Bible better by examining samples of each of the major genres represented while at the same time placing each within its historical context. We will also focus upon questions of interpretation. By taking a general survey of the ways in which the Hebrew Bible has been read and interpreted in the past we will begin to understand how these ancient texts continue to live and speak to so many. Same as CLAS 210.

## JWST 310 Select Topics in Jewish Studies (3)

Staff. This course will cover special offerings in Jewish history, religious thought and literature. It will be taught by various permanent and visiting Jewish Studies instructors.
JWST 314 Select Readings in the Hebrew Bible (3)
Mr. Brady. In this course we will read specific books from the Hebrew Bible (in translation). The books read will rotate within three topics: Genesis; The Five Scrolls: Song of Songs, Ruth, Lamentations, Ecclesiastes, and Esther; The Prophets. The aim of this course is to provide the student with the opportunity to read portions of the Hebrew Bible in detail and how they have been read, interpreted, and explained throughout the centuries. The student will also learn to read the texts critically and begin to form his/her own understanding of the text. Same as CLAS 314

JWST 315 Second Temple Judaisms (3)
Mr. Brady. Starting with the return from Babylonia up until the destruction of the Jerusalem Temple in 70 C.E., Judaism was transformed from a local ethnic religious cult to a broad-based, diverse, and often fragmented sectarian religion. Many outside cultures and civilizations, from the ancient Persians to the Imperial Romans, influenced the Jews and Judaism through language, culture, and political contacts. We will study these cultural contracts and conflicts that caused Jews in the Second Commonwealth to develop competing understandings of Judaism. Same as CLAS 315.

## JWST 320 Modern Judaism (3)

Staff. Analysis and interpretation of Judaism in modern times. The meanings of religiosity and secularity are explored through analysis of several Jewish responses to modernity: religious reform, Jewish socialism, political and cultural Zionism, assimilationism. Integration of these diverse responses produces a coherent picture of how a religion is transformed through interaction with modern culture.

## JWST 321 American Judaism (3)

Staff. The course examines the nature of religion in modern and contemporary times, using Judaism in America as an example. How did the American Jewish community come into being? What is American about it? What is Judaic, that is, carrying forward aspects of classical Judaism? What is the meaning of the ethnic, social, and cultural traits emergent in contemporary Jewish life? Answers to these questions provide a picture of the character of American Judaism and of the complexities of contemporary religious life.

## JWST 324 Early American Jewish History (3)

Mr. Latner. This class focuses on the period from the earliest Jewish settlers in mid-seventeenth century colonial America through the establishment of viable Jewish communities and institutions by the latter part of the nineteenth century. It covers the so-called "Sephardic" and "Germanic" periods of American-Jewish history, prior to the wave of Eastern European immigration. Among the themes explored are the tension between Jewish identity and the pressures of assimilation; the transformation of the synagogue; the emergence of Jewish social and cultural institutions; changing religious practices and the rise of Reform Judaism. Events and themes are placed within the broader context of American history. Same as HISU 334.

## JWST 350 The Golden Age of Spanish Jewry I: Moslem Spain (3)

Mr. Goldstein. An examination of the cultural, political, and intellectual history of Spanish Jewry from the beginnings of Jewish settlement through the early reconquest. Special attention is given to the contributions of Hasdai ibn Shaprut and Samuel Ha-Nagid.

## JWST 352 The Golden Age of Spanish Jewry II: Christian Spain (3)

Mr. Goldstein. A study of the transition of Spanish Jewry from Moslem rule to Christian rule. The course includes an analysis of the several disputations of this period as well as the impact of the inquisition and expulsion. Special attention is given to the literature and philosophy of Maimonides, Crescas, and Solomon ibn Adret.

## JWST 353 Jewish Life and Thought in the High Middle Ages (3)

Mr. Goldstein. The medieval period was perhaps the most prolific age for Jewish exploration and interpretation of Jewish religious texts and sources. We will examine a number of thesephilosophical, mystical, poetic, liturgic, and juridical-in order to better appreciate the context and content of medieval concerns and solutions.

## JWST 354 Jewish Life and Thought from the Renaissance to the Age of Reason (3)

Mr. Goldstein. The world of Jewish martyrs, mystics, dreamers, and heretics, as seen through an analysis of selected sources, including Zohar, the correspondence of Menasseh ben Israel, and various Hasidic legends. Attention will be given to the rise of centers of Jewish culture, such as Cromwell's England, Florence, Vilna, Prague, and Spinoza’s Amsterdam.

JWST 360 Women in the Hebrew Bible (3)
Mr. Brady. Women play a significant role in the Bible, one that is often at best misunderstood and at worst ignored. In this class we will examine the biblical stories and their historical context in order to understand the role of women in the biblical period as well as the role of the figures within the biblical text. We will also examine modern interpretations of these tests (including feminist readings and creative fiction based upon the biblical text) to see how modern scholars have understood these ancient texts in modern times. Same as CLAS 360.

## JWST 388 Writing Practicum (1)

Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.

## JWST 411 Rabbinic Judaism (3)

Mr. Brady. Recommended prerequisite: JWST 315. This course will focus on the literature and culture of the Rabbinic period (c. 200-600 C.E.). We will concentrate on reading and analyzing primary texts (Midrash, Mishnah and Talmud) as well as studying the historical context and methodological issues. This course will discuss the various literatures' styles, methods and contents as well as their internal and external cultural influences. Same as CLAS 411.

JWST 415 Women, Judaism, and Jewish Culture (3)
Staff. Women's roles in Judaism and Jewish life have been defined by the religious precepts and civil laws described in the Bible and interpreted by the rabbis in a patriarchal age. Nevertheless, throughout the ages, women have carved out areas for themselves within the Jewish religious, social, and political systems as well as fulfilled the roles prescribed to them. This course will study the women of Jewish history and how they have participated in, developed and shaped Jewish religious, social, and cultural life.
JWST 425 The Dead Sea Scrolls (3)
Mr. Brady. Prerequisites: JWST 210 and JWST 315 or approval of instructor. It has been just over 50 years since a group of Bedouin shepherds found several clay jars containing ancient scrolls. The documents include copies of the Hebrew Bible, apocryphal works, and sectarian works written to provide order and meaning to the readers lives. But who wrote the scrolls and who were they writing for? This course will investigate these questions and others by focusing on the texts themselves and the archaeological evidence from the site of Khirbet Qumran. Secondary sources will also be consulted and read critically. Same as CLAS 425

JWST 430 The Palestinian-Israeli Conflict in Culture and Literature (3)
Staff. This course will focus on the literary and cultural response to the Israeli-Palestinian conflict since the beginning of the Zionist settlement to our time. We will ask questions such as how each culture, the Israeli and Palestinian, has represented the other? Has each depiction been a unified cultural portraiture or can we identify multifarious delineations? What constitutes national identity and what role have national, religious, racial and gender perspectives played in the construction of the Israeli and Palestinian identities? How the various formation of the other have contributed to the identity creation of each culture? And finally, can we point out significant historical changes in these representations? We will examination of both Palestinian and Israeli experiences as reflected in various texts including fiction, poetry, philosophical and historical treatises, editorials, caricatures, film and the like, all in English translation. Last be not least, we will try to understand both the stable and the changing parameters of national identity on the background of universal intellectual and political movements such as nationalism, multiculturalism, and globalization.
JWST 481 Special Topics in Jewish Studies (3)
Staff. This course will cover special offerings in Jewish history, religious thought, and literature.
JWST H491, H492 Independent Studies (1-3, 1-3)
JWST H499-H500 Honors Thesis $(3,4)$
COURSES OFFERED BY OTHER DEPARTMENTS
History
HISE 642 Readings in the Holocaust
HISM 120 The Contemporary Middle East
HISM 320 History of Islam
HISM 321 Modern Middle East
HISM 322 History of Arab-Israeli Conflict
Music
MUSC 333 Jewish Music
Political Science
POLI 459 The Holocaust System: A Political Analysis

## Hebrew

## HBRW 101 Elementary Hebrew I (4)

Staff.

## HBRW 102 Elementary Hebrew II (4)

Staff. Prerequisite: HBRW 101 or equivalent.

## HBRW 203 Intermediate Hebrew I (4)

Staff. Prerequisite: HBRW 102 or equivalent. An introduction to Hebrew prose and poetry. A continuation of 102 with emphasis on reading and Hebrew conversation.
HBRW 213 Intermediate Hebrew II (3)
Staff. Prerequisite: HBRW 203 or equivalent. A continuation of Hebrew 203 with an emphasis of reading and discussion of texts in Hebrew.

## HBRW 223 Biblical Hebrew I (3)

Mr. Brady. Prerequisite: HBRW 102 or approval of instructor. This course will involve reading various texts of the Hebrew Bible (Old Testament) and the study of biblical Hebrew.

HBRW 310 Advanced Hebrew Literature and Language (3)
Staff. Prerequisite: HBRW 213 or approval of instructor. An advanced class for students interested in pursuing further Hebrew studies. Class will read and discuss modern Hebrew literature as well as study advanced grammar and syntax. May be repeated for credit.
HBRW 323 Biblical Hebrew II (3)
Mr. Brady, Mr. Goldstein. Prerequisite: HBRW 223. This course is a continuation of Hebrew 223 Biblical Hebrew I and involves reading various texts from the Hebrew Bible. Biblical Hebrew grammar will be reviewed as appropriate.
HBRW H491, H492 Independent Studies (1-3, 1-3)
Staff.

## Latin American Studies

Office: The Roger Thayer Stone Center for Latin American Studies, 100 Joseph Merrick Jones Hall

Phone: (504) 865-5164
Fax: (504) 865-6719
Website: www.tulane.edu/~clas/CLAShome.html
Program Administrators
James D. Huck, Ph.D., Tulane (Assistant Director for Undergraduate Affairs)
Thomas F. Reese, Ph.D., Yale (Executive Director)
The Roger Thayer Stone Center for Latin American Studies administers the Latin American Studies Program which integrates over 400 courses taught by 70 core faculty and 42 adjuncts and affiliates in various academic departments. The program is designed to present a broad regional approach to Latin America and to provide the student with a general knowledge and sympathetic understanding of the people and problems of this important world area. It is intended principally as a vehicle of liberal education, but it may prove a useful adjunct to careers relating to Latin America in fields such as business and commerce, communications, government service, research or teaching.
The Roger Thayer Stone Center for Latin American Studies is one of the major programs of its kind in the U.S. and is supported by funding from various government agencies and foundations. Its faculty and students draw upon a rich variety of resources: one of three separate Latin American libraries in U.S. universities, field grants, field schools in Latin America, etc.

## MAJOR

The B.A. in Latin American Studies requires a minimum of 30 credit hours of work selected from various departments, which offer classes in the field. Five courses must be taken from one of the concentrations listed below. In addition, Latin American Studies 101 and 400 are required, plus either Latin American Studies 102 or Spanish 313. Finally, three courses must be taken at the 600 level, unless the student spends the entire junior year abroad in Spain, Portugal, or a Latin American country, in which case only two 600-level courses are required.
The concentration system serves to focus the disciplinary course work of LAST majors and minors around an interdisciplinary topic. There are three categories of concentrations. Students may choose one concentration from any one of these three categories.

## Major Historical Periods and Ethnicities:

Pre-Conquest and Indigenous Societies
Colonial Societies
Post-Colonial and Modern Societies
Interdisciplinary Clusters:
Politics, Economics, and Public Policy
Art, Literarure, and Culture
Environment, Health, and Ecology
Social Movements and Development
Cultural Areas or Regions:
Central America and Mexico
Brazil
the Caribbean
Students may also, with approval and guidance, construct an individual concentration to fit personal career goals or research. A current list of courses that count toward each concentration is available at the Center for Latin American Studies.

## MINOR

A minor in Latin American Studies consists of 15 credit hours. Required courses include one of the three introductory courses on Latin America: LAST 101, LAST 102 or SPAN 313, LAST 400 Core Seminar, and three electives, one of which must be at the 600 level. Two of these five courses must be selected from one of the concentrations listed above.
At the beginning of each semester a current list of courses from other departments that count towards the major and minor is available in the Stone Center for Latin American Studies.
LAST 101 Introduction to Latin America (3)
Staff. A wide-ranging discussion of Latin American culture, society, politics, and economy. The course probes the institutions of modern Latin America and seeks to identify their origins. Reading, lectures, and discussions draw upon the work of various academic disciplines.

## LAST 102 Cultural Heritage of Latin America (3)

Staff. A general survey of Latin American culture with emphasis of the development of ideas, aesthetic trends, literature, and popular traditions. Outside reading and written reports.

LAST 389 Service Learning (1)
Staff. Prerequisite: Departmental approval. Students complete a service activity in the community in conjunction with the content of a three-credit corequisite course.
LAST 395, 396 Special Offering (3, 3)
Staff.

## LAST 400 Core Seminar (3)

Staff. Required of all senior students majoring in Latin American Studies. The Core Seminar develops students' capacity for interdisciplinary problem solving and understanding of Latin American culture, society, and politics. Topics vary but all involve bibliographical study, reading, and discussion culminating in preparation of individual papers.
LAST 456, 457 Internship Studies (1-3, 1-3)

Staff. Prerequisites: approval of instructor and Program Director. An experiential learning process coupled with pertinent academic course work. Open only to juniors and seniors in good standing. Registration is completed in the academic department sponsoring the internship on TUTOR. Only one internship may be completed per semester. (Note: A maximum of six credits may be earned in one or two courses.)
LAST H491, H492 Independent Studies (3, 3)
Staff. Prerequisite: approval of instructor.
LAST 495, 496 Special Offerings (3)
Staff. Courses offered by visiting or permanent faculty. For offering in a specific semester, consult the department.
LAST H499-H500 Honors Thesis (3, 4)
Staff. Departmental approval required.
LAST 695, 696 Special Offerings in Latin American Studies $(3,3)$
Staff. Courses offered by visiting professors or permanent faculty. For special offering, see the Schedule of Classes. For description, consult department.

## SAMPLE COURSES BY CONCENTRATION

## Pre-Conquest and Indigenous Societies

ANTH 441 Olmec and Maya Civilization
ANTH 610 South American Archaeology
ANTH 618 Middle American Indians
ARHS 370 Pre-Columbian Art
SPAN 653 Indigenous Andean Literature
Colonial Societies
ARHS 371 Colonial Art of Latin America
HISL 347 Colonial Louisiana 1700-1812
HISL 371 Colonial Latin America
HISL 676 Colonial Mexico
SPAN 672 19th Century Latin American Literature

## Post-Colonial and Modern Societies

HISL 677 Modern Mexico
HISL 682 Modern Brazil
SOCI 249 Latin American Social Structure
SPAN 617 Modernism in Spanish American Literature
SPAN 646 Major Contemporary Poets in Latin America
Politics, Economics, and Public Policy
*APPD 668 Five Decades of Development
ECON 359 Economic Development in Latin America
POLC 335 Latin American Governments
POLC 442 State/Society Developing Countries
Art, Literature, and Culture
ADST 200 Intro to African Diaspora
ANTH 683 Aztec and Maya Literature
COMM 419 Introduction to Latin American Film
HISL 378 Women in Latin America
SPAN 410 Gender/Sex Hispanic Culture

## Environment, Health, and Ecology

ANTH 404 Ecological Anthropology
ANTH 634 Medical Anthropology
*BIOL 611 Tropical Ecology
*ENHS 604 Environmental Health for Developing Countries
Social Movements and Development
*APPD 664 Achieving Sustainable Development
ECON 365 Agriculture and Rural Development in Latin America
POLC 442 State/Society Developing Countries
SOCI 690 Sociology of Development in Latin America
SOCI 693 Social Movements in Latin America
Central America and Mexico
ANTH 618 Middle American Indians
POLC 331 Government of Central America and the Caribbean
HISL 679 Central America
SPAN 614 Literature of Central America
SPAN 652 Mexican Literature
Brazil
BRAZ 201 Introduction to Brazilian Studies
HISL 681 Colonial Brazil
HISL 682 Modern Brazil
POLC 634 Brazilian Government
PORT 614 Major Authors of Brazil
The Caribbean
COMM 462 Women, Development and Communication in the English-speaking Caribbean
HACR 111 Haitian Creole
HISL 172 Introduction to Caribbean History
POLC 331 Government Central America/Caribbean

* Non-LAS course. See the college SPC restrictions.
LESS COMMONLY TAUGHT LANGUAGES
see Allied Programs


## Linguistics

Office: 1021 Audubon Street
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Website: spgr.sppt.tulane.edu/TULing/TULingProg.html
Program Administrator
Judith M. Maxwell, Anthropology (Director)
Faculty Associates
Radu Bogdan, Philosophy
William Brumfield, Germanic and Slavic Languages
George Cummins, Germanic and Slavic Languages
Graeme Forbes, Philosophy
Harry Howard, Spanish and Portuguese
Thomas Klingler, French and Italian
Barbara Moely, Psychology
Olanike-Ola Orie, Anthropology
Elizabeth Poe, French and Italian
Paul Schierhorn, Theatre and Dance
Linguistics is the scientific study of language. Language is a, if not the, particularly human ability. The study of this ability includes definitional characteristics, the acquisition and loss of language by "hu-per-offspring-kind", its formal properties of sound, meaning, and juxtaposition, and the social contextualization of its use. The major program in linguistics is designed to train the student in modern techniques of language analysis and description, while providing exposure to the elements of diversity and universality in human language use. The student gains familiarity with real language data, while developing theoretical and philosophical frameworks within which to evaluate this knowledge.
The linguistics major is an interdisciplinary program, integrating courses from thirteen departments. The skills acquired in formal analysis, language, and social modeling provide a student with useful tools in pursuit of careers in artificial intelligence, computer systems modeling, language teaching/translating, cultural/language resource management, bilingual education, speech pathology, international relations, and management communication.

## BACHELOR OF ARTS IN LINGUISTICS

The major in linguistics consists of ten courses selected from the list below. The student should take at least one course in each of the following areas: phonology, syntax, language history, and language and thought. As courses are distributed among various departments, the student must consult with the program advisor in selecting courses to fulfill this distribution requirement. As one of the ten courses, the student must take a three-credit independent studies course correlating this general background with an area of specialization. Honors' thesis work fulfills the independent studies requirement. No language courses taken to fulfill the college proficiency requirement may be counted toward the major.

## BACHELOR OF SCIENCE IN LINGUISTICS

Linguistics B.S. majors will be required to take six credits of mathematics. Linguistics majors who take less math or use Symbolic Logic as their fulfillment of the math proficiency requirement would continue to receive the B.A.

Anthropology
ANTH 315 Cognitive Anthropology
ANTH 329 The Nature of Language
ANTH 330 History of Writing
ANTH 331 Introduction to Historical Linguistics
ANTH 340 Language and Culture
ANTH 344 Dialectology
ANTH 359 Introduction to Syntax
ANTH 363 Linguistic Phonetics
ANTH 364 Studies in Phonology
ANTH 365 Morphology
ANTH 366 Discourse Analysis: Pragmatics of Language Use
ANTH 367 Language and its Acquisition
ANTH 368 Language and Power
ANTH 369 Language and Gender
ANTH 642 Linguistics Field Methods
ANTH 670 Spoken Nahuatl
ANTH 672 Spoken Yoruba
ANTH 680 Spoken Yucatecan Maya
ANTH 681 Introduction to Maya Hieroglyphs
ANTH 682 Classical Yucatec

## COURSES OFFERED BY OTHER DEPARTMENTS

## Asian Studies

ASTJ 101, 102 Beginning Japanese I, II
ASTJ 203, 204 Intermediate Japanese I, II

## Computer Science

*CPSC 350 Programming Languages
*CPSC 466 Artificial Intelligence

## English

ENLS 402 Structure of English Language
ENLS 405 History of the Language
ENLS 407 Introduction to Old English

## French

FREN 314 French Phonetics
FREN 410 French in Louisiana
FREN 416 Translation Theory and Practice
FREN 611 Field Research on French in Louisiana
FREN 621 History of the French Language
FREN 691 Special Problems in French Linguistics
Germanic and Slavic Languages
GERM 365 Advanced Russian Grammar
GERM 372 Translation: Theory and Practice of an Impossible Art
GERM 607 Slavic Contributions to Linguistics

## Hebrew

HBRW 101 Introductory Hebrew
HBRW 102 Intermediate Hebrew

## Linguistics

LING 343 Semantics of Natural Language
LING 301 Semantics
LING 389 Brain and Language: Service Learning
LING 411 Brain and Language

## Mathematics

MATH 111, 112 Probability and Statistics I, II
MATH 301 Probability and Statistics

## Philosophy

PHIL 121 Elementary Symbolic Logic
PHIL 304 Mathematical Logic
PHIL 343 Semantics of Natural Language
PHIL 380 Language and Thought
PHIL 606 Advanced Symbolic Logic
PHIL 607 Mathematical Logic
PHIL 618 Mental Representation
PHIL 662, Philosophical Logic
Psychology
PSYC 307 Thinking and Information Processing
PSYC 314 Sensory Processes and Perception
PSYC 351, 352 Special Projects in Psychology (advisor approval required)
PSYC 367 Brain and Behavior
PSYC 657 Cognitive Neuroscience
PSYC 658 Cognitive Neuroscience Laboratory
Sociology
SOCI 303 Introduction to Research Design
SOCI 304 Introduction to Research Analysis
SOCI 644 Language Behavior and Communications
Spanish
SPAN 426 Spanish Phonetics and Phonology
SPAN 427 Iberoamerican Dialectology
SPAN 601 Methods of Teaching Spanish and Portuguese
SPAN 606 Hispanic Bilingualism
SPAN 651 History of the Spanish Language
Theatre
THEA 309 Stage Speech

LING 301 Semantics, the Study of Meaning (3)
Mr. Howard. What does the word "cat" mean? This course looks at three answers. One says that "cat" is just the set of all cats. Another says that "cat" refers to a prototypical cat, one described by the characteristics common to all the cats that you have ever seen. The third answer says that "cat" is the word that the brain associates with the cats that you saw when you were younger. Each of these answers assumes that the mind works in a certain way, so the right one tells us something about how the mind works in situations that have nothing to do with the meaning of "cat".

## LING 343 Semantics of Natural Language (3)

Mr. Forbes. An introduction to the study of meaning in natural languages. The central techniques involve extending the methods of logical semantics for formal languages. No prerequisites, but prior exposure either to generative grammar (e.g., ANTH 359) or symbolic logic (e.g., PHIL 121) would not be wasted. Same as PHIL 343.

## LING 389 Service Learning (1)

Staff. Prerequisite: Departmental approval. Students complete a service activity in the community in conjunction with the content of a three-credit corequisite course.

## LING 411 Brain and Language (3)

Mr. Howard. The goal of this course is to learn how the brain is organized to produce and comprehend language and to understand linguistic disorders attendant on brain damage. There is an optional service learning component in which students can work with a speech therapist at a local health-care provider.

## LING H491, H492 Independent Studies (3, 3) <br> Staff.

## LING H499-H500 Honors Thesis $(3,4)$

Staff. Prerequisites: approval of program coordinator and course director. Thesis may involve field study as well as intensive reading and research in a selected subfield within linguistics.

## LING 681, 682 Special Topics in Linguistics (3, 3)

Staff. Special topics in linguistics. For description consult the director.
Other departments offer courses with linguistic import as well. These courses may count toward the major upon consultation with the program coordinator.

* Non-LAS course. See the college SPC restrictions.


## Literature

## French

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Political Science
Office: 306 Norman Mayer
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Fax: (504) 862-8745
Program Administrators
Erec Koch, French and Italian
Ray Taras, Political Science
The literature major seeks to expose students to the study world literatures and cultures within a comparative framework as well as from the point of view of significant literary theories. Students will explore culture across the boundaries of national traditions and discrete historical periods. Literature courses will address such issues as canon formation; historical links between the rise of nationalism and the development of national literatures; cross-cultural borrowings, translations, and influences; the relationship between theory and literary practice; and the effects of imperialism, colonialism, and global commerce on literary production, consumption, and value. Courses draw upon the expertise of faculty in a wide array of departments and programs throughout LAS as well as that of outside lecturers.

## MAJOR

The Literature major consists of 10 courses ( 30 credits), which are divided into core and advanced course work.
Core courses ( 12 credits)
LITR 101 Global Texts and TraditionsI
LITR 102 Global Texts and Traditions II
LITR 201 Introduction to Literary Analysis
One of the following:
LITR 401 Introduction to Literary Theory
ENLS 471 Introduction to Literary Theory
FREN 615 Concepts of Literary Criticism
SPAN 610 Literary Theory

Majors must also take three courses ( 9 credits) at the four hundred level or above in one nonnative national literature. Normally, those course are offered in one of the following departments: Classical Studies (LATN and GREK offerings), French and Italian, German and Slavic Studies, and Spanish and Portuguese.
Students must take two courses ( 6 credits) in related departments or programs. Those courses will provide a framework and/or methodology for comparative literary studies. They may include LITR 481- and 482- Special Topics or courses at the 300 or 400 level or above in the following disciplines: African and African Diaspora Studies, American Studies, Anthropology, Art History, Asian Studies, Brazilian Studies, Classical Studies (CLAS offerings), Cultural Studies, Economics, English, History, Jewish Studies, Latin American Studies, Medieval Studies, Music, Philosophy, Political Science, Religious Studies, Theatre and Dance, and/or Women's Studies. Students must receive the major advisor's approval and, in some cases, the instructor's approval for courses other than LITR.
Students must take the capstone senior seminar, LITR 595 (3 credits), in the fall of the senior year.

## LITR 201 Global Texts and Traditions I (3)

This gateway course provides an introduction to Western and Non-Western literatures and cultures up to the Early Modern period. The course examines literary texts within a series of themes and topics, such as origins, cultural encounters, and self and society. The course will examine cultural similarities and differences by analyzing modes of transculturation and literary transference.

## LITR 202 Global Texts and Traditions II (3)

This gateway course provides an introduction to Western and Non-Western literatures and cultures from the Early Modern Period to the contemporary age. The course examines literary texts within a series of themes and topics, such as origins, cultural encounters, and self and society. The course will examine cultural similarities and differences by analyzing modes of transculturation and literary transference.

## LITR 301 Introduciton to Literary Analysis (3)

This course aims to familiarize students with the tools of literary analysis in the major nonWestern and Western traditions. We study a variety of texts from diverse periods and traditions in terms of genre, literary history, formal terminology, canonicity, translation, textuality, and comparative approaches. LITR 201 and 202 are prerequisites. For majors, this course is recommended before LITR 401.

## LITR 401 Introduction to Literary Theory (3)

This course aims to orient students to the major terms, issues, and debates informing contemporary literary theory. Beginning with the key roles that semiotics, Marxism and psychoanalysis play in today's literary theory and criticism, the course proceeds to consider questions of the "literary," formal versus historical approaches, contributions of feminism, gender studies, and queer theory, and issues pertaining to multiculturalism. LITR 201 and 202 are prerequisites. For majors, this course is recommended after LITR 301
LITR 481, 482 Special Topics (3, 3)
A writing practicum is available. May be used to fulfill the college writing requirement.

## LITR H499-H500 Honors Thesis $(3,4)$

Admission be departmental and Honors Committee approval.

## LITR 595 Senior Seminar (3)

Prerequisite: senior standing and LITR 201, 202, 301, and 401. This seminar offers majors an opportunity to explore in depth a topic in literary studies from a comparative perspective. Examples of some topics include: the literature of protest; globalization and the world's literatures; war and the production/reception of literature; utopias and dystopias; wisdom literature; and post-modern narrative theory.

## Mathematics

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Professors
John Dauns, Ph.D., Harvard
John E. Diem, Ph.D., Purdue
Lisa J. Fauci, Ph.D., New York
Laszlo Fuchs, Ph.D., University of Budapest (Evelyn and John G. Phillips Distinguished Chair in Mathematics)
Pierre A. Grillet, Ph.D. Université de Paris
Morris Kalka, Ph.D., New York (Chair)
Slawomir Kwasik, Ph.D., University of Gdansk
Terry C. Lawson, Ph.D., Stanford
Michael W. Mislove, Ph.D., Tennessee
Victor H. Moll, Ph.D., New York
James T. Rogers, Jr., Ph.D., California, Riverside
Steven I. Rosencrans, Ph.D., M.I.T.
Frank J. Tipler, Ph.D., Maryland
Xuefeng Wang, Ph.D., Minnesota
Alexander D. Wentzell, Ph.D., Steklov Mathematical Institute
Associate Professors
Ricardo Cortez, Ph.D., California, Berkeley
Ian H. Dinwoodie, Ph.D., Northwestern
Maurice J. Dupré, Ph.D., Pennsylvania
John Liukkonen, Ph.D., Columbia
Norbert Riedel, Ph.D., Technical University of Munich
Albert L. Vitter III, Ph.D., Princeton
David D. Yang, Ph.D., S.U.N.Y., Stony Brook
Assistant Professors
Weimin Chen, Ph.D., Michigan State
Alexander Kurganov, Ph.D., Tel-Aviv University
Michelle Lacey, Ph.D., Yale

## Emeritus

Frank T. Birtel, Ph.D., Notre Dame (University Professor)

## MATHEMATICS REQUIREMENT FOR THE BACHELOR OF SCIENCE

Six credits of mathematics are required of all candidates for the bachelor of science. Any two mathematics courses (subject to the restrictions listed in Introductory Courses) except 115 may be used to satisfy this requirement. The combination of 115 and 116 may count as one course toward the B.S. degree requirement. Note that some departments recommend or require particular mathematics courses to supplement their majors. Students are therefore advised to consult their major department's listing in this catalog.

## INTRODUCTORY COURSES

The following information is meant to aid students in planning their programs. It is not a substitute for the advice of the faculty advisors who are familiar with the student's individual situation.

111, 112 Not suitable for students who plan three semesters of calculus. Does not count toward the mathematics major.
115, 116 This course is intended for students without a strong background in mathematics. The material presented in Calculus 121 is covered in two semesters. This course will prepare the student to continue with the regular calculus sequence. If a student receives credit for 115 or 116, the student may not receive credit for 121. After finishing 115-116, the student can register for 122. A student may not register for this course after receiving credit for 121.

121, 122 Intended primarily for students with solid backgrounds in high school algebra, trigonometry, and precalculus. These courses are prerequisite for most upper division mathematics courses. If a student has already received credit for 121, the student may not receive credit for 115 or 116. A student may not receive credit for both 122 and 131.121 is a prerequisite for 122.

131 Intended for students with prior knowledge of calculus. A score of 3 or higher in the Calculus AP test or permission of the undergraduate coordinator is required for admission. A student may not receive credit for both 122 and 131.

## AP Examination Credit Granted by the Department

| Subject | Score | Credit/Course(s) | Recommended <br> Placement |
| :--- | :--- | :--- | :--- |
| Calculus AB | 5 | 4 credit hours, (121) | 131 |
| Calculus AB | 4 | 4 credit hours, (121) | 131 |
| Calculus AB | 3 | no credit | 131 |
| Calculus BC | 5 | 8 credit hours, (121, 122) 221 |  |
| Calculus BC | 4 | 8 credit hours, (121, 122) | 221 |
| Calculus BC | 3 | 4 credit hours (121) | 131 |

## THE MAJOR PROGRAM

A major in mathematics consists of:
(1) the following five core courses which are required of all mathematics majors: 121, 122, 221, 305, and 309; 115 and 116 may be substituted for 121; 131 may be substituted for 122.
(2) four additional mathematics courses at the 300 level or above with the following provisos:
(a) one but not both of 217 and 224 may be substituted for one of the 300-level courses;
(b) at least one course must be at the $\mathbf{4 0 0}$ level or above;
(c) an advanced course in another department, with a high mathematical content, may, with the approval of the department undergraduate studies committee, be substituted for one of the 300 -level courses.
(3) the year-long Senior Seminar, Mathematics 398, 399 is required of all mathematics majors in Liberal Arts and Sciences who are not doing an Honors Project within the department. Students planning to graduate in December should begin this course in the fall of the preceding year. The Senior Seminar does not count towards the additional 300 level math courses in (2).
A student may receive either a B.A. or B.S. degree with mathematics as a major subject. A freshman should take the appropriate calculus course. Students with no prior calculus course should normally take 121 and 122 during the freshman year. Students with one semester of calculus credit (or equivalent knowledge) should take 131. Students with two semesters of calculus credit should start in 221 and contact a mathematics major advisor during the first semester for major program planning advice. It is also recommended that a prospective mathematics major take Computer Science 101 and Physics 131 and 132 during either the freshman or sophomore year.
Students should take the core courses as early as possible in their programs. After completing 221 , most majors will take either 217 or 224, although neither is required for the major (note only one can be counted in lieu of a 300 -level course toward the major requirements). Generally, one should take 309 by the end of the sophomore year and 305 by the end of the junior year. Note that 309 is offered every semester but 305 is only offered in the fall semester. Students with strong interests in computer science, applied mathematics, or statistics may wish to include 217 (computer science), 224 (applied mathematics), or 301 (statistics) in their programs after completing 221, to allow sufficient flexibility to schedule advanced course work in these areas during the junior and senior years. Note for incoming freshman: if you intend to major in mathematics, you should contact the Undergraduate Coordinator before registering for your courses.
Students who are especially interested in statistics may elect to fulfill a concentration in statistics: $301,304,402$, and 603 are required in addition to the core courses.
The major program is designed to provide the student with a solid foundation during the first two years and provide for a variety of programs of study during the junior and senior years. A major program in mathematics can provide a background for both graduate study and work in a variety of areas of the mathematical sciences such as mathematics, applied mathematics, computer science, and statistics as well as provide preparation for a professional schools such as law, medicine, and business. The major program should be designed as early as possible with the student's goal in mind and with the help of the major advisor.

## MINOR IN MATHEMATICS

A minor in mathematics consists of 121, 122, 221, 309 and two additional courses at the 200 level or above, with the stipulation that 217 and 224 cannot both count toward the minor.

## JUNIOR YEAR ABROAD

Students planning a major in mathematics and to participate in the Junior Year Abroad (JYA) program are advised to consult a major advisor when planning their sophomore programs. Participants in the JYA Program majoring in mathematics must successfully complete two courses in mathematics at the 300 level or above after returning from abroad.

## SPECIAL HONORS

The purpose of the Honors Program in mathematics is to provide exceptional students with an opportunity to complete an intensive program in their major area and to receive recognition for that work. This program is recommended for students who wish to do graduate work in mathematics or related sciences. Honors in mathematics requires a 3.5 grade-point average in all courses taken in mathematics and in related courses serving to fulfill major requirements.

Honors also requires either (1) an honors project or (2) the completion of two additional upperlevel mathematics courses with grades of B or higher. These can be selected from any course numbered 650 or higher or an honors version of a course numbered 300 or higher which has been approved in advance by the Undergraduate Studies Committee. An honors project must be under the supervision of a member of the mathematics faculty and receive prior approval from the student's major advisor. The student receives six credits for the project, which is carried out over a two semester period. It must include a prospectus, a paper, and an oral presentation. Students wishing to complete an honors program must have their curriculum approved by their major advisor and the Undergraduate Coordinator during their junior year, and must declare their intention to complete an honors program at that time.

## MATHEMATICS PLACEMENT

Information on placement may be obtained from the Department of Mathematics. Inquiries should be addressed to the Undergraduate Coordinator.

## HONORS SECTIONS

Honors sections in 121, 122, 131, 221, and 224 are offered each year. Generally speaking, these sections treat the same material as the regular sections, but in greater depth. Honors sections of 300 -level courses are offered when there is sufficient demand - they are conducted in conjunction with a regular section but require extra work for honors credit. They may also include an additional class meeting each week. Admission to the honors sections is by invitation, but all interested students are encouraged to direct inquiries to the Undergraduate Coordinator.

## COURSES

## MATH 111, 112 Probability and Statistics I, II (3, 3)

Staff. Prerequisite: high school algebra. Elementary probability theory with applications; random variables; distributions including a thorough discussion of the binomial, Poisson, and normal distributions; central limit theorem; histograms; sampling distributions; confidence intervals; tests of hypotheses; linear models; regression and correlation; chi-square test; non-parametric statistics; bioassay; sensitivity experiments; sequential test. 111 is a prerequisite for 112.
Math 114 Statistics for Business (4)
Staff. Prerequisite: high school algebra. An introductory statistics course for pre-BSM students, which emphasizes basic topics on statistical inferences with extensive coverage of data collection and analysis as needed to evaluate the reported statistical results and to make good decisions in business. The course stresses the development of statistical thinking, the assessment of credibility
and the value of the inferences made from data, both by those who analyze and those who produce them. In comparison with Math 111, this course spends more time on statistical inference problems, less on probability, and teaches the use of Excel, a computer skill necessary nowadays in the business world.

## MATH 115, 116 Introduction to Calculus (3, 3)

Staff. The material of Calculus 121 is covered in two semesters, with diversions for topics in algebra, trigonometry, complex numbers as the need for these topics arises. Mathematics 115 is a prerequisite for 116 . Students finishing the course sequence 115-116 may continue with 122 or any other course having Calculus 121 as a prerequisite. The combination of 115 and 116 may count as one course toward the B.S. degree requirement.

## MATH 121 Calculus I (4)

Staff. Prerequisites: high school algebra, geometry, and trigonometry. Functions and their graphs, limits and continuity, derivatives and applications of derivatives, and introduction to the integral.

## MATH 122 Calculus II (4)

Staff. Prerequisite: grade of at least C- in MATH 116 or 121. Integration; exponential, logarithmic, and trigonometric functions; techniques of integration; mean value theorem; Taylor's Theorem and Taylor series; and infinite series.

## MATH 131 Consolidated Calculus (4)

Staff. Prerequisite: a score of 3 or higher on the AB or BC Calculus AP test or permission of the mathematics department undergraduate coordinator. A combined course in Calculus I and II for students with a background in Calculus I. Students receive credit for both this course and 121 if they receive a B- or higher. Students may not receive credit for both 131 and 122.

## MATH 217 Discrete Mathematics (3)

Staff. Prerequisite: MATH 122 or 131. An introduction to the concepts and techniques of discrete mathematics including set theory, mathematical induction, graphs, trees, ordered sets, Boolean algebras, and the basic laws of combinatorics.

## MATH 221 Calculus III (4)

Staff. Prerequisite: MATH 122 or 131. A basic course in differential and integral calculus of several variables. Vectors in the plane and space. Vector functions, derivatives, arc length, curvature. Functions of several variables: continuity, partial derivatives, chain rule, gradient, optimization, Lagrange multipliers. Double and triple integrals: change of variables, polar coordinates, cylindrical and spherical coordinates, surface area. Vector fields: gradient, curl, divergence, line and surface integrals, Green's, Stokes’, and Divergence theorems.
MATH 224 Introduction to Applied Mathematics (4)
Staff. Prerequisite: MATH 122 or 131. An introduction to the techniques of applied mathematics. The emphasis will be on the mathematical modeling by differential equations of a variety of applications in the natural sciences. Numerical and graphical techniques for finding both quantitative and qualitative information about solutions will be discussed and implemented on the computer. No programming experience is assumed.

## MATH 300 Computational Problem Solving (4)

Staff. Prerequisite: MATH 121 or approval of instructor. This course will utilize a Scheme programming environment to teach student how to solve a broad range of mathematical problems.

## MATH 301 Probability and Statistics (3)

Staff. Prerequisite: MATH 221. An introduction to statistics and the necessary probability background. Binomial, Poisson, and normal distribution; independence; sampling distribution; confidence intervals and hypothesis tests on the mean; variance; proportions; goodness of fit; contingency tables; linear regression.

MATH 304 Linear Models (3)
Staff. Prerequisite: MATH 301. Corequisite: MATH 309 or approval of instructor. Review of linear algebra pertinent to least squares regression. Review of multivariate normal, chi-squared, t , F distributions. Classical theory of linear regression and related inference. Regression diagnostics. Extensive practice in data analysis.
MATH 305 Real Analysis I (3)
Staff. Prerequisite: MATH 221. Introduction to analysis. Real numbers, limits, continuity, uniform continuity, sequences and series, compactness, convergence, Riemann integration. An indepth treatment of the concepts underlying calculus.

## MATH 309 Linear Algebra (4)

Staff. Prerequisite: MATH 221. An introduction to linear algebra emphasizing matrices and their applications. Gaussian elimination, determinants, vector spaces and linear transformations, orthogonality and projections, eigenvector problems, diagonalizability, Spectral Theorem, quadratic forms, applications. MATLAB is used as a computational tool.

## MATH 311 Abstract Algebra I (3)

Staff. Prerequisite: MATH 221. An introduction to abstract algebra. Elementary number theory and congruences. Basic group theory: groups, subgroups, normality, quotient groups, permutation groups. Ring theory: polynomial rings, unique factorization domains, elementary ideal theory. Introduction to field theory.

## MATH 320 Combinatorics (3)

Staff. Prerequisites: MATH 121, 122, and either 221 or 309 or approval of instructor. Basics of combinatorics with emphasis on problem solving. Provability, pigeonhole principle, mathematical induction. Counting techniques, generating functions, recurrence relations, Polya's counting formula, a theorem of Ramsey.

## MATH 331 Scientific Computing I (3)

Staff. Prerequisites: MATH 221, 224, and Computer Science 101 or equivalent. Errors. Curve fitting and function approximation, least squares approximation, orthogonal polynomials, trigonometric polynomial approximation. Direct methods for linear equations. Iterative methods for nonlinear equations and systems of nonlinear equations. Interpolation by polynomials and piecewise polynomials. Numerical integration. Single-step and multi-step methods for initialvalue problems for ordinary differential equations, variable step size. Current algorithms and software.

## MATH 347 Analytical Methods of Applied

Mathematics (3)
Staff. Prerequisites: MATH 221 and 224. Integral theorems of vector calculus: Gauss-GreenStokes theorems, Fourier series, introduction to partial differential equations (wave, heat diffusion, potential equations). Separation of variables techniques, wave motion, transform techniques, applications.

## MATH 365 Number Theory and Applications (3)

Staff. The subject of number theory is one of the oldest in mathematics. The course will cover some basic material and describe interesting applications. One of the recurrent themes is the realization that mathematics that was developed usually for its own sake, has found applications in many unexpected problems. Some of the topics covered in the class are Pythagorean triples, prime numbers, divisibility and the highest common divisor, linear diophantine equations, congruences, round-robin tournaments and perpetual calendars, multiple functions, perfect numbers, primitive roots, pseudo-random numbers, decimal fractions and continued fractions, quadratic reciprocity
MATH 398-399 Seminar in Mathematics (1, 3)
Staff. Prerequisites: MATH 305, 309, and two additional courses at the 300-level or above. Under faculty guidance, students will select a topic in current mathematical research, write an expository article on that topic, and give an oral presentation. This seminar is required of all mathematics majors who are not doing an Honors Project within the department. Completion of 398 and 399 fulfills the college writing requirement.

## MATH 402 Mathematical Statistics (3)

Staff. Prerequisites: MATH 221, 301. Review of principal discrete and continuous distributions. Exponential families. Likelihood functions and estimation; sufficiency, optimal estimators, maximum likelihood estimators and their distributions. Hypothesis tests; Neyman-Pearson lemma, likelihood ratio tests. Likelihood principle. Bayesian methods. Introduction to categorical data analysis and nonparametric methods.

## MATH 406 Real Analysis II (3)

Staff. Prerequisites: MATH 305 and 309. An in-depth treatment of multivariable calculus. Extends the material covered in Mathematics 221. Chain rule, inverse and implicit function theorems, Riemann integration in Euclidean n-space, Gauss-Green-Stokes theorems, applications.

## MATH 412 Abstract Algebra II (3)

Staff. Prerequisites: MATH 309 and 311. Abstract vector spaces, quotient spaces, linear transformations, dual spaces, determinants. Solvable groups. Field extensions, Galois theory, solvability of equations by radicals.

## MATH 421 Differential Geometry (3)

Staff. Prerequisites: MATH 305 and 309. Theory of plane and space curves including arc length, curvature, torsion, Frenet equations, surfaces in three-dimensional space. First and second fundamental forms, Gaussian and mean curvature, differentiable mappings of surfaces, curves on a surface, special surfaces.
MATH 430 Complex Analysis (3)
Staff. Prerequisite: MATH 305. The complex number system, complex integration and differentiation, conformal mapping, Cauchy's theorem, calculus of residues.

## MATH 441 Topology (3)

Staff. Prerequisite: MATH 305. An introduction to topology. Elementary point set topology: topological spaces, compactness, connectedness, continuity, homeomorphisms, product and quotient spaces. Classification of surfaces and other geometric applications.

## MATH 478 Introduction to Concurrency (3)

Staff. Prerequisites: MATH 217 and MATH 310 or approval of instructor. This course is a general introduction to Concurrency, i.e., the mathematical modeling of systems made up of several processes interacting with each other. The process algebra CSP (Communicating Sequential Processes) will be studied, both on the syntactic and semantic level. The denotational, operational, and algebraic models used to reason about the language will be presented, and examples will be used throughout to illustrate the theory.

MATH 491, 492 Independent Studies (1-3, 1-3)
Staff. Prerequisite: approval of the department. No more than four hours of 491-492 may be counted toward satisfying the major requirements.

## MATH H499-H500 Honors Thesis (3, 4)

Staff. Prerequisite: approval of the department. Thesis may serve to satisfy part of the departmental honors requirements.

## MATH 603 Stochastic Processes (3)

Staff. Prerequisite: MATH 301. Markov processes, Poisson processes, queueing models, introduction to Brownian Notion.

## MATH 635 Optimization (3)

Staff. Prerequisite: MATH 309 or equivalent. Constrained and unconstrained non-linear optimization; Linear programming, combinatorial optimization as time allows. Emphasis is on realistic problems whose solution requires computers, using Maple or Mathematica.
MATH 651, 652 Topology I and II (3, 3)
Staff. Prerequisites: MATH 305 and 406. Point set topology. Connectedness, product and quotient spaces, separation properties, metric spaces. Classification of compact connected surfaces. Homotopy. Fundamental group and covering spaces. Singular and simplicial homology. Eilenberg-Steenrod axioms. Computational techniques, including long exact sequences. MayerVietoris sequences, excision, and cellular chain complexes. Introduction to singular cohomology.

## MATH 655, 656 Differential Geometry I, II $(3,3)$

Staff. Differential manifolds. Vector fields and flows. Tangent bundles. Frobenius theorem. Tensor fields. Differential forms, Lie derivatives. Integration and deRham’s theorem. Riemannian metrics, connections, curvature, parallel translation, geodesics, and submanifolds, including surfaces. First and second variation formulas, Jacobi fields, Lie groups. The Maurer-Cartan equation. Isometries, principal bundles, symmetric spaces, K\%ohler geometry.

## MATH 661, 662 Algebra I and II $(3,3)$

Staff. Prerequisites: MATH 309 and 311. Vector spaces: matrices, eigenvalues, Jordan canonical form. Elementary number theory: primes, congruences, function, linear Diophantine equations, Pythagorean triples. Group theory: cosets, normal subgroups, homomorphisms, permutation groups, theorems of Lagrange, Cayley, Jordan-Hölder, Sylow. Finite abelian groups, free groups, presentations. Ring theory: prime and maximal ideals, fields of quotients, matrix and Noetherian rings. Fields: algebraic and transcendental extensions, survey of Galois theory. Modules and algebras: exact sequences, projective and injective and free modules, hom and tensor products, group algebras, finite dimensional algebras. Categories: axioms, subobjects, kernels, limits and colimits, functors and adjoint functors.
MATH 665, 666 Differential Equations I, II (3, 3)
Staff. ODE: existence and uniqueness, stability and linearized stability, phase plane analysis, bifurcation and chaos. PDE: heat, wave, and Laplace equations, functional analytic (Sobolev
space) and geometric (characteristic) methods. Maximum principle. Introduction to nonlinear PDE's.

## MATH 671, 672 Analysis I and II (3, 3)

Staff. Prerequisites: MATH 305, 309, and 406. Lebesgue measure on R. Measurable functions (including Lusin's and Egoroff's theorems). The Lebesgue integral. Monotone and dominated convergence theorems. Radon-Nikodym Theorem. Differentiation: bounded variation, absolute continuity, and the fundamental theorem of calculus. Measure spaces and the general Lebesgue integral (including summation and topics in $\mathrm{R}_{\mathrm{n}}$ such as the Lebesgue differentiation theorem). $\mathrm{L}_{\mathrm{p}}$ spaces and Banach spaces. Hahn-Banach, open mapping, and uniform boundedness theorems. Hilbert space. Representation of linear functionals. Completeness and compactness. Compact operators, integral equations, applications to differential equations, self-adjoint operators, unbounded operators.

## MATH 675, 676 Computation I, II (3, 3)

Staff. Floating point arithmetic (limitations and pitfalls). Numerical linear algebra, solving linear systems by direct and iterative methods, eigenvalue problems, singular value decompositions, numerical integration, interpolation. Iterative solution of nonlinear equations. Unconstrained optimization. Solution of ODE, both initial and boundary value problems. Numerical PDE. Introduction to fluid dynamics and other areas of application.

MATH 681, 682 Applied Mathematics I and II (3, 3)
Staff. Prerequisites: MATH 305, 309, 347, and 406. Formulating mathematical models. Introduction to differential equations and integral equations. Fourier series and transforms, Laplace transforms. Generating functions. Dimensional analysis and scaling. Regular and singular perturbations. Asymptotic expansions. Boundary layers. The calculus of variations and optimization theory. Similarity solutions. Difference equations. Stability and bifurcation. Introduction to probability and statistics, and applications.
Note: Mathematics 651, 652, 655, 656, 661, 662, 665, 666, 671, 672, 675, 676, 681, 682 are the same as courses of the same title offered in the Graduate School. These courses are particularly recommended for students planning to do graduate work in mathematics.
MATH 684 Numerical Methods in Partial Differential Equations (3)
Staff. Prerequisites: MATH 331 and 347 or approval of instructor. This course will present a detailed analysis of the methods for numerically approximating the solution of ordinary and partial differential equations typically encountered in applications from engineering and physics. Mathematical theory, practical implementation and applications will be emphasized equally. Typical applications to be discussed include population dynamics, particle dynamics, waves, diffusion processes.

## Mathematical Economics

The bachelor of science in mathematical economics is an interdisciplinary program which provides students going on to strong professional or graduate schools the solid economic and mathematical training they need for such undertakings, while holding the number of required credits within reasonable limits. At least three kinds of students should be well served by such a major.

- students seeking eventually to get an M.B.A. with a quantitative orientation
- students seeking to do graduate work in economics
- students planning study or careers in modeling in the social sciences.

REQUIRED COURSES

## Mathematics

MATH 121, 122 Calculus I, II or Math 131
MATH 221, 224 Calculus III, Introduction to Applied Mathematics
MATH 301 Introduction to Probability and Statistics
MATH 309 Linear Algebra
One mathematics elective determined by student's needs.

## Economics

ECON 101, 102 Introductory Microeconomics, Macroeconomics
ECON 301 Intermediate Microeconomics
or
ECON 303 Intermediate Microeconomics with Calculus
ECON 302 Intermediate Macroeconomics
ECON 441 Mathematical Economics or approved substitute
One course chosen from Economics 423, 425 or 709
Two economics electives

## Medieval Studies

Office: 315 Woldenberg Art Center
Phone: (504) 862-8000 x2208
Fax: (504) 862-8710

## Program Administrator

William Tronzo, Art (Director)

## MAJOR

An interdisciplinary major in medieval studies is offered by a staff of 15 professors from various departments whose interests are in the Middle Ages. The major in medieval studies consists of 27 credits chosen by the student and the student's advisor from the following fields: Germanic, Latin and Romance, social studies and fine arts. The student chooses one of these four fields as the area of specialization and takes four courses in this area; the remaining five courses are to be divided among at least two of the other three fields.

## MDST 200 Introduction to Medieval Studies (3)

Staff. An introduction to the interdisciplinary nature of medieval studies, focusing on the relationships between history, language, and the production of literary texts.
MDST 400 Special Topics in Medieval Studies (3)
Staff. Each course will treat a particular area of medieval studies, within an interdisciplinary framework.

MDST 600 Special Topics in Medieval Studies (3)
Staff. Each course will treat a particular area of medieval studies, within an interdisciplinary framework.

## Germanic

## English

ENLS 407 Introduction to Old English
ENLS 412 Medieval Literature
ENLS 445 Chaucer
†ENLS 708 Old Norse

## Latin and Romance

Latin
LATN 607 Medieval Latin

## French

FREN 422 Medieval French Literature
FREN 621 History of the French Language
FREN 622 Medieval French Literature

## Italian

ITAL 601 Topics in Origins and Masterpieces of 13th- and 14th-Century Italian Literature

## Spanish

SPAN 651 History of the Spanish Language
SPAN 681 Medieval Spanish Literature

## Social Studies

History
HISA 102 The Barbarian West
HISA 103 Medieval Europe, 1100-1450
HISA 303 Early Medieval and Byzantine Civilization from Constantine to the Crusades
HISA 331 Medieval England
HISA H400 Colloquium in Late Antiquity
HISA 402 Special Topics in Medieval and Renaissance History
HISA 601 Seminar in Select Topics in Roman History
HISA 604 High Middle Ages
HISA 605 Italian Renaissance
HISA 609 Seminar in Select Topics in Byzantine History
$\dagger$ HIST 717 Medieval Seminar
Philosophy
$\dagger$ PHIL 724 Medieval Logic
Political Science
POLT 472 Ancient and Medieval Political Theory
Fine Arts
Architecture
*HTEL 335 Islamic Architecture
*HTEL 351 Medieval Architecture
Art
ARHS 320 Late Antique and Byzantine Art
ARHS 321 Art and Experience in the Middle Ages
ARHS 331 Art of the Early Renaissance in Italy
ARHS 337 Northern Renaissance Art
ARHS 651 Seminars in the History of Art
ARHS 658 Seminars in Medieval, Northern Renaissance, Early Italian Renaissance

## Music

MUSC 309 Music Before 1600
MUSC 608 Notation of Medieval and Renaissance Music Other courses may be included on approval.

## Russian

RUSS 353 Survey of Russian Art
$\dagger$ By special permission.

* Non-LAS course. See the college SPC restrictions.


## Music

Office: Brandt v.B. Dixon Performing Arts Center
Phone: (504) 865-5267
Fax: (504) 865-5270
Website: www.tulane.edu/~music
Email: music@tulane.edu
Professors
John H. Baron, M.A., Harvard, Ph.D., Brandeis (L.R. Schawe and W. Schawe '16 Memorial Professor)
Barbara M. Jazwinski, M.A., Stanford, Ph.D., City University of New York (V. Beer Professor)
Faina Lushtak, Dipl., Chaikovsky State Conservatory, Moscow (Downman Chair in the Performing Arts)

## Associate Professors

Anthony M. Cummings, M.F.A., Ph.D., Princeton (Chair)
B. Michael Howard, M.Mus.Ed., Southern Mississippi (A.L. Mintz ‘48 ‘51 and L.B. Mintz ‘55 ‘67 Professor)

## Assistant Professors

John J. Joyce Jr., M.Mus., North Texas State, M.A., Ph.D., Tulane
Gayle M. Murchison, M.Mus., Hartford, M.Phil., Ph.D., Yale

## BACHELOR OF ARTS IN MUSIC

The Bachelor of Arts degree program in music develops academic competence in the fundamental historical, anthropological, and theoretical aspects of music. The B.A. degree in music consists of at least 36 credits, as follows: 4 semesters of musicology (MUSC 141, 142, 241, 242); 4 semesters of music theory (MUSC 151, 152, 201, 202); 4 semesters of musicianship laboratory (APMS 109, 110, 209, 210); and 8 credits of music electives (any MUSC or APMS courses at or above the 200-level).

## MINOR IN MUSIC

A minor in music consists of at least 18 credits, as follows: 2 semesters of musicology (MUSC 141, 142); 2 semesters of music theory (MUSC 151, 152); 2 semesters of musicianship laboratory (APMS 109, 110); and 4 credits of music electives (any MUSC or APMS courses at or above the 200-level).

## BACHELOR OF FINE ARTS IN MUSICAL COMPOSITION OR MUSICAL PERFORMANCE

The B.F.A. degree program in musical composition or in musical performance (classical guitar, classical piano, or voice) elaborates upon the fundamental academic competencies developed in the B.A. degree program with additional course work in the creative or performing aspects of music. The B.F.A. in musical composition or in musical performance (classical guitar, classical piano, or voice) consists of 50 to 53 credits as follows: 4 semesters of musicology (MUSC 141, 142, 241, and 242); 4 semesters of music theory (MUSC 151, 152, 201, and 202); 4 semesters of musicianship laboratory (APMS 109, 110, 209, and 210); and 22 to 25 additional specialty credits approved by the students private instructor and the chair of the department (recommended for composers: APMS 217 four times, APMS 221 in composition four times, APMS 321 in composition twice, APMS 423 in composition twice, and one course from APMS 302, 404, or 495; recommended for performers: APMS 217 four times, APMS 221 four times in the appropriate performance medium, APMS 321 twice in the appropriate performance medium, and APMS 423 twice in the appropriate performance medium). In addition, majors in guitar, piano, and voice perform junior (30-minute) and senior (60-minute) recitals, and majors in composition perform a senior (60-minute) recital. Students are officially admitted to the B.F.A. program only upon successful completion of the core academic curriculum (MUSC 141, 142, 151, 152, 201, 202, 241, and 242, and APMS 109, 110, 209, and 210) and the approval of their principal instructor and the chair of the department

## BACHELOR OF FINE ARTS IN MUSICAL THEATRE

The major in musical theatre is a comprehensive, interdisciplinary, 57 -credit program in music, theatre, and dance, consisting of the following courses: MUSC 151, MUSC 152, MUSC 245, MUSC 332, APMS 109, APMS 110, APMS 217-04 eight times, APMS 221 (Voice) four times, APMS 321 (Private Intermediate Voice) twice, and APMS 423 (Private Advanced Voice and Senior Recital Preparation) twice, Theatre 210 (Fundamentals of Acting), Theatre 334 (Theatre Production and Design I), either Theatre 204 or Theatre 304 (Theatre Practicum), and 10 credits worth of coursework in dance from among the following courses: Dance 181, 182, 193, 194, 195, 196, 197, 198, 296, 380, 382, 395, 480, 482, and 495. In addition, students must perform junior (30-minute) and senior (60-minute) recitals.

## DEPARTMENTAL REGULATIONS

Any student enrolled as an undergraduate in Tulane College, Newcomb College, or the Schools of Architecture, Business, or Engineering may take any course in the music department for which $\mathrm{s} / \mathrm{he}$ meets the prerequisite. All instruction in applied music is given as private lessons, with the exception of beginning guitar students (who are assigned to a guitar class), beginning piano students (who are assigned to a piano class), and beginning voice students (who are assigned to a voice class). Students registering for the first time are assigned to an instructor after consultation and/or an audition. Graduating seniors are not permitted to begin the study of a new instrument or voice.

All students registering in theory for the first time are examined in the fundamentals of music, including notation, sight-reading, scales, intervals, meter and rhythm, and dictation to determine their placement in either MUSC 100 or 151.

## SCHEDULE OF FEES FOR APPLIED MUSIC

Applied-music courses, for credit, are open to all fulltime students. Students should register in Brandt v.B. Dixon Performing Arts Center, Room 102, no later than the first week of each semester. Piano, voice, guitar, or other instruments: one 1-hour lesson per week. Guitar Class, Piano Class, or Voice Class, limited enrollment: 2 one-hour classes per week.
A fee is charged for private lessons. Rates are assessed for the semester. Lessons may be discontinued for sufficient reason; however, refunds are not granted after two lessons. Music majors who successfully complete the B.F.A. in the composition, guitar, piano, voice, or musical theatre programs may apply upon graduating for a refund of the fees charged for private lessons during the junior and senior year (i.e., the two semesters of APMS 321 and the two semesters of APMS 423) that are taken with the head of the pertinent program, or with other permanent faculty in that program. As space permits, any full-time student following a regular course in any undergraduate program in Tulane College, Newcomb College, or the Schools of Architecture, Business, or Engineering may take private instruction in voice, guitar, piano, or other instruments at the charges indicated for music students.

## COURSES

(History, Anthropology, and Theory of Music)
MUSC 100 Fundamentals of Theory (3)
Staff. Basic course in the elements of music. Both semesters.
MUSC 105 The Art of Listening (3)
Staff. A course designed to increase the listeners perception and enjoyment of music. Both semesters.

## MUSC 109 Introduction to Popular Musics (3)

Ms. Murchison. Survey course focusing on the development of popular music styles since World War II.

## MUSC 141 History of European Art Music to 1800 (3)

Mr. Baron, Mr. Cummings, Mr. Joyce, Ms. Murchison. Pre- or corequisites: MUSC 151 and APMS 109 (or their equivalent), or permission of instructor. First semester.

MUSC 142 History of European Art Music Since 1800 (3)
Mr. Baron, Mr. Joyce. Prerequisites: MUSC 151 and APMS 109 (or their equivalent), or permission of instructor; corequisites: MUSC 152 and APMS 110 (or their equivalent), or permission of instructor. Second semester.
MUSC 151 Harmony (3)
Ms. Jazwinski. Prerequisite: successful completion of a diagnostic examination administered to students prior to their enrolling in MUSC 151. Corequisite: APMS 109. The study of diatonic and secondary chord structures and progressions with written exercises and analysis of music from the common practice period. Basic musicianship laboratory. First semester.

## MUSC 152 Advanced Harmony (3)

Ms. Jazwinski. Prerequisites: MUSC 151 and APMS 109. Corequisite: APMS 110. Chromatic harmony and modulation, written exercises using expanded harmonic vocabulary. Formal analysis of classic period works. Advanced musicianship laboratory. Second semester.
MUSC 189 Music in New Orleans (3)
Mr. Baron. A survey of the various types of New Orleans music during the 19th and 20th centuries: jazz, ragtime, sentimental piano and vocal music, dance music, ethnic music, and religious music.
MUSC 201 Tonal Analysis: 18th-19th Centuries (3)
Ms. Jazwinski. Prerequisites: MUSC 152 and APMS 110, or by examination. Corequisite: APMS 209. An in-depth study of harmonic, contrapuntal, rhythmic, and formal procedures in representative works selected from the Baroque through the Romantic periods. Expanding and applying analytical skills learned in 151 and 152 to entire compositions. First semester.

MUSC 202 20th-Century Theory (3)
Ms. Jazwinski. Prerequisites: MUSC 201 and APMS 209. Corequisite: APMS 210. Analysis of works by Debussy, Stravinsky, Bartok, Hindemith, Schoenberg, Webern, Dallapiccola, etc. Writing skills based on 20th-century melodic and harmonic principles. Second semester.
MUSC 205 Orchestral Music (3)
Staff. The development of music for orchestra from Bach to Mahler. Listening, reading, and written reports. First semester.

MUSC 230 Introduction to Computer Applications in Music (3)
Staff. Prerequisites: MUSC 152 and APMS 110 and approval of instructor. An introduction to the critical role of computers in the music field today. As a survey of computer tools and techniques, this course will include applied work with notation, MIDI, digital sound-editing, and multi-media software.

## MUSC 241 American Musics (3)

Mr. Joyce, Ms. Murchison. Prerequisites: MUSC 152 and APMS 110 (or their equivalent), or permission of instructor; corequisites: MUSC 201 and APMS 209 (or their equivalent), or permission of instructor. First semester. A chronological survey of music in the United States from the Pilgrims to jazz and rock. The course traces the widely varied paths taken by music in America and shows how the three spheres of folk, popular, and classical music have continually interacted to form a variegated whole. Lectures move from genre to genre, placing each in its historical and sociological order.
MUSC 242 World Musics (3)
Staff. Prerequisites: MUSC 201 and APMS 209 (or their equivalent), or permission of instructor; corequisites: MUSC 202 and APMS 210 (or their equivalent), or permission of instructor. Second semester. An overview of the field of ethnomusicology and the types of issues and concerns that have guided the research of world music within that field. A number of selected musical case studies from Asia, the Middle East, Latin America that illuminate the differences and similarities between Western musics and their counterparts in other parts of the world. Particular interest will be given to the way in which cultural, social, and religious beliefs have informed stylistic, performance practice, and aesthetic development in other parts of the world as a means of reflecting about the same types of connections in Western music.
MUSC 245 Introduction to Opera (3)
Mr. Monachino. Course includes lectures concerning the nature of opera and also a historical outline of the development of opera in Europe. Emphasis is then placed on viewing a number of complete operas, which will be screened on laser discs.

MUSC 330 Music Cultures of the World (3)
Staff. A survey of music in different societies throughout the world with assignments and readings in music other than Western art music. The lectures explain how to listen to this music as music and consider systematically the function of music in society. Primarily for non majors.
MUSC 332 Musical Theatre in America (3)
Mr. Howard, Mr. Joyce. A survey of vernacular theatre music in America from its European roots in opera buffa, ballad opera, and operetta through the jazz developments of the sixties.

## MUSC 333 Jewish Music (3)

Mr. Baron. Survey of Jewish liturgical music from Biblical times to the present, and of Jewish popular, theatre, and folk music. Emphasis on European, Israeli, Sephardic, and American traditions.
MUSC 334 History of Jazz (3)
Mr. Joyce. Development of jazz as a cultural, sociological phenomenon, and survey of jazz styles. Both semesters.
MUSC 335 Music in Contemporary Society (3)
Mr. Joyce. An introduction to the music of the contemporary world as it interacts with social, political, and cultural processes that distinguish the 20th century. Examines the full spectrum of modern musical styles (classical, jazz, popular, folk, rock) as they have adapted to the mass communications technology of the present day.
MUSC 337 Studies in the Great Composers (3)
Staff. The music of selected great composers is studied in depth against the background of their careers and times: African-American master composers; Bach; Beethoven; master Broadway and Tin Pan Alley composers; master composers of Italian opera; Mozart; or Wagner.
MUSC 341 Russian Music (3)
Mr. Baron. The history of 19th- and 20th-century Russian music with special emphasis on Tchaikovsky, Prokofiev, and Shostakovich.
MUSC 388 Writing Practicum (1)
Staff. Writing practicum. Fulfills the college writing requirement.
MUSC 411 Chamber Music (3)
Staff.

## MUSC 456, 457 Internship Studies (1-3, 1-3)

Department chair. Prerequisites: approval of instructor and department chair. Qualified junior and senior majors may receive credit for work in musical institutions in the community, such as recording studios, the New Orleans Opera Association, the Louisiana Philharmonic Orchestra, and the like; this is to be accompanied by an academic component. Registration is administered by the Office Manager in the Department of Music, Brandt v.B. Dixon Performing Arts Center, Room 102. Only one internship may be completed per semester. Note: A maximum of three credits may be earned in one or two courses.
MUSC H491, H492 Independent Studies (3, 3)
Staff. For qualified students in any of the fields of music.
MUSC H493, H494 Seminar (3, 3)
Staff. Special problems in music.
MUSC 495 Special Topics in Musicology (3)
Mr. Baron, Mr. Cummings, Mr. Joyce, Ms. Murchison, Mr. LÈon.
MUSC H499-H500 Honors Thesis (3, 3 or 4)
Staff. For senior honors candidates in any field.

## APPLIED-MUSIC COURSES (MUSICAL COMPOSITION AND MUSICAL PERFORMANCE)

Applied-music courses for credit are open to all full-time students in Tulane College, Newcomb College, and the Schools of Architecture, Business, or Engineering, on a first-come, first-served basis. See "Departmental Regulations", above.

APMS 109 Musicianship Laboratory I (1)
Staff. Corequisite: MUSC 151. Basic musicianship laboratory.
APMS 110 Musicianship Laboratory II (1)
Staff. Prerequisites: MUSC 151 and APMS 109; corequisite: MUSC 152. Advanced musicianship laboratory.
APMS 203, 204 Band and Orchestral Instruments (1, 1)
Staff. One hour lesson with a minimum of six hours practice weekly. Fundamentals of the techniques of each instrument and study of approved methods of teaching the instrument.

## APMS 209 Musicianship Laboratory III (1)

Staff. Prerequisites: MUSC 152 and APMS 110, or by examination; corequisite: MUSC 201. Expanding and applying basic musicianship skill to complete musical works.
APMS 210 Musicianship Laboratory IV (1)
Staff. Prerequisites: MUSC 201 and APMS 209, or by examination; corequisite: MUSC 202. Writing and aural skills based on 20th century melodic, rhythmic, and harmonic principles.

APMS 217 Musical Ensemble (1)
Staff. May be taken no more than four times (Section 04 eight times for Musical Theatre majors). Ensemble courses are open, for credit, to all students of the University. The sections are elective.

## APMS 217 Section 01 Choral Ensemble.

By audition.
APMS 217 Section 02 Instrumental Ensemble. Instructor approval.
APMS 217 Section 03 Band.
Instructor approval.

## APMS 217 Section 04 Musical Theatre Workshop.

Instructor approval.

## APMS 217 Section 05 Orchestra.

By audition.

## APMS 217 Section 06 Jazz Ensemble.

Instructor approval.
APMS 217 Section 07 Vocal Ensemble.
Instructor approval.
APMS 217 Section 08 Guitar and Piano Accompaniment of Vocalists.
Instructor approval.

## APMS 217 Section 09 Rock Ensemble.

Instructor approval.

## APMS 221 Voice, Instrument, or Composition (1-2)

Staff. May be taken no more than four times. One hour private lesson with a minimum of six hours of practice weekly ( 2 credits). Students assigned to guitar, piano or voice class meet for two one-hour lessons each week (1 credit); all beginners must start with a class.
APMS 302 18th-Century Counterpoint (3)
Mr. Baron, Ms. Jazwinski. Prerequisite: MUSC 152. Eighteenth-century counterpoint. Principles of canonic and fugal composition in the style of J.S. Bach. Analysis of pertinent compositions. Sight singing and dictation.

## APMS 313, 314 Techniques of Instrumental Conducting (1, 1)

Staff. Prerequisites: MUSC 151, 152, 201, and 202, or approval of instructor.

## APMS 321 Private Intermediate Voice, Instrument, or Composition (2)

Staff. May be taken no more than twice. Applied music at the intermediate level. Fifty-minute private lesson, with a minimum of six hours of practice weekly.

## APMS 404 Orchestration (3)

Ms. Jazwinski. The instruments of the orchestra; their construction, ranges, and playing techniques; methods of effective instrumental writing; the mechanics of reading and writing a score. Written exercises, analysis of scores, study of recorded performances and live demonstrations.

## APMS 423 Private Advanced Voice, Instrument, or Composition and Recital Preparation (3)

Staff. May be taken no more than twice. One hour lesson per week. Minimum of 12 hours practice. One half-recital required for performance majors at the junior level. One full recital required for both composition and performance majors at the senior level.
APMS 450 Materials and Pedagogy of Piano (3)
Ms. Lushtak. First semester, alternate years.
APMS 495 Special Topics in Music Theory (3)
Ms. Jazwinski.

## Neuroscience

Website: www.tulane.edu/~neurosci/neurosci.html

## Psychology

Office: 2007 Percival Stern Hall
Phone: (504) 865-5331
Fax: (504) 862-8744
Cell and Molecular Biology
Office: 2000 Percival Stern Hall
Phone: (504) 865-5546
Fax: (504) 865-6785

## Program Administrators

Gary Dohanich, Psychology (Co-Director)
Jeffrey Tasker, Cell and Molecular Biology (Co-Director)
Faculty Associates
Andrei Belousov, Cell and Molecular Biology
Paul Colombo, Psychology
Joseph Dien, Psychology
Harry Howard, Spanish and Portuguese
David Hurley, Cell and Molecular Biology
Fiona Inglis, Cell and Molecular Biology
Bret Smith, Cell and Molecular Biology

## MAJOR

A major in neuroscience allows a student to pursue an interdepartmental curriculum that focuses on the role of the nervous system in regulating physiological processes. Neuroscience combines many traditional fields of study including psychology, biology, chemistry, physics, anatomy, and physiology. The field of neuroscience encompasses a broad domain that ranges from the cellular and molecular control of brain cells to the regulation of responses in whole organisms.

The student majoring in neuroscience fulfills the standard requirements of a premedical curriculum, which is recommended or required for admission to graduate study in neuroscience or related graduate programs. This curriculum also enables the student to pursue medical training, possibly specializing in an area related to neuroscience.

A bachelor of science in neuroscience requires nine credits of core courses; 12 credits of elective courses; and 38 credits of co-requisite courses in biology, psychology, chemistry, physics, and mathematics totaling 59 credits. At least six of the elective credits must be taken from the list of neuroscience electives and at least three laboratory courses must be taken as one-credit components of core and elective courses.

Students majoring in neuroscience are strongly encouraged to pursue research in laboratories on the main campus or at the medical school as independent studies and/or an honors thesis. An independent study or honors thesis may fulfill one of the three required laboratory courses.

## Required Core Courses (9 credits)

CELL 331 Cellular Neuroscience (3)
PSYC 367 Brain and Behavior (3)
PSYC 651 Biological Psychology (3)

## Elective Courses

## (minimum 12 credits, including minimum of three labs)

Elective Neuroscience Courses
(minimum six credits)
CELL 332 Systems Neuroscience
CELL 434 Neurobiology of Disease
CELL 435 Developmental Neurobiology
CELL 663 Cellular Neurophysiology
LING 411 Brain and Language
PSYC 653 Psychopharmacology
PSYC 655 Behavioral Neuroendocrinology
PSYC 657 Cognitive Neuroscience
Elective Laboratory Courses

## (minimum of three labs)

CELL 211 General Biology Lab
CELL 302 Cell Biology Lab
CELL 312 Molecular Biology Lab
CELL 411 Cells and Tissues
CELL 417 Developmental Biology Lab
EEOB 444 Human Physiology Lab
EXSS 303/313 Human Anatomy and Physiology I (Lecture/Lab)
EXSS 304/314 Human Anatomy and Physiology II (Lecture/Lab)
PSYC 314 Sensory Processes \& Perception
PSYC 369 Comparative Animal Behavior (Lecture/Lab)
PSYC 652 Biological Psychology Lab
PSYC 654 Psychopharmacology Lab

PSYC 656 Behavioral Neuroendocrinology Lab
PSYC 658 Cognitive Neuroscience Lab
Independent Study or Honors Thesis may count as one lab course

## Elective Lecture Courses

CELL 205 Genetics
CELL 301 Cell Biology
CELL 305 Drugs and Their Actions
CELL 311 Molecular Biology
CELL 321 Cellular Physiology
CELL 401 Cellular Biochemistry
CELL 416 Developmental Biology
CELL 608 Advanced Developmental and Cell Biology
EEOB 101/111 Diversity of Life (Lecture/Lab)
EEOB 333 Human Physiology
PSYC 212 Experimental Statistics and Design
PSYC 333 Abnormal Psychology
PSYC 368 Comparative Animal Behavior
PSYC 611 Intermediate Statistics and Design
PSYC 667 Advanced Statistics and Design
Corequisite Courses (38 credits)
CELL 101 General Biology
CHEM 107/117 General Chemistry
CHEM 108/118 General Chemistry
CHEM 241/243 Organic Chemistry
CHEM 242/244 Organic Chemistry
MATH 121 or 131 Calculus I or Consolidated Calculus
MATH elective
PHYS 121 or 131 General Physics
PHYS 122 or 132 General Physics
PSYC 100, 101, or 102 Introductory Psychology

NSCI 491, 492 Independent Studies (3, 3)
Staff. Laboratory or library research under direction of a faculty member.
NSCI H499-H500 Honors Thesis $(3,4)$
Staff. Admission by department and Honors Committee approval.

## Pharmacology

See Allied Programs

## Philosophy

Office: 105 Newcomb Hall
Phone: (504) 865-5305
Fax: (504) 862-8714
Website: www.tulane.edu/~phil/
Professors
Radu J. Bogdan, Ph.D., Stanford
Ronna C. Burger, Ph.D., New School for Social Research
Graeme R. Forbes, D.Phil., Oxford (The Celia Scott Weatherhead Distinguished Professor of Philosophy)
Gerald Gaus, Ph.D., Pittsburgh
Eric M. Mack, Ph.D., Rochester
Andrew J. Reck, Ph.D., Yale
Michael E. Zimmerman, Ph.D., Tulane (Chair)
Associate Professors
Bruce W. Brower, Ph.D., Pittsburgh
John D. Glenn, Jr., Ph.D., Yale
Osborne H. Green, Jr., D.Phil., Oxford
Donald S. Lee, Ph.D., Yale
Assistant Professor
Paul A. Lodge, Ph.D., Rutgers

## MAJORING IN PHILOSOPHY

All students majoring in philosophy and not writing an honors thesis must complete a total of nine courses (27 credits) in philosophy. All students majoring in philosophy and writing an honors thesis must complete ten courses ( 31 credits). In this case, honors thesis work in H499 and H500 counts for two courses and seven credits. (One of these seven credits is a writing requirement credit.) In addition to the standard major, the department offers two more specialized tracks within the major: Law, Morality, and Society; and Language, Mind, and Knowledge.

## STANDARD MAJOR

For the standard major in Philosophy the specific course requirements are: the two course sequence in the history of philosophy (201, 202); one course in logic (106, 121, or 304, with 121 or higher strongly recommended); one course in ethics (103, 351, 355, 356 or 357). At least two of the remaining courses must be at the 600 level. No more than three of the required nine courses can be at the 100 level.

## CONCENTRATION IN LAW, MORALITY, AND SOCIETY

For the concentration in Law, Morality, and Society the specific course requirements are: the two course sequence in classics of political philosophy (211, 212); one course in critical thinking or logic ( 106 or 121); five other courses in ethics, political philosophy or the philosophy of law (103, $105,334,351,355,356,357,364,365$, H499, H500, $613,651,652$, 654 or 674 ); one course outside of these areas at the 300 level or above. At least two of these courses must be at the 600 level.

## CONCENTRATION IN LANGUAGE, MIND, AND KNOWLEDGE

For the concentration in Language, Mind, and Knowledge the specific course requirements are: the two course sequence in the history of philosophy (201, 202); one course in logic (121 or 304); five other courses in philosophy of language, mind, or knowledge (104, 220, 312, 341, 342, 375, 380, 387, H499, H500, 609, 612, 617, 618, 619, 662); one course outside of these areas at the 300 level or above. At least two of these courses must be at the 600 level.

## MINOR

A minor in philosophy consists of five philosophy courses, three of which must be above the 100 level.

## PHIL 101 Introduction to Philosophy (3)

Mr. Bogdan, Mr. Glenn, Mr. Green, Mr. Lodge, Mr. Mack, Mr. Reck. A general introduction to problems concerning knowledge, reality, and conduct.
PHIL 102 Philosophies of the Self (3)
Mr. Zimmerman. An examination of several theories of the nature of self and its relation to society and to the world. Techniques of thinking about the self and its identity crises.

## PHIL 103 Ethics (3)

Mr. Brower, Mr. Gaus, Mr. Green, Mr. Mack, Mr. Reck. A critical study of alternative theories of the good life, virtue and vice, right and wrong, and their application to perennial and contemporary moral problems.

## PHIL 104 Beginning with Minds (3)

Mr. Bogdan. A topical introduction to philosophy which surveys historical and current work in philosophy of mind and the study of cognition. The material revolves around the reasons we have to attribute minds to people. We explore several reasons for having a mind: the capacity for knowledge, innate representations, language, consciousness, agency, control over the body, freedom from natural causality. This course is particularly useful for those students interested in the cognitive studies program, a coordinate major.

## PHIL 106 Critical Thinking (3)

Mr. Lee. This course is intended to enhance the student's analytical reasoning skills. Emphasis is placed on the study of arguments and the development of techniques of informal logic for assessing their cogency.

## PHIL 121 Elementary Symbolic Logic (3)

Mr. Forbes, Mr. Lee, Mr. Lodge. The course concerns techniques of analyzing sentences and arguments by uncovering the formal structures and relations which underlie them. This involves translating ordinary language into the symbolic formulas of elementary logical systems and proving formalized arguments. This course satisfies the mathematics proficiency requirement.

## PHIL 133 The Meaning of Life (3)

Mr. Zimmerman. This course provides students with an opportunity to explore an important philosophical topic: the question of the meaning of life, including the possibility that life does not have any "meaning". Historically, a number of important philosophers have regarded this question as the most important and profound of human inquiries. This course will examine a number of different philosophical attempts, from Western and Eastern traditions, to answer the questions of the meaning of life.

## PHIL 201 History of Ancient Philosophy (3)

Ms. Burger, Mr. Reck. A study of ancient Greek philosophy, focusing on the thought of the PreSocratics, Plato, and Aristotle. Same as CLAS 201.
PHIL 202 History of Modern Philosophy (3)
Ms. Burger, Mr. Glenn, Mr. Lodge, Mr. Reck, Mr. Zimmerman. A study of early modern philosophy, focusing on the period from Descartes through Kant.

## PHIL 211 Classics of Political Philosophy I (3)

Ms. Burger. This course will be devoted to a study of classical works of political philosophy in the Western tradition, primarily Plato’s Republic and Aristotle’s Politics. Same as CLAS 211.
PHIL 212 Classics of Political Philosophy II (3)
Mr. Mack. This course will be devoted to an examination and critical assessment of classical works of modern political philosophy in the Western tradition, focusing each term on the writings of approximately three or four of the following thinkers: Machiavelli, Hobbes, Locke, Rousseau, Marx, Mill.
PHIL 219 Philosophy and History of Natural Science (3)
Mr. Lee. Scientific method will be analyzed as a process of stages and illustrated by historical examples. The philosophical presuppositions of science are examined in light of the historical shift from Aristotelian to modern science. Whether change in scientific theories is revolutionary or evolutionary is studied with reference to actual case histories.

## PHIL 220 Matter and Consciousness (3)

Mr. Bogdan. A systematic survey of philosophical and foundational theories of mind and cognition of this century. The course begins with the philosophical legacy of earlier centuries (mind/body dualism, consciousness and privileged access, introspection, sense data, and phenomenology), considers the first scientific response to this legacy (behaviorism and the rise of scientific psychology), and then follows the major theoretical positions and debates of this century such as physicalism and reductionism, functionalism and the computer model of the mind, eliminative materialism and neurophilosophy, instrumentalism, and commonsense psychology.

## PHIL 288 Writing Practicum (1)

Staff. Writing practicum. Fulfills the college writing requirement.

## PHIL 293 Special Topics in Philosophy (3)

Staff. Examination of philosophical issues not typically covered in existing courses. Primarily for freshmen and sophomores.

## PHIL 301 Philosophy of Religion (3)

Ms. Burger, Mr. Glenn. A study of major writings in the Western tradition dealing with basic issues of philosophy of religion and philosophical theology.
PHIL 302 The Bible and Philosophy (3)
Ms. Burger. This course will focus on a reading of the Bible with a view to the philosophic questions it raises which have been central to the tradition of Western thought.

## PHIL 304 Mathematical Logic (3)

Mr. Forbes. Prerequisite: PHIL 121 or two courses in mathematics. An introduction to and survey of the mathematical study of formalized logical systems.
PHIL 310 19th Century European Philosophy (3)
Mr. Glenn, Mr. Zimmerman. A study of major philosophical ideas and figures from Hegel through Nietzsche.

## PHIL 311 Contemporary European Philosophy (3)

Mr. Glenn, Mr. Zimmerman. An examination of issues and ideas in 20th-century continental philosophy. Attention is given to the phenomenological movement with consideration of the transcendental phenomenology of Husserl and the existential phenomenologies of such thinkers as Heidegger, Sartre, Merleau-Ponty, and Ricoeur. Other topics which may be treated include Freudianism considered as a philosophical anthropology, structuralism, and postmodernism.
PHIL 312 Analytic Philosophy (3)
Mr. Forbes. An introduction both to major figures in the analytic tradition such as Frege, Russell, and Quine, and to major problems such as meaning, reference, and truth.

## PHIL 313 Classic American Thought (3)

Mr. Reck. American philosophy from 1630 to 1885. Readings in and discussion of representative thinkers in each period from the Puritans to the pragmatists.

## PHIL 314 Recent American Philosophy (3)

Mr. Reck. Readings in American philosophy from the pragmatists to the present, including Peirce, James, Royce, Mead, Dewey, Santayana, Whitehead, and others.

PHIL 319 Philosophy of Social Science (3)
Mr. Gaus. An introduction to philosophical issues raised in the study of the social sciences. Questions to be considered include: how is social scientific explanation similar to that in the physical sciences? Is social science concerned with explanations or understanding? What is the place of rational actor models on the social sciences? Can there be a value-free social science? Same as PECN 419.
PHIL 320 Plato (3)
Ms. Burger. Prerequisite: PHIL 201 or permission of instructor. An in-depth reading of one or more of the Platonic dialogues. Same as CLAS 307.

PHIL 324 Medieval Philosophy (3)
Staff. A study of the most influential philosophers of the Christian, Islamic, and Jewish traditions (e.g., Augustine, Aquinas, Ockham, Maimonides, Avicenna, and Averroes). The focus is on metaphysics and epistemology. Representative topics: arguments concerning the existence of God, eternity and creation, divine foreknowledge and human freedom, the problem of universals, and skepticism.

## PHIL 325 Descartes and the 17th Century (3)

Mr. Lodge. Rene Descartes is arguable the most important figure in 17th century philosophy. The class considers the way in which the intellectual landscape of the century was changed by Descartes' metaphysical and epistemological doctrines. Beginning with precursors such as Bacon and Hobbes, it moves through the debates between Descartes and his immediate contemporaries, and finishes with late 17th century reactions to Descartes' work in philosophers such as Leibniz, Locke, and Malebranche. Topics may include debates over skepticism and knowledge, scientific method, the nature of the material world, the relation between mind and body, and arguments concerning the existence of God.

## PHIL 334 Humanity's Place in Nature (3)

Mr. Zimmerman. This course will compare the predominant Western conception of humanity's place in nature with alternative conceptions, including those held by non-Western thinkers.

## PHIL 335 Transpersonal Philosophy (3)

Mr. Zimmerman. Examines and discusses alternative explanations for transpersonal phenomena, including near-death experience, non-dual forms of consciousness, and reported instances of memories of previous "incarnations". Such phenomena raise basic questions about the nature of "reality" and "truth".
PHIL 336 Sacred Symbols (4)
Mr. Zimmerman. Explores the role played by sacred symbols and images in the contemplative dimensions of two major religious traditions. Focus on philosophical and theological issues raised by using symbols to point to what cannot be adequately represented. Course includes mandatory contemplative practice sessions each week.

## PHIL 341 Theory of Knowledge (3)

Mr. Brower, Mr. Lodge. An introduction to epistemology. Topics may include the problem of skepticism, theories of epistemic justification, the nature of empirical knowledge, a priori or mathematical knowledge, and our introspective knowledge of our mental states.

## PHIL 342 Metaphysics (3)

Mr. Brower, Mr. Forbes. An introduction to one or more topics in metaphysics. Topics may include causality, identity, modality, existence, persons and minds, universals and particulars, space and time, and the nature and possibility of metaphysics itself.

## PHIL 343 Semantics of Natural Language (3)

Mr. Forbes. An introduction to the study of meaning in natural languages. The central techniques involve extending the methods of logical semantics for formal languages. No prerequisites, but prior exposure either to generative grammar (e.g., ANTH 359) or symbolic logic (e.g., PHIL 121) would not be wasted. Same as LING 343.

PHIL 350 Buddhism (4)
Mr. Zimmerman. This course examines the metaphysical, epistemological, religious, and psychological dimensions of Buddhism, while also tracing its development from India into Southeast Asia, China, Japan, and the West. This course has a lab component: regular mindfulness practice.

## PHIL 351 History of Ethics (3)

Mr. Green. The historical development of philosophies concerning the good life, moral duty and right, choice and consequences, freedom and necessity in their personal and social nature.
PHIL 355 Medical Ethics (3)
Mr. Green. A systematic and critical study of ethical problems in medicine concerning the physician-patient relationship, life and death, and social responsibility.

## PHIL 356 Social and Political Ethics (3)

Mr. Brower, Mr. Mack. A study of the arguments and positions advanced by philosophers with regard to the need for and justification of social and political institutions and with regard to the character of human rights, justice, and the good society.

## PHIL 358 Ethical Theory (3)

Mr. Brower, Mr. Glaus, Mr. Green. This course surveys the prominent ethical theories of the late nineteenth and twentieth centuries. It considers both theories of meta ethics and normative ethics. Theories to be examined include: relativism, subjectivism, egoism, moral realism, utilitarianism, Kantianism, contractualism, virtue theory, and Existentialism.

PHIL 364 Philosophy of Law (3)
Mr. Brower, Mr. Mack. Prerequisite: two courses in philosophy or social science. A study of the character and justification of law and legal systems. Legal realism, legal positivism, and natural law theories are explored as are such law-related issues as punishment, the enforcement of morals, and the grounds of legal responsibility. Same as PHIL 604.

## PHIL 365 Crime and Punishment (3)

Mr. Brower, Mr. Mack. This course offers a critical examination of philosophical issues involving crime and punishment. In the first half, we will ask what forms of behavior, if any, the state is entitled to declare to be criminal, focusing on such issues as drug abuse, prostitution, blackmail, gambling, hate speech, suicide, pornography, ticket scalping, insider trading, and gun control. In the second half, we will ask what forms of punishment, if any, the state is entitled to impose on those who violate those laws, if any, which are permissible, focusing on such issues as capital punishment, corporal punishment, and competing justifications of punishment in general.

PHIL 374 Consciousness (3)
Mr. Bogdan. The questions this class addresses are the following: What is consciousness and why it matters? Why is consciousness puzzling if not mysterious? Is consciousness one phenomenon or many? The grand divide: the (so called) easy versus hard problems; function versus qualia, public facts versus private experiences. What mechanisms and competencies underpin consciousness? Where (brain location)? Who are the possessors of consciousness, phylogenetically and ontogenetically? Why consciousness: its rationale and functions? How does consciousness emerge from matter (if at all)?

## PHIL 375 Mind and Knowledge (3)

Mr. Bogdan. An interdisciplinary examination of how cognitive systems, from the simplest to the most complex, perceive, form beliefs, and acquire knowledge.

## PHIL 376 Interpreting Minds (3)

Mr. Bogdan. This course provides a systematic introduction to the recent and very dynamic interdisciplinary research area in naÔve psychology or theory of mind. The course begins with the philosophical debates about naÔve or folk psychology and the key philosophical concepts that have shaped the research agenda, then surveys the main empirical data, key experiments and hypotheses about ape and child interpretation of minds, and concludes with a comparative analysis of several and much debated proposals about how the interpretation of minds is accomplished-through innate mechanisms (modules), by simulation or in terms of a naÔve theory. Same as PSYC 376.

## PHIL 380 Language and Thought (3)

Mr. Bogdan. An introduction to the philosophy of language and mental representation. Major topics: the relation between language and thought, models of mind, representation as computation, the language of thought, mental imagery, propositional attitudes, meaning and intentionality.

## PHIL 387 Mind in Evolution (3)

Mr. Bogdan. As any biological capacity, the mind must have evolved. Can evolution explain its design? The mind has many components, from perception to language and thinking. Are they all products of natural selection, of other evolutionary forces, or of no such forces at all? Can evolution explain the uniqueness of the human mind? What could be the factors that explain this uniqueness: tool making, language, social life? In attempting to answer these questions, the class brings an evolutionary perspective to some important topics in philosophy of mind and philosophical psychology and offers a multidisciplinary introduction to the emerging but rapidly developing field of evolutionary cognitive science.

## PHIL 388 Writing Practicum (1)

Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.
PHIL 393, 394 Special Topics in Philosophy (3, 3)
PHIL H491, H492 Independent Studies (1-3, 1-3)
Staff. Prerequisite: approval of department.
PHIL H499-H500 Honors Thesis $(3,4)$
Staff. For senior honors candidates.

## PHIL 604 Philosophy of Law (3)

Mr. Brower, Mr. Mack. Prerequisite: two courses in philosophy or social science. A study of the character and justification of law and legal systems. Legal realism, legal positivism, and natural law theories are explored as are such law-related issues as punishment, the enforcement of morals, and the grounds of legal responsibility. Same as PHIL 364.

## PHIL 606 Advanced Symbolic Logic (3)

Mr. Lee. Prerequisite: PHIL 121 or equivalent. Translation of propositions into quantified formulas with single-place and relational predicates. Deduction by quantification rules. Also, theorematic development of an axiomatic logistic system.

## PHIL 607 Mathematical Logic (3)

Mr. Forbes. This course treats theory of computable (general recursive) functions, arithmetical coding of syntax, unprovability of consistency, and undefinability of truth. The course develops these topics and reflects on their philosophical significance. Instructor approval strongly recommended.

## PHIL 609 Philosophy of Science (3)

Mr. Lee. Prerequisite: two courses in philosophy or at least two courses in any of the sciences. The scientific method as phases of forming hypotheses and verifying them. The logic and epistemology of scientific explanation. Metaphysical presuppositions underlying scientific knowledge.

## PHIL 612 Metaphysics (3)

Mr. Brower, Mr. Forbes, Mr. Reck. Prerequisites: PHIL 201 and 202, or equivalent. An examination of the basic problems of metaphysics (being, substance, process, universals, person, God) as treated by the main traditions in classical and contemporary thought.
PHIL 613 Moral Philosophy (3)
Mr. Brower, Mr. Gaus, Mr. Green, Mr. Mack. Prerequisite: one previous course in ethics or graduate standing. An advanced critical inquiry into the major issues of normative and critical ethics. Problems and positions concerning moral conduct and responsibility and the meaning and justification of ethical discourse are discussed in connection with readings from classical and contemporary sources.

## PHIL 617 Philosophy of Perception (3)

Mr. Bogdan. Prerequisite: approval of instructor. An historical and systematic examination of major theories of perception.

## PHIL 618 Mental Representation (3)

Mr. Bogdan. Prerequisite: approval of instructor. A survey and evaluation of major theories of mental representation drawing on recent work in philosophy of mind, cognitive psychology, linguistics, semantics, and artificial intelligence. Major topics: linguistic representation, the language of thought, propositional attitudes, mental imagery, and innate representations.

## PHIL 619 Philosophy of Mind (3)

Mr. Green. Prerequisite: two courses in philosophy or graduate standing. The mind-body problem, knowledge of other minds, and problems about thought, action, and feelings are discussed in the light of readings from classical and contemporary sources.

PHIL 620 Plato (3)
Ms. Burger. Prerequisite: PHIL 201 or PHIL 211. An in-depth study of one or more of the Platonic dialogues, Republic, Theaetetus, Sophist, Statesman, Parmenides, Philebus or Timaeus, with reading and discussion of related dialogues as background.
PHIL 621 Aristotle (3)
Ms. Burger. Prerequisite: PHIL 201 or PHIL 211. An in-depth study of one or more of the Aristotelian treatises, Metaphysics, Physics and De anima, Ethics, Politics, or the logical writings.
PHIL 626 Rationalism (3)
Mr. Lodge. Prerequisites: PHIL 201 and 202, or equivalent. Descartes, Spinoza, and Leibniz examined individually and as contributors to one of modern philosophy's historical developments.

## PHIL 627 Empiricism (3)

Mr. Lodge. Prerequisites: PHIL 201 and 202, or equivalent. Locke, Berkeley and Hume examined both individually and as contributors to one of modern philosophy's historical developments.
PHIL 628 Kant (3)
Mr. Glenn. Prerequisite: two courses in philosophy including PHIL 202 or equivalent. An examination of Kant's critical philosophy.
PHIL 631 Kierkegaard (3)
Mr. Glenn. Prerequisite: PHIL 202 or approval of instructor. A study of one or more of the works of Søren Kierkegaard.
PHIL 633 Nietzsche (3)
Mr. Zimmerman. Prerequisite: approval of instructor. This course will involve close reading and critical examination of major texts by Nietzsche, such as On the Genealogy of Morals.
PHIL 651 Theories of Economic Justice (3)
Mr. Mack. A study of alternative conceptions of economic justice including the conceptions offered by utilitarians, contractarians, natural rights theorists, and Marxists. Other topics include the just distribution of natural resources and the choice between command and market economies.

## PHIL 652 Environmental Ethics (3)

Mr. Zimmerman. Examination of ethical issues regarding treatment of nonhuman beings. Major topics include moral extentionism, as well as critiques of attempts to extend human-centered moral doctrines to nonhuman beings.

## PHIL 653 Philosophy and Gender (3)

Mr. Zimmerman. Prerequisite: three courses in philosophy or approval of instructor. This course examines the claim that patriarchal culture has given a masculinist slant to the development of major themes in Western philosophy. The course will assess critically the efforts of philosophers who try to show the partiality and bias of philosophical concepts formerly viewed as universal by their male authors.

## PHIL 654 Philosophy: Global Justice (3)

Mr. Mack. A study of the justice of relations among nations and among individuals across national boundaries. Topics include international distributive justice, the ownership of global resources, the morality of secession, just war, and terrorism.
PHIL 662 Philosophical Logic (3)
Mr. Forbes. Prerequisite: approval of instructor. Central topics in philosophical logic are covered, including reference, predication, vagueness, logical form, counterfactuals, propositional attitudes, logical truth, paradoxes.

## PHIL 674 Contemporary Political Philosophy (3)

Mr. Brower, Mr. Mack. Analyzing contemporary approaches to normative concepts in politics, reviewing many writers, and concentrating on political philosophers such as Arendt, Marcuse, Oakeshott, Rawls, and Strauss. Same as POLT 479.
PHIL 675 Utilitarianism: From Bentham to Harsanyi (3)
Mr. Riley. This course introduces students to the utilitarian tradition and to the modern debate over whether some version of utilitarianism is likely to serve as the most adequate moral and political philosophy.

## PHIL 688 Writing Practicum (1)

Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.
PHIL 693, 694 Special Offerings (1-3, 1-3)
Staff. Prerequisites: two courses in philosophy and junior standing. For specific offering, see the Schedule of Classes. For description, consult department.

## Physics

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Website: www.phy.tulane.edu/
Professors
Ulrike Diebold, Ph.D., Technische Universitaet Wien, Vienna
Alan L. Goodman, Ph.D., California, Berkeley
James M. MacLaren, Ph.D., Imperial College, London (Associate Provost)
James H. McGuire, Ph.D., Northeastern (Murchison-Mallory Professor of Physics)
John P. Perdew, Ph.D., Cornell (Chair)
Robert D. Purrington, Ph.D., Texas A\&M
Wayne F. Reed, Ph.D., Clarkson
George T. Rosensteel, Ph.D., Toronto
Frank J. Tipler, Ph.D., Maryland
Assistant Professors
Zhiqiang Mao, Ph.D., Univ of Science \& Technology, China
Fred Wietfeldt, Ph.D., California, Berkeley

## Emeritus

David L. Ederer, Ph.D., Cornell

## INTRODUCTORY COURSES

The department offers both calculus-based general physics (131 and 132) and non-calculus general physics (121 and 122). Premedical students may elect either 121-122 or 131-132. Physics 131 and 132 are designed primarily for majors in the sciences, mathematics, and engineering.

## COURSES FOR NON-SCIENTISTS

The department offers a broad range of non-traditional courses which may be used to satisfy the science requirement. These courses are non-mathematical; testing emphasizes verbal techniques (papers, book reports, projects, essays, etc.), rather than quantitative skills. There are no mathematics or other prerequisites for any of these courses.

## MAJOR

The intention of the liberalized physics major program is to encourage cross-disciplinary preparation for students interested in public interest science or in physics as a preparation for medical or other professional schools. Dual majors are encouraged. Students pursuing a career in physics are advised to follow the "Pre-graduate Training" sequence. The basic requirements for a physics major are as follows. A minimum of 24 credits of physics, including general physics (normally 131, 132 taken during the freshman year). Six credits of upper level courses must be chosen from among contemporary topics (235, 236, 321, 327, 447, 607, 608, 621, 625, 627, 630, 675 ) and six credits from classical topics (363, 374, 423, 465, 601, 602). Three credits of Advanced Laboratory 353 are also required. Satisfactory completion of one semester of Seminar 380 is required for degree certification (one credit). At least 13 credits (four courses) of mathematics are required including Mathematics 221 or Mathematics 224 or both. No more than two of the four mathematics courses may be at the 100 level. Twelve additional credits above the 100 level of physics, chemistry, biology, geology or mathematics must be selected with the approval of the major advisor. This approval will normally be given only for courses that have disciplinary prerequisites at the 100 level. It is recommended that a course in computer science be taken early in a student's undergraduate career.
Students are encouraged to consider a bachelor of science in physics as preparation for graduate study in disciplinary and interdisciplinary sciences (physics, astrophysics, biophysics, chemistry, neuroscience, materials science, geophysics, meteorology, oceanography, and applied physics), for professional study in medicine, in patent law, or in engineering, and for careers in environmental science, in mathematical or computer modeling, in science writing, or in science and public policy. Within the requirements above, programs can be tailored to suit the needs of students who elect these career options.
Tulane University is a member of the Oak Ridge Associated Universities (ORAU) consortium.

## MINOR

A minor in physics consists of eight credits of general physics (normally 131, 132) plus twelve credits of physics courses at the 200 level or above. At least three credits of the upper-level courses must be chosen from classical topics in physics (363, 374, 423, 465). It should be noted that some of the upper-level physics courses have certain mathematics prerequisites.

## PRE-GRADUATE TRAINING

The student who intends to continue graduate work in physics should complete at least 32 credits in physics including general physics, 363, 374, 423, 447, 465. Students are encouraged to undertake a research project and write a senior honors thesis under the supervision of a physics faculty member. The student should also take Mathematics 347 or its equivalent. Other recommended mathematics courses include 305, 309, 406, 421, and 430. Courses in scientific computing, e.g., Mathematics 331 are also recommended.

## COURSES FOR NON-SCIENTISTS

## PHYS 101 Great Ideas in Science (4)

Mr. McGuire. Basic principles of science and their relevance to our world. The universe, Newtonian mechanics, energy conservation, symmetry in nature, order and disorder, electricity, quantum mechanics, atoms and molecules, DNA, computer technology, and ethical issues. Laboratory.

## PHYS 201 The Omega Point Theory: Integrating Science and Religion (3)

Mr. Tipler. The future evolution and final state of the universe in modern cosmology. The Mind-as-Computer-Program idea and the Turing Test of personhood. The universe as a computer simulation. Why is there something rather than nothing? What is "free will" and is it consistent with physics? Resurrection vs. soul immortality in religious eschatology. Heaven, Hell, and Purgatory as a "virtual reality" in the computers of the far future. Why the most fundamental laws of physics require the Final State of the universe-Omega Point-to be omniscient, omnipotent, omnipresent, and transcendent to space and time. A personal God and individual immortality as implications of reductionist scientific materialism.

## PHYS 304 Approaches to the Scientific Revolution (3)

Mr. Goodman, Mr. Purrington, Mr. Tipler. The origins of quantitative science in the "Newtonian Revolution" have been the subject of much recent scholarship. The course examines a variety of often conflicting insights about this crucial period and its heritage in contemporary science, without assuming that consensus is any longer possible. Sources and techniques from history of science, biography, sociology of science, and cultural studies of science are employed. Case studies from Isaac Newton's work provide the context for the development of the multiple points of view.

## SEQUENCE OF COURSES FOR MAJORS

## PHYS 121 Introductory Physics I (4)

Staff. A non-calculus course in classical physics stressing the fundamental physical laws. Newtonian mechanics, thermal phenomena, electricity and magnetism, and classical waves normally are treated in 121. A weekly laboratory is included; the laboratory includes a review of techniques of problem solving, as well as experiments in classical physics. Not open for credit to students who have completed 131.

## PHYS 122 Introductory Physics II (4)

Staff. A continuation of 121 . Electricity and magnetism, and optics. Emphasis is given to topics in modern physics, including the quantum theory of the atom and special relativity. A weekly laboratory is included. Not open for credit to students who have completed 132.
PHYS 131 General Physics I (4)
Staff. Prior or concurrent study in calculus, or approval of instructor is strongly recommended. A calculus-based course in classical physics designed primarily for physical science majors. Newtonian mechanics, thermodynamics, and classical wave motion are studied. Emphasis is on understanding basic principles and solving problems. A weekly laboratory is included. The laboratory includes a review of techniques for problem solving, as well as experiments in classical physics. Not open to students who have completed 121.

## PHYS 132 General Physics II (4)

Staff. A continuation of 131. Electricity and magnetism, optics, and topics in modern physics, including the quantum theory of the atom and special relativity. Weekly laboratory. Not open to students who have completed 121 and 122.

PHYS 235 Modern Physics I (3)
Staff. Prerequisites: PHYS 121 and 122 or 131 and 132, and six credits of mathematics. Quantitative treatment of important topics of 20th-century physics: special relativity, kinetic theory and Planck's hypothesis, photons, deBroglie wavelength, the nuclear atom, the Bohr model, introduction to wave mechanics, multi-electron atoms.

## PHYS 236 Modern Physics II (3)

Staff. Prerequisite: PHYS 235. Properties of nuclei, radioactivity, nuclear reactions, interaction of particles with matter. Diatomic molecules, electrons in metals, band theory of solids, superconductivity. Atomic physics, elementary particles, the standard model, quarks, and cosmology.

## PHYS 301 Theoretical and Computational Physics (3)

Staff. Prerequisites: PHYS 235 and 11 credits of mathematics, or approval of instructor. An introduction to the methods of theoretical physics emphasizing modern mathematical techniques, numerical methods using computers and computer algebra.

## PHYS 305 Spectroscopy of Solids and Atoms (3)

Mr. Ederer. Prerequisites: PHYS 131, 132, 235, 236, or consent of instructor. This course deals with the interaction of photons with matter. Topics will include some of the ideas of quantum electrodynamics that form the basic underpinning of all forms of electromagnetic interactions with matter. Absorption, reflection, and scattering of radiation in the spectral region extending from the infrared to the x-ray region of the spectrum will be described and will include experimental methods used to study gases and condensed matter materials. Emphasis will be given to photoionization, autoionization, Raman, Compton, Bragg, and Rayleigh scattering, and how these phenomena are used to study the electronic properties of matter. Sources, including lasers and synchrotron radiation, and instrumentation for their used will be discussed.

## PHYS 321 Molecular Biophysics and Polymer Physics (3)

Mr. Reed. Prerequisites: PHYS 235 or equivalent, CHEM 107 or equivalent, and MATH 122 or equivalent. An introduction to the physics of polymers and the physical bases underlying the biofunctionality of macromolecules in living systems. Themes of molecular self-organization, conformation, complementarity, and information content are emphasized and related to protein, lipid, and nucleic acid structure and processes. Introduction to scattering, NMR, and other spectroscopic techniques. Same as PHYS 621.
PHYS 327 Biophysics of the Living Cell (3)
Staff. This course explores the fundamental physics of several important processes in living systems at the cellular level. The emphasis throughout will be on how physical theory can be used to achieve a deeper level of understanding of biological processes. Topics covered include the relevant aspects of equilibrium and nonequilibrium statistical mechanics, diffusion, cellular electrochemistry and transport, energy transduction, protein pumps, motor proteins, enzyme biophysics and kinetics, and the composition and behavior of neurons. Same as PHYS 627.

## PHYS 353 Advanced Laboratory I (3)

Staff. Prerequisite: PHYS 235 or approval of instructor. Advanced experiments in modern physics, particularly nuclear physics, emphasizing research techniques and analysis of data using computers.
PHYS 363 Electromagnetic Theory I (3)
Staff. Prerequisites: PHYS 131, 132, and Mathematics 221 or equivalent. Three lecture hours and one conference hour a week. Electrostatic fields in a vacuum, dielectric materials, solutions to Laplace's and Poisson's equations, steady current and non-magnetic materials, low frequency circuit theory, Maxwell's equations.

## PHYS 374 Classical Mechanics (3)

Staff. Prerequisites: PHYS 131, 132, and MATH 221. Three lecture hours and one conference hour a week. Newtonian mechanics, oscillations, central force motion, special theory of relativity, dynamics of rigid bodies, and the Lagrangian formulation of classical mechanics.

## PHYS 380 Seminar (1)

Staff. Prerequisite: junior standing or departmental approval. A series of undergraduate and faculty seminars emphasizing topics and points of view not covered in the standard curriculum, but which are nonetheless important to the education of a physicist. Required of all majors.

## PHYS 388 Writing Practicum (1)

Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.

## PHYS 391 Special Topics in Physics (3)

Staff. Special topics in physics depending upon faculty and student interest.

## PHYS 423 Thermal Physics (3)

Staff. Prerequisites: PHYS 121 and 122, or 131 and 132. A study of the physical properties of matter where temperature is an important variable. The laws of thermodynamics, equations of state, thermodynamic potentials. Kinetic theory of gases. Elementary statistical postulates. Ensembles, the partition function. Entropy, phase transitions.

## PHYS 447 Introductory Quantum Mechanics (3)

Mr. Rosensteel. Prerequisites: PHYS 235 and Mathematics 221. The postulates of quantum mechanics, Schroedinger equation, operator methods, angular momentum, fermion and boson systems, and Heisenberg formulations, applications to simple physical systems.
PHYS 465 Optics (3)
Staff. Prerequisites: PHYS 121 and 122, or 131 and 132, and eight credits of mathematics. Geometrical, physical, and quantum optics. Applications to optical instruments, spectroscopy, and interferometry, Fourier optics, lasers, and holography.
PHYS H491, H492 Independent Studies (1-3, 1-3)
Staff. Prerequisite approval of instructor and chair of department.
PHYS H499-H500 Honors Thesis (3, 4)
Staff. Open only to candidates for honors degrees with department approval.

## PHYS 601 Techniques of Theoretical Physics I (3)

Mr. MacLaren, Mr. McGuire. Prerequisite: approval of instructor. Mathematical techniques used in theoretical physics. Topics include partial differential equations, orthogonal coordinate systems, separation of variables, introduction to ordinary differential equations, series solutions and convergence; Sturm Liouville theory, eigensystems and orthogonal functions; complex variables, Taylor and Laurent series, contour integration, integration by steepest descents, and conformal mappings.

## PHYS 602 Techniques of Theoretical Physics II (3)

Mr. MacLaren, Mr. McGuire. A continuation of Physics 601. Calculus of variations, Rayleigh Ritz technique, Bessel and Legendre functions, Fourier series, Fourier and Laplace transforms, Green functions. An introduction to group theory and symmetry.
PHYS 607 Astrophysics (3)
Mr. Purrington, Mr. Tipler. Fundamentals of stellar atmospheres and interiors: nuclear astrophysics, energy generation in stars, stellar evolution, nucleo-synthesis, and theories of supernovae. Gravitational collapse and properties of superdense stars. Galactic structure and evolution, elements of cosmology.
PHYS 608 Surface Science (3)
Ms. Diebold. Prerequisite: approval of instructor. Introduction to current topics of surface and interface physics and applications. Methods and techniques of modern surface science, experimental requirements and applications. Concepts of two-dimensional physics and chemistry, properties of surfaces and model systems.

## PHYS 621 Molecular Biophysics and Polymer Physics (3)

See Physics 321 for description.

## PHYS 625 The Standard Model (3)

Mr. Purrington, Mr. Tipler. Prerequisite: PHYS 447. Unification of the strong, weak, and electromagnetic interactions, based on the $\mathrm{U}(1) \times \mathrm{SU}(2) \times \mathrm{SU}(3)$ gauge group. Introduction to quantum field theory and the Feynman rules. Gauge invariance and non-Abelian Gauge Theories. The Standard Model Lagrangian. Electroweak theory and quantum chromodynamics. Masses and the Higgs mechanism. W and Z boson widths and decay channels. Quarks, gluons, confinement and jets. Mesons, baryons, and glueballs. The Higgs boson. Running coupling constants in QED and QCD. Quark mixing angles, CP violation and KM matrix. Beyond the Standard Model: grand unification, supersymmetry, supergravity, and superstrings.
PHYS 627 Biophysics of the Living Cell (3)
See Physics 327 for description.

## PHYS 630 General Relativity (3)

Mr. Tipler. Prerequisites: PHYS 602 or MATH 221 and 235 or MATH 374. Review of special relativity. Tensor analysis. Differential forms and manifolds. Geodesics and curvature two-forms. The metric tensor. The stress-energy tensor and the Einstein equations. The initial data problem. The Schwarzschild and Kerr solutions: classical black holes. Elementary relativistic cosmology. Generation and detection of gravitational waves. Experimental tests of general relativity: the PPN formalism. Global techniques and the Hawking-Penrose singularity theorems. Hawking radiation and the Bekenstein bound.

## PHYS 675 Modern Cosmology (3)

Mr. Tipler. Prerequisites: PHYS 423, 625, and 630. The Friedmann cosmological models: open, flat, and closed; matter and radiation dominated. The cosmological constant. Three degree blackbody radiation and its theoretical implications. Experimental tests in cosmology. Nucleosynthesis and galaxy formation. Anisotropic and inhomogeneous cosmologies: the Bianchi models, primarily Kasner and Type IX. GUTs in the very early universe: baryogenesis and phase transitions. Dark matter. Cosmic strings and magnetic monopoles. Inflationary models. Chaotic inflation. Future history and final state of the universe.

## Political Economy

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Program Administrators
Richard F. Teichgraeber III, History (Director)
Judith K. Schafer, Ph.D., Tulane, (Associate Director)
Faculty Associates
Gerald F. Gaus, Philosophy
Ronald King, Political Science
Eric Mack, Philosophy
Douglas R. Nelson, Economics
Jonathan M. Riley, Philosophy

## MAJOR

The political economy major aims to promote sustained reflection on the interrelations of political and economic activities and institutions. It provides undergraduate students with the basic skills of economic analysis. But the major is also based firmly on the view that the study of the interrelations of politics and economics has a rich humanistic tradition and that its pursuit can encourage sustained reflection on fundamental values. Political economy is an interdisciplinary major built on a core of eight required courses and five additional courses drawn from economics, political science, history and philosophy.
This major tries to avoid the sometimes excessive specialization that characterizes more traditional undergraduate majors. While providing students basic skills of economic analysis, the political economy major at Tulane is distinctively based on the view that technical economic analysis should not be divorced from a broader concern for understanding the moral and historical foundations of economic institutions and political structures.

The requirements of the political economy major include the following core of eight courses:

## Economics

101 Introductory Microeconomics
102 Introductory Macroeconomics
301 Intermediate Microeconomics

## Political Economy

301 Introduction to Political Economy
302 Political Economy: An Historical Overview
303 Individual, Society, and State
304 Comparative and International Political Economy
600 Majors Seminar
The total number of required credits in the core is 24 . The major also requires five electives chosen from an interdepartmental list of courses grouped according to the following four alternative concentrations. The required Political Economy 301-304 sequence has been designed to introduce students to the prominent and common concerns of the three tracks. Studies along one of these concentrations provides a focus within the major. Each major's selection of a concentration is made in consultation with a faculty advisor.

## POLITICAL ECONOMY CONCENTRATIONS

## Law, Economics, and Policy Track

Two of the following eight:
Economics
ECON 332 Urban Economics
ECON 333 Environment and Natural Resources
ECON 334 Government in the Economy
ECON 335 Law and Economics
ECON 397/398 Special Studies in Economics
ECON 452 Economics of Public Expenditures
ECON 453 Economics of Taxation
Three of the following sixteen:
History
HISU 360 History of Early American Law
Philosophy
PHIL 356 Political Philosophy
PHIL 364 Philosophy of Law
PHIL 651 Theories of Economic Justice
PHIL 654 Global Justice

## Political Economy

PECN 404 Democracy, Capitalism, and Free Speech
PECN 414 Theories of Distributive Justice
PECN 419 Philosophy of Social Justice

## Political Science

POLA 324 Public Policy
POLA 423 Environmental Politics and Policy
POLA 424 Budgets and Deficits
POLA 425 Power and Poverty in America
POLA 427 Constitutional Law
POLA 480 Science, Technology, and Public Policy
POLA 629 Judicial Process
Sociology
SOCI 680 Society and Economy
Moral and Historical Perspectives Track
Two of the following three:
Economics
ECON 335 Law and Economics
ECON 397/398 Special Studies in Economics
Three of the following fourteen:
History
HISE 323 The Chernobyl Catastrophe
HISU 360 History of Early American Law
HISU 648 Industrial America
Philosophy
PHIL 356 Political Philosophy
PHIL 364 Philosophy of Law
PHIL 604 Philosophy of Law
PHIL 651 Theories of Economic Justice
PHIL 654 Global Justice

## Political Economy

PECN 404 Democracy, Capitalism, and Free Speech

## Political Science

POLT 382 Contemporary Political Ideas
POLA 418 American Political Culture
POLA 427 Constitutional Law
POLT 486 American Political Thought
Sociology
SOCI 611 Sociology of Work
International Perspectives Track
Two of the following four:

## Economics

ECON 334 Government in the Economy
ECON 372 Contemporary Japanese Economy
ECON 374 Asia-Pacific Rim Economic Development
ECON 433 International Trading Relations
Three of the following thirteen:

## Economics

ECON 333 Environment and Natural Resources
ECON 359 Economic Development of Latin America
ECON 365 Agricultural and Rural Development in Latin America
Philosophy
PHIL 651 Theories of Economic Justice
PHIL 654 Global Justice

## Political Economy

PECN 419 Philosophy of Social Science

## Political Science

POLC 341 Politics and Nationalism
POLI 351 Power, Morality, and International Relations
POLI 354 International Political Economy
POLC 444 Autocracy
POLI 462 Global Environmental Politics
POLI 654 Research in International Political Economy

## Sociology

SOCI 690 Sociology of Development in Latin America

## Additional Political Economy Courses

## Political Economy

PECN 456, 457 Internship Studies
PECN 497, 498 Special Topics

## INTERNSHIPS AND HONORS PROGRAM

In the summer between junior and senior years, a political economy major may elect to participate in a summer internship. The Murphy Institute offers a limited number of grants in an open competition for political economy majors only.

With consent of the director, a student may pursue a degree with honors in political economy. A senior honors thesis is required.
Finally, it should be noted that undergraduate majors in political economy are invited to participate in various activities sponsored by the Murphy Institute of Political Economy. The Murphy Institute hosts prominent scholars and public figures in a series of annual lectures. Student majors are invited to all of these occasions, as well as to more informal meetings with our visitors.

The Murphy Institute of Political Economy sponsors semester and summer abroad programs in London and Cambridge.
Further information on the political economy major may be obtained from the Murphy Institute of Political Economy.

## PECN 456, 457 Internship Studies (1-3, 1-3)

Staff. Prerequisites: approval of instructor and Program Director. An experiential learning process coupled with pertinent academic course work. Open only to juniors and seniors in good standing. Registration is completed in the academic department sponsoring the internship on TUTOR. Only one internship may be completed per semester. (Note: A maximum of six credits may be earned in one or two courses.)

## PECN H491, H492 Independent Studies (3, 3)

Staff. Prerequisite: departmental approval. Qualified students are allowed to arrange for independent study with approval of instructor and their faculty advisor.
PECN H499-H500 Honors Thesis (3, 4)
Staff. For senior honors candidates. Intensive reading, research and writing in a selected field of political economy. Students should discuss their honors thesis with a prospective director during the second semester of their junior year.

## PECN H601 Honors Seminar (3)

Staff. A seminar for junior and senior honors students in political economy. Specific themes will be announced each semester.

## CORE COURSES

PECN 301 Introduction to Political Economy (3)
Mr. Gaus. This course introduces undergraduate majors to some of the chief intellectual concerns associated with the term political economy including international political economy, economics and philosophy, and law and economics.

## PECN 302 Political Economy: An Historical Overview (3)

Mr. Teichgraeber. This course introduces students to the question of how different modern Western societies and thinkers have defined the relationships between political and economic activities. Beginning with the experience of Europe in the 15th century, it examines what the unprecedented wealth of modern Western societies has meant for the understanding and practice of politics. It also explains what caused the economic abundance of Western nations to come into being in the first place, and how that abundance has been sustained over time.

## PECN 303 The Individual, Society, and State (3)

Mr. Mack. This course presents an integrated study of the main alternatives in political ideology (liberalism, socialism, fascism, Marxism) advocated in the modern world and the exemplifications of these ideologies in practice in the modern world (post-war West Germany, 20th-century Britain, Mussolini’s Italy, the former Soviet Union)
PECN 304 Comparative and International Political Economy (3)
Mr. Nelson. Virtually all contemporary economies are characterized by extensive relations between the economic and political systems. Furthermore, these relations seem to involve often complex relations between the global, national, and sub-national political economies. This fact is currently referred to as "globalization". However, it is clear that globalization, whatever it is, has different effect on national (and sub-national) political economies. In this course, we will: 1) attempt to develop an understanding of globalization; 2) develop a comparative analysis of the links between globalization and national outcomes; and 3) examine the international institutions that attempt to manage globalization. Because time is finite, and there are other courses, we will focus primarily on advanced democracies.

## OTHER POLITICAL ECONOMY COURSES

## PECN 401 Constitutionalism: Ancient Athens to

## Present (3)

Mr. Riley. This course discusses the historical development of constitutionalism, with a view to understanding what is common to the various forms of constitutional government which have appeared in different societies from classical Athens to modern America.

## PECN 402 American Political Thought (3)

Mr. Riley. Prerequisite: PECN 401. This course discusses the historical development of the Constitution and associated political ideas, from the founding period up to the present. Thinkers discussed include Madison, Calhoun, Croly, Dewey, and Rawls, among others. Same as POLT 486.

## PECN 404 Democracy, Capitalism, and Free Speech (3)

Mr. Riley. This course discusses freedom of expression in the context of advanced capitalist democracies such as the U.S. Topics include justifications for free speech, its proper scope, tensions between democratic self-government and capitalist mass media, and Supreme Court decisions relating to freedom of expression.
PECN 419 Philosophy of the Social Sciences (3)
Mr. Gaus. An introduction to philosophical issues raised in the study of the social sciences. Questions to be considered include: how is social scientific explanation similar to that in the physical sciences? Is social science concerned with explanation or understanding? What is the place of rational actor models on the social sciences? Can there be a value-free social science? Same as PHIL 319.

## PECN 497, 498 Special Topics in Political Economy (3, 3)

## PECN 600 Majors Seminar (3)

Staff. The political economy majors' seminar focuses on a large theme or question that no single discipline in the program uniquely claims for its own and no one approach exhausts. Example of such issues: the rise of the nation state, capitalism and democracy, the foundations of economic behavior, the organization and meaning of work, and industrialization, economic growth, and social change. In designing a majors seminar, faculty define the issues that most engage them as teachers and scholars and that sustain a coherent cross-disciplinary course offering.
PECN 675 Utilitarianism: From Bentham to Harsanyi (3)
Mr. Riley. This course introduces students to the utilitarian tradition and to the modern debate over whether some version of utilitarianism is likely to serve as the most adequate moral and political philosophy. Same as PHIL 675.

## Political Science

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Professors
Ronald F. King, Ph.D., Chicago
Paul H. Lewis, Ph.D., North Carolina
Raymond C. Taras, Ph.D., University of Warsaw
Robert S. Robins, Ph.D., Duke

## Associate Professors

Mary Clark, Ph.D., Wisconsin
W. David Clinton, Ph.D., Virginia

Jean M. Danielson, Ph.D., Kansas
Thomas S. Langston, Ph.D., M.I.T.
Nancy L. Maveety, Ph.D., Johns Hopkins (Chair)
Anthony Pereira, Ph.D., Harvard
Gary A. Remer, Ph.D., California, Los Angeles
Martyn P. Thompson, Ph.D., London University; Dr. phil. habil., Universität Tübingen

## Assistant Professors

Brian Potter, Ph.D., California, Los Angeles
Salvatore Pitruzzello, Ph.D., Columbia

## Andrea Talentino, Ph.D., California, Los Angeles

Political Science concerns itself with both the struggle for power and the search for justice. These at times conflicting goals of the polity account for a basic division in the discipline. Thus, the study of political phenomena has both a descriptive or scientific component and a normative or evaluative component. Political phenomena are present everywhere in political life, wherever questions about the distribution of wealth, status, power, and privilege occur. Politics, then, concerns conflicts of interests and values and the practices through which they are conciliated. The acknowledgment of the ubiquity of political phenomena across a range of geographic, cultural, and temporal settings accounts for the four broad subfields that constitute the work of the discipline.

## MAJOR

At least 30 credits of political science course work (based on the three-credit-hour per course system), or ten courses.* Only four credits of honors thesis research may be counted in the total 30 credits. Students may choose one of three options to complete the major in political science.
*Transfer credit for courses taken outside Tulane University involving different credit systems will be evaluated case by case.

## GENERAL MAJOR IN POLITICAL SCIENCE

## Distribution of Course Work

At least one course in each of the following subfield areas:
American Political Processes and Institutions (POLA) 210 or any other course with a POLA designation
Comparative Political Processes and Institutions (POLC) 230 or any other course with a POLC designation
International Politics, Organization, and Law (POLI) 250 or any other course with a POLI designation
Political Theory (POLT) 270 or any course with a POLT designation

## Level of Course Work

1. At least one course at the $\mathbf{1 0 0}$ or $\mathbf{2 0 0}$ level.
2. At least two courses at the $\mathbf{4 0 0}$ level or above. This does not include internships, independent studies, or honors thesis credits.
3. Either one course at the 600 level or one four-credit writing course in political science.

## Grade Point Average

According to college rules, all students must have an overall GPA of 2.0 or better, and a GPA in their major of 2.0 or better, at the time of graduation.

Political Science Major with a Concentration in International Relations
Distribution of Course Work
At least one course in each of the following subfield areas:
American Political Processes and Institutions (POLA) 210 or any other course with a POLA designation

Comparative Political Processes and Institutions (POLC) 230 or any other course with a POLC designation
International Politics, Organization, and Law (POLI) 250 or any other course with a POLI designation
Political Theory (POLT) 270 or any course with a POLT designation
At least four of the remaining six courses must be taken in Comparative Political Processes and Institutions or International Politics, Organization, and Law.
Level of Course Work

1. At least one course at the $\mathbf{1 0 0}$ or $\mathbf{2 0 0}$ level.
2. At least two courses at the 400 level or above. This does not include internships, independent studies, or honors thesis credits.
3. Either one course at the $\mathbf{6 0 0}$ level or one four-credit writing course in political science.

Economics Component ( 9 credits)
ECON 101
ECON 102
one additional economics course

## Foreign Language Component

Students must demonstrate a proficiency in a modern foreign language normally attained by the completion of three credits of course work beyond the college foreign language proficiency requirement.

## Electives

Students selecting the concentration in international relations are expected to focus their political science course work in the two subfields most relevant to their international interests (international politics, organization, and law and comparative political processes and institutions) and to select elective courses which are complementary to their major. Students interested in the concentration should consult with Professor Clinton.

## Grade Point Average

According to college rules, all students must have an overall GPA of 2.0 or better, and a GPA in their major (including both their political science courses and their political science courses plus required components) of 2.0 or better, at the time of graduation.

## Political Science with a Concentration in American Politics and Policy

## Distribution of Course Work

At least one course in each of the following subfield areas:
American Political Processes and Institutions (POLA) 210 or any other course with a POLA designation

Comparative Political Processes and Institutions (POLC) 230 or any other course with a POLC designation
International Politics, Organization, and Law (POLI) 250 or any other course with a POLI designation
Political Theory (POLT) 270 or any other course with a POLT designation

## Level of Course Work

1. At least one course at the $\mathbf{1 0 0}$ or $\mathbf{2 0 0}$ level.
2. At least two courses at the $\mathbf{4 0 0}$ level or above. This does not include internships, independent studies, or honors thesis credits.
3. Either one course at the 600 level or one four-credit writing course in political science.

Policy Analysis Component
Students will elect one of the following indicated tracks.

## Methods track:

SOCI 303 Introduction to Research Design
and

SOCI 304 Introduction to Research Analysis
(Note: This is a two-course sequence)
or
POLS 400 Conduct of Research
(Note: This is an advanced level methodology course.

## Practice track:

POLS 456 (or 457) Internship
Note: According to college rules, students may not exceed six credits of internship as applied toward their total credit hours for graduation.

## Electives

Students selecting the concentration in American politics and policy are expected to focus their political science course work in the subfield most relevant to their interests (American political processes and institutions). In addition, students will select three courses for a total of nine credits from the following list of related electives in American area studies.

## Economics

ECON 336 Current Economic Issues

## History

HISU 355 American Political Traditions: Foundations, 1776-1860
HISU 356 American Political Traditions: Modernization, 1860 to the Present

## Sociology

SOCI 109 Social Problems
SOCI 218 Wealth, Power, and Inequality
Students interested in alternative additional related electives, or interested in this concentration, should consult with Professor King.

## Grade Point Average

According to college rules, all students must have an overall GPA of 2.0 or better, and a GPA in their major (including both their political science courses and their political science courses plus required components and electives) of 2.0 or better, at the time of graduation.

## MINOR

A minor in political science consists of six courses in political science, in at least two different subfields, with at least three courses above the 200 level.

## ACCELERATED M.A. IN POLITICAL SCIENCE

Tulane and Newcomb undergraduate majors in political science may be admitted to the Master's Degree program in political science as early as the end of their junior year, i.e., after completing 75 credit hours.

Superior students could reasonably expect to earn an M.A. in one additional year by completing four graduate-level courses by the end of their senior year. Graduate-level courses satisfactorily completed at any time during an admitted student's undergraduate career would be counted toward the M.A.

In the following year, such students would take an additional four courses at the graduate level and write and defend a satisfactory thesis. If the student completed a Senior Thesis as an undergraduate, he/she could build upon that work in the Master's Thesis.

Also before graduating with the M.A., the student would demonstrate competence in one foreign language.
Application would be made through the Graduate School.

## HONORS PROGRAM

## POLS H101 Introduction to Politics (3)

Staff. An introduction to the principles and practice of political life in a variety of domestic and international contexts. Open only to honors freshmen. Each H101 section has a limited enrollment of no more than 15 students. A paper is required and is assigned on a tutorial basis with individual student-instructor conferences. Credit will be given for only one of the following: 101 or H101.
POLS H491, H492 Independent Studies $(3,3)$
Staff. The department offers independent studies at all levels, freshman through senior, provided the student is qualified and an appropriate faculty director is available.
POLS H499-H500 Honors Thesis $(3,4)$
Staff. Only four of these credits are to be counted toward the requirements for the major. Honors theses written in political science do not count as political science writing courses.

## INTRODUCTORY COURSES

## POLS 101 Introduction to Politics (3)

Staff. An introduction to the principles and practice of political life in a variety of domestic and international contexts. Open to freshmen only. Each 101 section has a limited enrollment of no more than 20 students. A paper is required and is assigned on a tutorial basis with individual student-instructor conferences. Credit will be given for only one of the following: 101 or H101.

## GENERAL COURSES

POLS 288 Writing Practicum in Political Science (1)
Staff. Writing practicum. Fulfills the college writing requirement.
POLS 301, 302, 303, 304 Special Projects (1-3, 3, 3, 3)
Staff.
POLS 388 Writing Practicum in Political Science (1)
Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.
POLS 400 The Conduct of Research (4)
Mr. King. This course is intended to introduce advanced students to the concepts and methods of political science research, and to show how those methods can be applied to concrete problems. Fulfills the college writing requirement.
POLS 401 Special Projects (3)
Staff.
POLS 456, 457 Internship Studies (1-3, 1-3)
Staff. Prerequisites: approval of instructor and department. An experiential learning process coupled with pertinent academic course work. Open only to juniors and seniors in good standing. Registration is completed in the academic department sponsoring the internship on TUTOR. Only one internship may be completed per semester. Note: a maximum of three credits may be counted in one or more courses toward the Political Science or International Relations major. See also the college requirements for internships.

## POLS 488 Writing Practicum in Political Science (1)

Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.
POLS 501 Participant Observer Research (3)
Staff. Prerequisites: at least one course in political science with grade of B or better, instructor and departmental approval. Individually directed students are given readings, tested on those readings, and must develop a research design to be carried out while participating in political activity, such as campaigns or interest group work outside the university. This work will culminate in a research paper.

POLS 695, 696 Special Offerings in Political Science (3, 3)
Staff. Courses offered by visiting professors or permanent faculty. For specific offering, see the Schedule of Classes. For description, consult department.

## AMERICAN POLITICAL PROCESSES AND INSTITUTIONS

## POLA 210 American Government (3)

Staff. An introductory survey of government at the national level with emphasis on constitutional principles and significant contemporary trends and problems.

## POLA 315 Elections in America (3)

Staff. The focus is on candidates, political parties, the press, consultants, and public opinion in elections and political campaigns. Covers presidential and congressional elections. Each semester, special attention is paid to a topic such as the economy, fundraising, activists, or campaign technique.

## POLA 316 Political Parties (3)

Staff. A study of theories of political parties in the United States and other democracies. The stress is on the electoral and governmental role of party organizations.
POLA 320 Congress (3)
Mr. Langston. A study of the United States Congress with emphasis on its development, its internal structure, the relationship of the elected representatives to their constituents, and the legislative process itself.

## POLA 322 The American Presidency (3)

Mr. Langston. A study of the office of the President of the United States that includes both historical review and analysis of the presidential role in our national government. A main focus of the course is on the relative importance of particular presidents and their leadership capacities and the limitations on the office itself.
POLA 324 Public Policy (3)
Mr. King. This course will examine the size and function of the U.S. federal government, the processes by which policy is formulated, budgeted, and evaluated, and the effects of policy on citizen welfare.

## POLA 327 Courts and Politics (3)

Ms. Maveety. Analysis of the political factors that influence courts, their staffing, their decisions, and their policymaking role. The interaction between legal policies and structures and political institutions and their development will be addressed.

## POLA 412 Louisiana Politics (3)

Staff. A review of why Louisiana politics is renowned in the West, featuring right- and left-wing populism, the highest quality campaign techniques, diversion of campaign funds, rewards for supporters, and reciprocity between judges and lawyers. Investigation of the background to Louisiana politics focuses on the absence of a dominant political or cultural group, a culture of sociability, a plethora of bases of political support, and a history of racial, regional, and religious cleavage.

## POLA 418 American Political Culture (3)

Staff. An examination of the American ways of practicing politics and thinking about governance. We will compare culture two centuries ago with the present, American with non-American political culture, political culture with market culture, and the dominant cultures with subcultures. Students will conduct research on aspects of New Orleans political culture.

## POLA 422 The Military in American Politics (3)

Mr. Langston. This course examines the United States armed forces as political actors and objects of policymaking. Special attention will be paid to changes in the military's influence and interests over time, and to the post-Cold War debate over the relevance of military power to the pursuit of national interests.

## POLA 423 Environmental Politics and Policy (3)

Mr. Potter. An overview of the issues, institutions, processes, and actors that determine political responses to environmental problems in the United States. The course includes discussions of current controversies in environmental politics.

## POLA 424 Budgets and Deficits (3)

Mr. King. This course examines the politics and policies of the U.S. federal budget. It focuses upon the role of a budget, its formation, and its content. Extensive attention will be given to current policy problems and their possible solutions.
POLA 425 Power and Poverty in America (3)
Mr. King. This course will investigate the extent of income inequality and of poverty in contemporary America and the impact of government upon them. Empirically, it will examine the programs of the American welfare state and assess their successes and failure. Normatively, it will discuss how one establishes minimum standards for distributional justice and inquire into the obligations we have toward our fellow citizens.

POLA 426 Race, Sex, and Power (3)
Ms. Maveety. This course examines the role of race and sex based classification in the law of equal protection and focuses on the political actions and events that lead to legal remedies for discrimination.

## POLA 427 Constitutional Law (3)

Ms. Maveety. A study of the general powers and limits of the branches of the national government and the relationship among the levels of government, as this has affected civil rights and individual liberties under the Constitution.

## POLA 480 Science, Technology, and Public Policy (3)

Mr. Langston. Interdisciplinary examination of the role of science and technology in modern society. Inquiry into the possibilities and methods of public review of governmental policies having significant technological implications. Introduction to the concepts and techniques of technology assessment.

POLA 618 Public Opinion and Voting Behavior (3)
Staff. An analysis of opinion formation in political situations and a survey of voting behavior in the United States.

## POLA 620 Interpretations of American Politics (3)

Mr. King, Mr. Langston. This class examines alternative accounts of American politics, using research to explore competing views, different methodologies, and varying emphases. Each participant will be responsible for conducting a serious piece of research on his or her own.

## POLA 629 Judicial Process (3)

Ms. Maveety. This course examines the relationship between the Supreme Court, the federal and state courts, and the Congress and President. It surveys various methods of analyzing the impact and implications of judicial decisions and evaluates various theories of the consequences of judicial policymaking.

## COMPARATIVE POLITICAL PROCESSES AND INSTITUTIONS

## POLC 230 Comparative Politics (3)

Staff. A comparison of various political processes and structures among selected countries designed to identify and highlight significant differences among various political models and practices.

## POLC 330 European Governments (3)

Mr. Jeffrey, Mr. Salvatore. This course is an introduction to the Post-World War II evolution of Western Europe. It examines four main dimensions: (i) the position of countries in the international political economy, (ii) the role of the state in the management of the economy as well as of the welfare system, (iii) the formal structure of the system of governance and policymaking, and (iv) the form of political participation and representation.
POLC 331 Governments of Central America and the Caribbean (3)
Ms. Clark. Governments and politics of the six Central American nations and Cuba, the Dominican Republic and Puerto Rico. Primary emphasis is placed on the revolutionary movements in those countries and the linkages among them.
POLC 335 Latin American Governments (3)
Ms. Clark, Mr. Lewis. A study of the political and governmental processes of major states of Latin America.

## POLC 338 Asian Governments (3)

Mr. Robins. This course focuses on the origins and dynamics of change in the newer nations of Asia, with a special emphasis on South Asia. Credit will not be given for both 438 and 643.

## POLC 341 Politics and Nationalism (3)

Mr. Taras. A study of nationalism and ethnic conflict in the contemporary world. Both approaches to the study of nationalist conflict and case studies of conflict are included.

## POLC 431 Mexican Politics and Government (3)

Staff. An exploration of the Mexican political process and the historical developments leading up to its present structure.

## POLC 432 Government and Politics of the Southern

Cone (3)
Mr. Lewis. Governmental processes in Argentina, Chile, Uruguay, and Paraguay. Emphasis is on parties and pressure groups as they attempt to shape the policies of democratic and authoritarian regimes.

## POLC 434 Latin American Environmental Politics (3)

Mr. Potter. This course surveys controversies in the management of environmental and natural resource issues in Latin America. Students without prior courses in international relations or American politics should consult the instructor prior to registration.

## POLC 436 Russian Politics (3)

Mr. Taras. An examination of both formal and informal factors affecting the nature of the Russian political system.

## POLC 442 State and Society in Developing Countries (3)

Mr. Pereira. The course examines the global context of political development in Africa, Asia, and Latin America, the pursuit of economic development and democracy in these regions, and efforts at grass-roots reform.
POLC 443 Politics of New Democracies (3)
Staff. This course discusses the manifestations and causes of political change in the newly democratic states of the world.
POLC 444 Autocracy (3)
Mr. Lewis. An investigation of political systems in which there are few if any manifest institutional checks on the exercise of governmental power.
POLC 445 Revolution, Protest, and Change (3)
Staff. An examination of the causes, dynamics, and consequences of political movements of revolution and reform.

## POLC 446 Politics and Personality (3)

Mr. Robins. The study of political life and thought from a psycho-cultural point of view. There are analyses of single political actors, types of actors, and of the aggregative effects of personality on political systems.

## POLC 447 Politics and Literature (3)

Mr. Taras. Study of the literature of political dissent, with particular focus on writers in communist and other authoritarian states.

## POLC 451 The Politics of the European Union (3)

Mr. Salvatore. Prerequisite: POLC 330. The "nation-states" of the old Europe are becoming the "member-states" of a European Union. While founded to avoid a repetition of the horrors of the past, the New Europe is increasingly being viewed as a model for the future. This course provides an overview of the political institutions and the political economy of the European Union. Four main areas are examined: (i) formal institutions and institutional relations of the European Union (ii) critical junctures in the evolution of the European Union, (iii) issues of""democratic deficits", and (iv) external relations and eastward enlargement.

## POLC 634 Brazilian Government (3)

Mr. Pereira. This course surveys the government and politics of Brazil, and includes a research project focusing on the analysis of political institutions, including parties and electoral rules.

## POLC 641 Approaches to Latin American Politics (3)

Ms. Clark. Major approaches to the study of Latin American politics such as developmentalism, institutionalism, corporativism, bureaucratism, authoritarianism, and dependency theory.

INTERNATIONAL POLITICS, ORGANIZATION, AND LAW

## POLI 250 International Relations (3)

Mr. Clinton, Mr. Potter, Ms. Talentino, Mr. Taras. An introductory analysis of basic factors influencing international politics, organization and law.

## POLI 351 Power, Morality, and International Relations (3)

Mr. Clinton. The influence of moral principles on international politics. Emphasis is placed on issues such as human rights, just and unjust wars, and the rights and responsibilities of those whose actions cross state boundaries, such as multinational corporations and international migrants.

## POLI 352 International Organization (3)

Staff. Prerequisite: POLI 250. A systematic study of attempts to modify the international system through multilateral organization.

## POLI 354 International Political Economy (3)

Mr. Potter. Prerequisite: POLI 250. Survey of traditional and recent theories and approaches to the study of international political economy. Emphasis will be given to the microfoundations for macromodels such as liberalism, Marxism, and realism. Topical areas will include monetary management, trade, and multinational corporations. Credit will not be given for both 454 and Political Economy 301.

## POLI 363 The Causes and Prevention of War (3)

Ms. Talentino. This course surveys the causes of war and peace among nations. The first half examines theories of war causation, and the second tests these out on historical case studies from the 20th century. The lessons of the past will be applied to important contemporary questions: Is the postwar peace among the great powers permanent? What policies can help reduce the likelihood of future war?
POLI 451 Vietnam: Policy and Process (3)
Mr. Campomenosi. Prerequisite: approval of instructor. This course analyzes American policy on the issue of Vietnam from 1945-1975. It also provides an analysis of the reaction of the prestige press to the official U.S. position on Vietnam.
POLI 452 Intelligence and Covert Operations (3)
Ms. Talentino. This class examines the uses of intelligence and clandestine operations as strategies affecting international relations from the end of World War II to the present.

## POLI 453 American Foreign Policy (3)

Mr. Cinton, Ms. Talentino. Prerequisite: POLI 250 or any 300 -level POLI class. Theory and practice of American foreign policy. Emphasis is on major issues in United States diplomacy and on basic ideas governing American foreign policy.

## POLI 459 The Holocaust System: A Political Analysis (3)

Mr. Mason. The politics of the development and implementation of the Nazi policies leading to the extermination of the European Jews. Attention is also given to the role of the various German political elites and German public opinion, the allies’ and neutrals' laxity with respect to the possibilities of penetrating the holocaust system and comparison with other holocaust systems.

## POLI 460 Latin American International Relations (3)

Ms. Clark. This course deals with relations among Latin American nations as well as those with the United States, Europe, Japan, and multinational institutions. This class will cover the international aspects of issues such as trade, security, human rights, immigration, and environmental politics as they relate to Latin America.

## POLI 461 Africa in International Politics (3)

Ms. Talentino. A study of the role played by African nations in international relations. The course addresses theoretical issues such as the meaning of statehood and the definition of responsible government, and then investigates how international actors have affected their development in Africa.

## POLI 462 International Environmental Politics (3)

Mr. Potter. An examination of the political dimensions of international environmental problems. The course will include investigation and analysis of the causes, consequences, and potential solutions to a range of environmental problems.

## POLI 463 Strategy and Politics (3)

Staff. Prerequisite: POLI 250, POLI 453, or approval of instructor. The focus of this course is grand strategy - the economic, diplomatic, and military policies adopted by states to improve their security. Theory and historical evidence will be used to address these questions: What are the different types of grand strategy, and which are appropriate to different international conditions? What forces determine a state's choice of grand strategy? What political, psychological, and cultural factors lead states to choose badly?

## POLI 465 Russian Foreign Policy (3)

Mr. Taras. This course will explore the sources and substance of Russian foreign policy with a focus on security issues, and on relations with the U. S., Europe, and the new independent states of Eurasia.

## POLI 651 International Politics (3)

Mr. Clinton. Prerequisite: POLI 250 or any 300-level POLI course. A systematic study of politics among nations including a survey of the principal theories concerning the international system.
POLI 654 Research in International Political Economy (3)
Mr. Pitruzelli, Mr. Potter. Prerequisite: POLI 250 or a 300-level POLI course. A survey of middle range models in international political economy stressing the analysis of assumptions, methodology, and empirical evidence. Emphasis will be given to the interaction between domestic politics, the state and international relations. Selected topics such as exchange rate fluctuations, capital flight and external debt will be addressed within the context of political development.
POLI 663 International Security (3)
Staff. Prerequisite: POLI 250 or POLI 453. A review of critical issues threatening the security of the major powers including nuclear strategy, arms control, weapons procurement, international economics, and military interventions in regional disputes. In addition to the substance of selected issues, the course deals with the literature on decision-making, crisis management, and the organization of governments for effective foreign policy-making. Emphasis is on American security problems and policy-making.

## POLITICAL THEORY

## POLT 270 Political Thought in The West (3)

Mr. Remer, Mr. Thompson. A history of the development of Western political thought from the ancient Greeks to recent times.

## POLT 371 Social Contract Theory: Ancient Greece to the Present (3)

Mr. Thompson. A survey of historical developments leading up to the current social contract revival among North American and European political theorists. Particular attention will be paid to the varieties of contractualism since the ancients and the appropriateness of contract theories for understanding the social, political, and moral relationships in modern commercial societies.

## POLT 375 Liberal Democratic Theory (3)

Staff. Various approaches to liberal democratic theory are discussed including recent contributions from social choice theorists and game theorists. Theorists discussed include Madison, Tocqueville, Mill, Robert Dahl, Kenneth Arrow, C.B. Macpherson and William Riker.

POLT 378 Feminist Political Theory (3)
Mr. Remer. This course will focus, first on the role of women in the tradition of western political thought. Second, the course will examine the attempts of contemporary feminist thinkers to deal with concepts central to the tradition of political theory, such as justice, equality, and liberty.

## POLT 381 Political Discourse (3)

Mr. Remer. A survey of theories of political discourse from the ancient Greeks to late 20thcentury democratic theory. Special attention will be paid to the relationship between classical rhetoric and political theory.
POLT 382 Contemporary Political Ideas (3)
Mr. Lewis, Mr. Thompson. An analysis of variants of revisionist Marxism, socialism, anarchism, fascism, 20th-century liberalism and conservatism, and the relation of these to contemporary American ideologies.

## POLT 471 Greek Foundations of Western Political Thought (3)

Mr. Remer, Mr. Thompson. A study of the classical Greek foundations of diverse traditions of Western political thought from Homer to Epicureanism. Special attention will be paid to the Sophists, Plato, and Aristotle.

## POLT 472 Ancient and Medieval Political Theory (3)

Mr. Remer. A survey of ancient and medieval political theory with emphasis on the concepts of order, liberty, and constitutionalism. Special attention is given to Plato, Aristotle, St. Augustine, and St. Thomas Aquinas.

## POLT 477 Transition to Modernity (3)

Mr. Remer. A survey of the political thought of the Renaissance and Reformation stressing the transition from medieval to modern political theory. Theorists discussed include Machiavelli, Erasmus, More, Luther, Calvin, Hooker, Bodin, and the "Monarchomachs."
POLT 478 Modern Political Theory (3)
Mr. Thompson. An analysis of the development of political theory since the 16th century with emphasis on modern ideologies especially conservatism, liberalism, communism, and fascism. Hobbes, Locke, Rousseau, Burke, Bentham, and Marx are given particular attention.

## POLT 479 Contemporary Political Philosophy (3)

Mr. Thompson. Analyzing contemporary political philosophy, within the context of Kantianism vs. Hegelianism. Attention will be concentrated on political philosophers such as Arendt, Oakeshott, Rawls, Foucault, Lyotard and Derrida. Same as PHIL 674.
POLT 486 American Political Thought (3)
Mr. Riley. Prerequisite: PECN 401. This course discusses the historical development of the Constitution and associated political ideas, from the founding period up to the present. Thinkers discussed include Madison, Calhoun, Croly, Dewey, and Rawls, among others. Same as PECN 402.

## POLT 487 Asian Political Thought (3)

Mr. Robins. A survey of major political ideas in Asian thought with attention paid to continuity and discontinuity between classical and modern ideologies and theories of government.

## POLT 670 Understanding Political Thought (3)

Mr. Remer, Mr. Thompson. An examination of the logical structure of practical political thinking (propaganda and ideology) and explanatory political thinking (history, science, and philosophy). The varieties will be exemplified in famous texts, films, and other media.

## POLT 682 Rationality and Choice (3)

Staff. Prerequisites: two prior courses in political science, economics, political economy, or approval of instructor. The course will include an introduction to some of the theoretical literature, as well as illustrations of such theories to political problems such as the provision of
social order and other collective goods, the management of natural resources, and the formation of organization and social movements.

## POLT 684 Managing the Environmental Commons (3)

Mr. Potter Prerequisites: POLA 423, POLI 462 or approval of instructor. Juniors and seniors only. An overview of different social and political institutions for managing environmental concernsresources that are jointly used but for which one person or group's use diminishes the potential use by others. Examples include the atmosphere, the world's oceans, many fisheries, parks and wilderness areas. Institutional arrangements will be compared along dimensions of efficiency, sustainability and equity.

## Psychology

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Website: www.tulane.edu/~psych/psychome.html
Professors
Gary P. Dohanich, Ph.D., Michigan State
Jeffrey J. Lockman, Ph.D., Minnesota (Chair)
Barbara E. Moely, Ph.D., Minnesota
Edgar C. O’Neal, Ph.D., Missouri (The John Madison Fletcher Professor of Psychology)
Associate Professors
Terry E. Christenson, Ph.D., California, Berkeley
Michael Cunningham, Ph.D., Emory
Janet B. Ruscher, Ph.D., Massachusetts, Amherst
Stacy Overstreet, Ph.D., Tulane
C. Chrisman Wilson, Ph.D., South Carolina

Assistant Professors
Paul Colombo, Ph.D., California, Berkeley
Joseph Dien, Ph.D., Oregon
Ronald S. Landis, Ph.D., Michigan State
Denise L. Newman, Ph.D., Minnesota
Carl J. Thoresen, Ph.D., Iowa
R. Enrique Varela, Ph.D., Kansas

Emeritus
Arnold A. Gerall, Ph.D., Iowa

## MAJOR

A minimum of 30 hours is required for a major in psychology including courses 100, H101 or 102; 212, and two psychology laboratory courses. The laboratories must come from the following: 307, 313, 314, 318, 322, 344, 345, 369, 480, 652, 654, 656, 658, 677. With permission of the thesis advisor and the departmental curriculum committee, H 500 may count as an equivalent to a departmental laboratory course. Other courses taken to reach the 30 credit requirement must be taken at the 300 level or higher, including at least one course from each of these three groups: psychobiology group: 314, 367, 368, 369, 470, 651, 653, 655, and 657; social, developmental, and cognitive processes group: 307, 321, 322, 323, 324, 325, 326, 331, 335, 339, 340, 343, 344, 345, 363, 408, 442, 461, 641 and 642; applications and techniques group: 301, 318, 320, 333, 334, 365, 371, 372, 373, 410, 611, 613, 650, 675, and 677.

By petition, the student majoring in psychology may substitute six hours in biology, chemistry, physics, or mathematics beyond the introductory level for one of the required 300 -level nonlaboratory psychology electives. Majors who fulfill the psychobiology requirement with CELL 123 must complete at least 27 hours of course work in psychology. The CELL 123 option precludes the substitution of two upper level science courses for one upper level psychology elective.

Students majoring in psychology are strongly advised to take 618 during their senior year as an integrative experience. Students intending to apply for graduate study in psychology or a related field are strongly advised to complete an honors thesis or take an additional laboratory course. Majors planning to enter the Junior Year Abroad program should seek departmental advice as early as possible. They should complete 212 by the end of their sophomore year as preparation for taking courses abroad and advanced courses when they return.

## MINOR

A minor in psychology requires Psychology 100, H101 or 102; 212; a laboratory course; and two additional three or four-credit psychology courses at or above the 300 level. A grade-point average of 2.0 or higher is required in courses applied to the minor.

## INTRODUCTORY COURSES

## PSYC 100 Introductory Psychology (3)

Mr. Christenson, Mr. Dien. Fundamentals of contemporary psychology, including topics such as heredity and behavior, principles of learning, physiological substrates of behavior, perception, social interaction, and mental health. Students may receive credit for only one introductory course: 100, H101 or 102.

PSYC H101 Seminar in General Psychology (4)
Mr. O’Neal. Basics of psychology including topics such as scientific methodology, physiological bases of behavior, behavioral and cognitive development, animal behavior, psychological testing, social perception and influence, disorders of behavior and affect, and applications of psychology. Discussions, lectures, demonstrations, and an emphasis on writing. Enrollment limited to twenty freshmen. Students may receive credit for only one introductory course: 100, H101 or 102.

## PSYC 102 Intensive General Psychology (3)

Mr. Lefton. Lectures, demonstrations, writing, and small group discussion focusing on the fundamentals of contemporary psychology. These topics include learning, perception, development, motivation, and social psychology. Participation in weekly small group discussions is required. Students may receive credit for only one introductory course: 100, H101 or 102.

## LECTURE COURSES

## PSYC 301 Introduction to Personality (3)

Ms. Newman, Mr. Thoresen. Prerequisite: PSYC 100, H101 or 102. An introductory survey of theories and measurement in personality.

## PSYC 320 Educational Psychology (3)

Ms. Moely, Mr. Wilson. Prerequisite: PSYC 100, H101 or 102. Examines psychological principles applied to educational practices with special emphasis on cognition. Its purpose is to help adults working with children to understand better the relationship between applied educational practices and psychological principles and research. Includes observational assignments in schools.

## PSYC 321 Child Psychology (3)

Mr. Lockman, Ms. Moely. Prerequisite: PSYC 100, H101 or 102. A survey of the concepts, principles, and major findings of research on human development.

## PSYC 323 Nursery School Observation (1)

Staff. Lecture, one hour; laboratory, two hours. Students must reserve two one-hour periods between 9 a.m. and noon or 1 and 4 p.m. for nursery school observation.

## PSYC 324 Urban Child Development (3)

Ms. Moely, Ms. Overstreet. Corequisite: PSYC 388 Writing Practicum or PSYC 389 Service Learning. A survey of psychological theories and recent research concerning the lives of city children, focusing on what theory and research tell us about how aspects of the urban environment affect children's academic, social, and personal development. Students must take either the writing practicum course or the service learning course but not both.

PSYC 325 The Psychology of Early Childhood (3)
Ms. Moely. Prerequisite: PSYC 100, H101 or 102. An investigation of educational programs for young children and/or parents of young children based on cognitive developmental theory, learning theory, and others. Curriculum development and the evaluation of program effectiveness are discussed.

PSYC 326 Infancy (3)
Mr. Lockman. Prerequisite: PSYC 321. The cognitive, perceptual, and social development of the human infant are reviewed. Research findings and methods are emphasized.
PSYC 331 Introduction to African-American Psychology (3)
Mr. Cunningham. Prerequisite PSYC 100, H101 or 102. A study of a wide range of topics relating to psychology generally, and African Americans specifically. Topics include personality, education, psychological assessment, racism, psychology in communities, and research.
PSYC 333 Abnormal Psychology (3)
Mr. Wilson. Prerequisites: PSYC 100, H101 or 102, and sophomore standing. An introduction to the psychological aspects of the behavior disorders.
PSYC 334 Childhood Behavior Disorders (3)
Ms. Overstreet. Prerequisite: PSYC 321. Corequisite: 389. An introduction to clinical disorders and exceptionalities occurring in childhood and adolescence. The course requires a practical experience involving two hours per week in area schools or community organizations. Concurrent registration for one hour service learning credit in psychology is required.

## PSYC 335 Nursery School Principles (3)

Staff. Prerequisite: PSYC 323 or approval of instructor. Lecture, two hours; laboratory, six hours. A study of the basic principles involved in guiding the behavior of preschool children. Students must reserve six hours a week between 9 a.m. and noon or 1 and 4 p.m. for work in the nursery school. Students should apply to instructor at least one semester in advance. Satisfies laboratory requirement only for students graduating in the Teacher Certification Program. Spring semester only.

## PSYC 339 Adolescent Psychology (3)

Mr. Cunningham. Prerequisite: PSYC 100, H101 or 102. A study of development through the adolescent years. Emphasis is on cognitive, social, physical, moral, sexual, and political development.

## PSYC 340 Child and Adolescent Social Development (3)

Staff. Prerequisites: PSYC 100, H101 or 102. This course focuses on critical topics that are related to a child becoming a healthy functioning social being. These topics include: biological contributions, temperament, attractiveness, attachment, gender differences, parenting styles, sibling relationships, peer relations, moral development, aggressiveness, identity, and schools.

PSYC 343 Introduction to Social Psychology (3)
Mr. O’Neal, Ms. Ruscher. Prerequisite: 100, H101 or 102. The individual in a social context: the nature and measurement of attitudes, social perception, interpersonal and intergroup relations.
PSYC 363 Psychology and Women's Health (3)
Staff. Prerequisite: PSYC 100, H101 or 102. This course will focus on factors which impact women's health. A review on how women's health differs from men's health will provide the basis for more in depth discussion of diseases and health issues that are specific to women. The psychosocial factors which influence health in women will be covered in detail.
PSYC 365 Family Psychology and Psychopathology (3)
Mr. Varela. Prerequisites: PSYC 100, H101 or 102 and prefer PSYC 340. This course is designed to familiarize students with current conceptual issues relating to family psychology and psychopathology. The course will focus on research and issues in selected topics in the development of the family. It is intended to give the student a sense of the breadth and depth of some of the major issues in the field of family psychology/psychopathology. The topics include the family life-cycle, family identity, family transitions, intergenerational issues, risk/resiliency factors, and the structural model of families.

## PSYC 367 Brain and Behavior (3)

Mr. Colombo, Mr. Dohanich. Prerequisite: PSYC 100, H101 or 102. Lectures cover the function and structure of the nervous system and the role of brain activity in the regulation of behavior. This course provides psychology majors with a first exposure to the biological bases of behavior and is not recommended for students who have taken other courses in this area of study. Credit may not be received for both CELL 123 and PSYC 367 or PSYC 367.
PSYC 368 Comparative Animal Behavior (3)
Mr. Christenson. Prerequisite: PSYC 100, H101 or 102 or EEOB 101. A lecture course to introduce the types of questions asked by animal behaviorists, theoretical disciplines posing those questions, and recent research in three categories: behavior as related to the environment, social behavior, and applied behavior. Designed for PSYC and EEB majors. Same as EEOB 368.
PSYC 371 Introduction to Industrial Organizational Psychology (3)
Mr. Landis, Mr. Thoresen. Prerequisite: PSYC 100, H101 or 102. A survey of major topics in personnel and organizational psychology as applied to business, industry, and government.

PSYC 372 Personnel Research Techniques (3)
Mr. Landis. Prerequisite: PSYC 371. The use of various quantitative research techniques applied to human resource problems in organizations. Primary topics covered include job analysis, recruitment, performance appraisal, validation, personnel selection, test bias and fairness, and training.

PSYC 373 Advanced Organizational Psychology (3)
Staff. Prerequisite: PSYC 371 or approval of instructor. Advanced study of major theories, research, and intervention in the area of organizational psychology. Coverage includes such topics as job attitudes, work motivation, leadership, organizational climate/culture, job design, and work group/team processes.

## PSYC 376 Interpreting Minds (3)

Mr. Bogdan. This course provides a systematic introduction to the recent and very dynamic interdisciplinary research area in naôve psychology or theory of mind. The course begins with the philosophical debates about naôve or folk psychology and the key philosophical concepts that have shaped the research agenda, then surveys the main empirical data, key experiments and hypotheses about ape and child interpretation of minds, and concludes with a comparative analysis of several and much debated proposals about how the interpretation of minds is accomplished-through innate mechanisms (modules), by simulation or in terms of a naôve theory. Same as PHIL 376.

## PSYC 408 Intimate Relationships (3)

Mr. O’Neal. Prerequisite: PSYC 100, H101 or 102, junior standing, or approval of instructor. Social psychological barriers to interpersonal intimacy as well as the dynamics of long-term personal relationships are considered. Topics include shyness, loneliness, romantic attraction, self-disclosure, envy and jealousy, intimate communication, sex roles and reciprocity in close relationships, sexual behavior that affects and is affected by such relationships, and relationship termination. Marriage and the family are considered as frequent institutional contexts but will not be the primary focus.

## PSYC 442 Body, Image, and Self (3)

Mr. O’Neal. Prerequisite: PSYC 343 or approval of instructor. For juniors and seniors only. A seminar on the dynamic interplay between body and conceptions of self. Discussion, class presentations, films, lectures and group exercises on body self objectification, visible stigma (physical disability, obesity), disorders that affect or are affected by body image (bulimia, anorexia, depression), customs of body adornment (scarification, tattooing, piercing, cosmetic surgery), narcissism and appearance obsession, clothing and the commodified body, and mass media effects on body self-esteem.
PSYC 443 Applied Social Psychology (3)
Ms. Ruscher. Prerequisites: PSYC 212, 343, and junior standing. Applies the theories and methodology of social psychology to areas such as the legal system, sports psychology, violence against women, the media, health psychology, and political psychology.

PSYC 461 Black Youth: Developmental Psychology Perspectives (3)
Mr. Cunningham. Prerequisite: PSYC 321 or 339. A study of major research findings with African-American children and adolescents. The course includes a participant-observer experience in the applied setting (e.g., school, group home). Intensive writing required.
PSYC 470 Seminar in Evolution of Reproductive

## Strategies (4)

Mr. Christenson. Prerequisites: EEOB 368 or PSYC 368 and approval of instructor. Discussion of the evolution and ecology of reproductive strategies. Topics include costs and benefits of sexual reproduction, sexual selection, sperm competition and mating systems. Fulfills the college writing requirement. Same as EEOB 470.

## LABORATORY COURSES

PSYC 212 Experimental Design and Quantitative Methods in Psychology (4)
Ms. Ruscher. Prerequisite: PSYC 100, H101 or 102. Lectures and laboratory in design of experiments, psychological measurement, and deriving conclusions from experimental data.
PSYC 307 Thinking and Information Processing (4)
Staff. Prerequisite: PSYC 212. Experiments and theories pertaining to processing, transformation, retention, and utilization of stimulus information. Perceptual coding and judgments, concept formation, problem solving, and decision processes. Application of statistical procedures. Satisfies laboratory requirement.
PSYC 313 Experimental Psychology (4)
Staff. Prerequisite: PSYC 212. Lectures and laboratory in design of experiments, quasiexperimental designs, control of variables, scientific communication, and application of statistical procedures. Satisfies laboratory requirement.

## PSYC 314 Sensory Processes and Perception (4)

Staff. Prerequisite: PSYC 212. A survey of the sensory and perceptual systems with emphasis on stimulus specification, methodology of experimentation, application of statistical procedure, and physiological bases of sensory processes and perception. Satisfies laboratory requirement.

## PSYC 318 Psychological Testing and Measurement (4)

Mr. Landis. Prerequisite: PSYC 212. A survey of the nature, extent, and measurement of individual differences. Practice is given in the administration, scoring, and interpretation of a variety of types of tests with particular emphasis on techniques in contemporary use. Satisfies laboratory requirement.

PSYC 322 Research Methods in Developmental Child Psychology (4)
Ms. Moely. Prerequisites: PSYC 212 and 321. Experimental approaches to the study of human development, directed research, and application of statistical procedures. Satisfies laboratory requirement.

## PSYC 344 Experimental Social Psychology (4)

Mr. O'Neal, Ms. Ruscher. Prerequisites: PSYC 212 and 343 or approval of instructor. Laboratory and field experiments in interpersonal relations, social roles, and attitude change. Satisfies laboratory requirement.

## PSYC 345 Research Methods in Social Cognition (4)

Ms. Ruscher. Prerequisites: PSYC 212 and 343. Students conduct and critique laboratory experiments in cognitive social psychology. Satisfies laboratory requirement.
PSYC 369 Experimental Animal Behavior (4)
Mr. Christenson. Prerequisites: PSYC 212, 368, and approval of instructor. A laboratory course with lectures in animal behavior in which hypothesis generation, experimental design, ethical consideration, methods of observation and data recording, and data analysis and interpretation are explored through experiments and written assignments. Fulfills the college writing requirement. Same as EEOB 369.

## PSYC 480 Special Topics in Psychology with Laboratory (4)

Staff. Prerequisite: 212. A special topics course in psychology with a laboratory component. The particular topic will be based on faculty and student interest. The course will include the basic elements of research design, the methodologies particular to the topic area, and writing research reports in the style of the American Psychological Association. Fulfills the psychology laboratory requirement for psychology majors and minors.

## PSYC 652 Biological Psychology Laboratory (1)

Mr. Colombo. Corequisite: PSYC 651. Prerequisite: PSYC 212. A laboratory course providing training in behavioral and neurobiological methods, experimental design, data collection and analysis and preparation of research reports. Fulfills college laboratory and writing requirements.
PSYC 654 Psychopharmacology Laboratory (1)
Mr. Dohanich. Corequisite: PSYC 653. Prerequisite: PSYC 212. Laboratories provide demonstration and hands-on experience in research methods used in contemporary psychopharmacology including receptor measurement, models of drug abuse and psychopathology, data analysis, and manuscript preparation. Satisfies departmental laboratory requirements. Satisfies college laboratory and writing requirements.

PSYC 656 Behavioral Neuroendocrinology Laboratory (1)
Mr. Dohanich. Corequisite: PSYC 655. Prerequisite: PSYC 212. Laboratories provide demonstration and hands-on experience in research methods used in contemporary neuroendocrinology including hormonal manipulation, behavioral measurement, data analysis, and manuscript preparation. Satisfies departmental laboratory requirement. Satisfies college laboratory and writing requirements.

## PSYC 658 Cognitive Neuroscience Laboratory (1)

Mr. Dien. Corequisite: PSYC 657. Prerequisites: PSYC 212 and PSYC 367 or approval of instructor. A laboratory course in which students will be introduced to the methods of cognitive neuroscience, including neural networks, event-related potentials, and functional magnetic resonance imaging. Students will design and carry out simple cognitive experiments to examine issues of hemispheric laterality.
PSYC 677 Research Techniques in Social and Organizational Psychology (3)
Mr. Burke, Mr. Landis, Mr. Thoresen. Prerequisites: PSYC 344 and approval of instructor. Lecture and projects in laboratory and field methodology currently employed in social and organizational psychology. For graduate students or advanced undergraduates. Satisfies laboratory requirement.

## SPECIAL TOPICS AND PROJECTS COURSES

PSYC 351, 352 Special Projects in Psychology (1-3, 1-3)
Staff. Prerequisite: approval of supervising faculty member. Supervised research activity for psychology majors.

## PSYC 380 Topics in Psychology (3)

Staff. Various topics in psychology based on faculty and student interest.

## PSYC 388 Writing Practicum (1)

Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.

## PSYC 389 Service Learning (1)

Staff. Students complete a service activity in the community in conjunction with the content of the corequisite course.
PSYC 456, 457 Internship in Psychology (3)
Staff. Prerequisites: psychology major, junior or senior standing, GPA of 3.00 or higher, completed application. Students will complete 90 hours of service in a community setting in which they will use the knowledge of psychology to complete a project or paper of benefit to the community site.

PSYC 491, 492 Independent Studies (1-3, 1-3)
Staff.
PSYC H499-H500 Honors Thesis (3, 4)
Staff. For senior honors candidates. Intensive reading and research in selected fields of psychology.

## ADVANCED UNDERGRADUATE AND GRADUATE COURSES

## PSYC 611 Intermediate Statistics and Experimental

## Design (3)

Ms. Ruscher. Prerequisite: PSYC 212 and approval of instructor. An intermediate-level course in statistics designed to meet the needs of beginning graduate students and those undergraduate students who plan to undertake graduate work in psychology. Emphasis is placed upon design of experiments and interpretation of research results.

PSYC 613 Multivariate Analysis (3)
Staff. Prerequisite: approval of instructor. Design and analysis of experiments in the behavioral sciences involving multiple predictor and criterion variables. Extensive use is made of Tulane computer facilities but no programming knowledge is required.
PSYC 618 History and Systems of Psychology (3)
Mr. Christenson. Prerequisite: approval of instructor. History of psychology, survey of modern viewpoints in psychology, including, associationism, structuralism, functionalism, behaviorism, and humanistic and cognitive psychology.
PSYC 640 Aggression (3)
Mr. O’Neal. Prerequisites: PSYC 343, 367 or 368. A consideration of determinants of aggressive behavior and of methods for its control.

## PSYC 641 Seminar in Group Dynamics (3)

Mr. O'Neal. Prerequisite: PSYC 343. A seminar on the psychology of small groups, including such topics as socialization, conformity, cohesion, decision-making, problem-solving, productivity, leadership, power, conflict, inter-group relationships, and individual change through group participation. Each student will carry out a project in a group in which they are a participant or observer. Discussion, exercises and student presentations.
PSYC 642 Social Stereotyping and Prejudice (3)
Mr. O'Neal, Ms. Ruscher. Prerequisite: PSYC 212 and 343 or graduate standing. Processes in social categorization; and how stereotypes of gender, ethnicity, race, disability, illness, and sexual orientation influence impression formation, affect, and interpersonal interaction. Cognitive factors in the development, maintenance, and reduction of prejudice.

## PSYC 650 Reading Assessment and Intervention (3)

Ms. Overstreet. Prerequisites: PSYC 212, junior standing, and completion of the college writing requirement. This course provides didactic instructor as well as practical experience in the assessment and remediation of reading problems in school aged children. Students are required to complete 50-60 hours of reading intervention over the course of the semester.

PSYC 651 Biological Psychology (3)
Mr. Colombo. Prerequisite: PSYC 367 or approval of instructor. An intensive survey of biological psychology with an emphasis on neuroanatomy and research methods used to study mechanisms of learning and memory, mental disorders, emotion, stress, and other psychological phenomena.
PSYC 652 Biological Psychology Laboratory (1)
Mr. Colombo. Corequisite: PSYC 651. Prerequisite: PSYC 212. A laboratory course providing training in behavioral and neurobiological methods, experimental design, data collection and analysis and preparation of research reports. Fulfills college laboratory and writing requirements.
PSYC 653 Psychopharmacology (3)
Mr. Dohanich. Prerequisite: PSYC 367 or approval of instructor. An introduction to the effects of psychoactive agents on the nervous system. Lectures emphasize the mechanisms by which drugs regulate neurotransmitter systems to alter psychological and physical states.
PSYC 654 Psychopharmacology Laboratory (1)
Mr. Dohanich. Corequisite: PSYC 653. Prerequisite: PSYC 212. Laboratories provide demonstration and hands-on experience in research methods used in contemporary psychopharmacology including receptor measurement, models of drug abuse and psychopathology, data analysis, and manuscript preparation. Satisfies departmental laboratory requirements. Satisfies college laboratory and writing requirements.

## PSYC 655 Behavioral Neuroendocrinology (3)

Mr. Dohanich. Prerequisite: PSYC 367 or approval of instructor. An introduction to the roles of steroid and peptide hormones in physiology and behavior. Lectures focus on the hormonal mechanisms that control reproductive and regulatory functions in human and infrahuman species.
PSYC 656 Behavioral Neuroendocrinology Laboratory (1)
Mr. Dohanich. Corequisite: PSYC 655. Prerequisite: PSYC 212. Laboratories provide demonstration and hands-on experience in research methods used in contemporary neuroendocrinology including hormonal manipulation, behavioral measurement, data analysis, and manuscript preparation. Satisfies departmental laboratory requirement. Satisfies college laboratory and writing requirements.
PSYC 657 Cognitive Neuroscience (3)
Mr. Dien. Prerequisites: PSYC 212 and PSYC 367. An introduction to the use of neuroimaging methods such as electroencephalography and functional magnetic resonance imaging to answer questions about cognitive psychology and the use of cognitive psychology to answer questions about neuroscience. Topics will cover such issues as perception, attention, memory, language, motor systems, and emotions.

PSYC 658 Cognitive Neuroscience Laboratory (1)
Mr. Dien. Corequisite: PSYC 657. Prerequisites: PSYC 212 and PSYC 367 or approval of instructor. A laboratory course in which students will be introduced to the methods of cognitive neuroscience, including neural networks, event-related potentials, and functional magnetic resonance imaging. Students will design and carry out simple cognitive experiments to examine issues of hemispheric laterality.

PSYC 661, 662 Advanced Studies in Psychology (1 or 3, 1 or 3)
Staff. By arrangement with department.

## PSYC 665 Advanced Studies in Cognition, Human Learning, and Memory (3)

Staff. Considered are advanced theoretical and empirical works and new developments in cognition, human verbal and motor learning, and retention processes. Research is pursued in depth to optimize student comprehension of such issues as encoding, transformation, storage, retention, retrieval, utilization, and interpretation of stimulus information by human subjects.
PSYC 666 Advanced Studies in Developmental Psychology (3)
Mr. Cunningham, Mr. Lockman, Ms. Moely. Prerequisites: PSYC 212 and 410, or instructor’s approval plus either 321,328 or 339 . Students are provided with the opportunity to engage in directed research and specialized study in developmental psychology. Recent advances in such areas as memory, social cognition, sex-roles, cognitive development, social development, and motivation are explored.

## PSYC 667 Advanced Studies in Experimental Design, Computer Applications, and Data Analysis (3)

Ms. Ruscher. Prerequisite: approval of instructor. Selected topics relating to methodological or quantitative aspects of psychological research are examined. Examples of topics include nonparametric statistics, computer applications in mathematical models of behavior, problems in design of multivariate analyses, Monte Carlo solutions to quantitative problems, and least-squares approaches.
PSYC 668 Advanced Studies in Personality and Social Psychology (3)
Mr. O’Neal, Ms. Ruscher, Mr. Wilson. Prerequisite: approval of instructor. Students examine one or a few specific areas in personality and social psychology. Topics such as attribution, impression, information, sex roles, and personality variables in social behavior are related to the dynamics of inter- and intrapersonal behavior.
PSYC 669 Advanced Studies in Psychobiology (3)
Mr. Christenson, Mr. Colombo, Mr. Dohanich. Prerequisite: approval of instructor. Advanced theoretical and empirical work in physiological mechanisms of behavior, neuroendocrinology, sensory processes, animal learning, or comparative animal behavior are explored.

PSYC 670 Topics in Psychology (3)
Staff. Various topics in psychology based on faculty and student interest.
PSYC 671 Personnel Selection (3)
Mr. Burke, Mr. Landis, Mr. Thoresen. Prerequisites: PSYC 371 and approval of instructor. Introduction to basic concepts and ideas required for graduate study in personnel psychology including selection, classification, recruitment, and measurement.

PSYC 673 Foundations of Measurement (3)
Mr. Landis. Prerequisite: PSYC 318 or approval of instructor. Introduction to psychometric theory, issues in measurement scaling, reliability, and validity.

## PSYC 674 Readings in Industrial and Organizational Psychology (1-3)

Mr. Burke, Mr. Thoresen. Prerequisite: approval of instructor. Student and faculty selected readings in industrial and organizational psychology to be completed for varying amount of credit.

PSYC 675 Organizational Psychology (3)
Mr. Brief. Prerequisites: PSYC 371 and approval of instructor. Application of principles of psychology to human functioning within organizations. Examples of topics to be included at an advanced level are motivation, job satisfaction, and leadership.

PSYC 676 Advanced Organizational Psychology (3)
Mr. Brief, Mr. Folger. Prerequisites: PSYC 675 and approval of instructor. Advanced study of psychological theories and principles applied to organizations including organizational theory, climate, and organizational structure.

PSYC 677 Research Techniques in Social and Organizational Psychology (3)
Mr. Burke, Mr. Landis, Mr. Thoresen. Prerequisites: PSYC 344 and approval of instructor. Lecture and projects in laboratory and field methodology currently employed in social and organizational psychology. For graduate students or advanced undergraduates. Satisfies laboratory requirement.
PSYC 678 Advanced Studies in Industrial and Organizational Psychology (1-3)
Mr. Burke, Mr. Landis, Mr. Thoresen. Prerequisite: approval of instructor. Advanced topics relating to industrial and organizational psychology such as utility analysis, stress, metaanalysis, and program evaluation.

## Religious Studies

Office: 1021 Audubon St.
Phone: (504) 865-5336
Fax: (504) 865-5338
Website: www.tulane.edu/~rtw
Program Administrator
Adeline Masquelier, Anthropology (Director)
Faculty Advisory Committee
Chris M.M. Brady, Jewish Studies
John D. Glenn, Jr., Philosophy
Demetrius K. Williams, Classical Studies
Gertrude Yeager, History
MAJOR
Religious Studies is a major designed to provide students with the methodology used to study religion as a fundamental human experience and to introduce students to the history of western and non-western religious traditions. The major in religious studies consists of ten courses including the five required core courses. The core courses include an introduction to the methodologies used in the study of religion, a basic course in the foundations of each of the three major religious traditions of the western world; (Graeco-Roman religion, Judaism, and Christianity) and a course in non-Western religion. The remaining five courses should be selected from the list of electives and must include one course at or above the 400 level.

## MINOR

A minor in Religious Studies consists of a minimum of five core courses.

## Core Courses

(all required for majors and minors)
Introductory Course
RLST 110/CLAS 110 Introduction to Religious Studies

## Western Religions

CLAS 320/HISA 318 Greek Religion
CLAS 322 Introduction to the New Testament
JWST 210/CLAS 210 Hebrew Bible - Old Testament

## Non-Western Religions <br> (one of the following)

## Anthropology

ANTH 335/635 Culture and Religion

## Art History

ARHS 370 Pre-Columbian Art
ARHS 651 Seminar on Aztec Arts
History
HISM 320 History of Islam

## Philosophy

PHIL 350 Buddhism

## Elective Courses

Note: Any course listed above in Non-Western may be taken as an elective.

## Art History

ARHS 320 Early Christian and Byzantine Art
ARHS 321 Medieval Art
ARHS 353 Survey of Russian Art

## Classical Studies

CLAS 220 The Development of Early Christianity
CLAS 304 Mythology
CLAS 324 The Historical Jesus
CLAS 325 Paul the Apostle
CLAS 329 Gnosticism and Early Christianity
CLAS 418/618 Seminar in Ancient Religion
(Note: Topics taught in rotation include History of Roman Religion, Mystery Cults of Greece and Rome, Magic and the Supernatural in the Ancient World, Problems in the Iconography of Greek and Roman Religion, Death and the Afterlife in the Ancient World. Course may be repeated for credit with a different topic.)
CLAS 430 The Literature of Early Christianity
GREK 415 The Undisputed Letters of Paul

## Colloquium

COLQ H302 God(s) and Science
COLQ H303 Science and Religion

## English

ENLS 448 Milton

## History

HISA 103 Medieval Europe
HISA 303 Early Medieval and Byzantine Civilization from Constantine to the Crusades
HISA 311 Rome and the Jews (167 B.C. - A.D. 135)
HISA 601 Later Roman Empire
HISA 604 High Middle Ages
HISA H609/CLAS H609 Seminar in Select Topics in Byzantine History
HISE 610 Renaissance and Reformation, 1450-1660
HISU H345 Salem Witchcraft
HISU 344 African-American Religious History
HISU 354/JWST 324 Early American Jewish History

## Jewish Studies

JWST 201 Introduction to Judaism
JWST 314 Hebrew Bible
JWST 315 Second Temple Judaisms
JWST 320 Modern Judaism
JWST 321 American Judaism
JWST 350 The Golden Age of Spanish Jewry I: Moslem Spain
JWST 352 The Golden Age of Spanish Jewry II: Christian Spain
JWST 353 Jewish Life and Thought in the High Middle Ages
JWST 354 Jewish Life and Thought from the Renaissance to the Age of Reason
JWST 411 Rabbinic Judaism
JWST 415 Women, Judaism, and Jewish Culture

## Music

MUSC 309 Music Before 1600
MUSC 333 Jewish Music

## Philosophy

PHIL 301 Philosophy of Religion
PHIL 302 Bible and Philosophy
PHIL 324 Medieval Philosophy
PHIL 336 Sacred Symbols

## Religious Studies

RLST 291, 292 Special Topics in Religious Studies
RLST 395, 396 Special Topics in Religious Studies
RLST 495, 496 Special Topics in Religious Studies
RLST H499, H500 Honors Thesis

## RLST 110 Introduction to Religious Studies (3)

Staff. This course gives an overview of the development of the western approach to the study of religion. It will be comparative and cover many aspects of world civilization, provide a window on the cultural dimensions of global politics, and supply a way of perceiving approaches to the study of religion under the rubrics of anthropology of religion, sociology of religion, history and phenomenology of religion, and philosophy of religion. Important theorists and schools of thought will also be examined. Same as CLAS 110.

## RLST 291, 292 Special Topics in Religious Studies (3, 3)

Staff. This course will cover special topics in Religious Studies offered by one of the cooperating departments in the RLST program. The course may be repeated for credit with a different topic.

## RLST 389 Service Learning (1)

Staff. Students complete a service activity in the community in conjunction with the content of the corequisite course.

## RLST 395, 396 Special Topics in Religious Studies (3, 3)

Staff. This course will cover special topics in Religious Studies offered by one of the cooperating departments in the RLST program. The course may be repeated for credit with a different topic.

## RLST 491, 492 Independent Study (3, 3)

Staff. Prerequisite: approval of program director. Open to students provided that the appropriate faculty director is available.

## RLST 495, 496 Special Topics in Religious Studies (3, 3)

Staff. This course will cover special topics in Religious Studies offered by one of the cooperating departments in the RLST program. The course may be repeated for credit with a different topic.

## RLST H499-H500 Honors Thesis (3, 4)

Staff. Admission by approval of the program director and the honors committee.

## ROTC

## Aerospace Studies

Military Science

Naval Science
See Allied Programs

## Russian Studies

Office: 119 F. Edward Hébert Hall
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## Program Administrators

Samuel C. Ramer, History (Director)
William C. Brumfield, Germanic and Slavic Languages (Associate Director)

## Faculty Associates

John Herschel Baron, Music
George M. Cummins, Germanic and Slavic Languages
Raymond C. Taras, Political Science
MAJOR
A major in Russian Studies consists of two years of Russian language (or equivalent by advanced placement), plus nine courses selected from the following list. Majors must have at least two courses in each of three disciplines, and must take at least two courses above the 300 level.
The Arts
MUSC 341 Russian Music
RUSS 353 Survey of Russian Art

## History

HISE 323 The Chernobyl Catastrophe: Energy and Environment in the Soviet Union
HISE 324 Russian History from the 9th to the Mid 19th Centuries
HISE 325 Russian History: The End of the Empire and the Soviet Period
HISE 327 Literature and Society in Russia, 1800-1917
HISE 328 Literature and Society in Russia, 1917-1991
HISE 624 History of Imperial Russia, 1801-1917
HISE 625 The Russian Revolution and the Soviet Regime

## Literature

RUSS 303 Masterpieces of Russian Literature I
RUSS 304 Masterpieces of Russian Literature II
RUSS 345 Tolstoy and Dostoevsky in English Translation
RUSS 370 Russian Poetry

## Political Science

POLC 436 Russian Politics
POLI 465 Russian Foreign Policy
RSST H491, H492 Independent Studies (3, 3)
Staff. Prerequisite: approval of program director. Open to students provided that the appropriate faculty director is available.

RSST H499-H500 Honors Thesis $(3,4)$
Staff. Admission by approval of the program director and the honors committee.

## Sociology

Office: 220 Newcomb Hall
Phone: (504) 865-5820
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Website: www.tulane.edu/~sociol/
Professors
Joel A. Devine, Ph.D., Indiana
Associate Professors
Carl L. Bankston III, Ph.D., Louisiana State
April A. Brayfield, Ph.D., Maryland
Edward V. Morse, Ph.D., Cornell

## Assistant Professors

Michele Adams, Ph.D., California, Riverside
Timothy Brezina, Ph.D., Emory
James R. Elliott, Ph.D., Wisconsin
Scott Frickel, Ph.D., Wisconsin
Elizabeth Fussell, Ph.D., Wisconsin
Kevin Gotham, Ph.D., Kansas
Mimi Schippers, Ph.D., Wisconsin
Jocelyn Viterna, Ph.D., Indiana

## Adjunct

Mary Ann Maguire, Ph.D., Stanford (Associate Dean, Newcomb College)

## Emeritus

Fredrick Koenig, Ph.D., Wisconsin
Sociology is the study of group life. It combines scientific and humanistic perspectives in the study of urban and rural life, family patterns and relationships, social change, inter-group relations, social class, environment, technology and communications, health care and illness, social movements, organizations, and pressing contemporary social issues. Sociology is a valuable liberal arts major for students planning careers in a wide variety of fields including social research, criminology, demography, social psychology, public administration, gerontology, education, rehabilitation, and market research. It provides a useful background for those planning to enter law, business, medicine, social work, public health, community planning, architecture, and politics.

## MAJOR

To major in sociology a student must complete a minimum of 27 credits (nine three-credit courses) taken from courses offered by the department. One 100-level course, 201, 303, 304, 322. Three 600-level courses. One additional course at the 100-299 or 501-699 level. Additional courses from other departments in the social sciences group are to be selected in consultation with the major advisor.

## MINOR

A minor in sociology consists of at least five three-credit courses ( 15 credits) per the following: One 100 level course, 201, 303, 322; one additional course at the 100-299 or 501-699 level. None of the courses taken in fulfillment of the sociology minor may be used to fulfill the requirements of other majors or minors.

## MINOR URBAN SOCIOLOGY

The Department of Sociology requires six three-credit courses (18 credits) to fulfill a minor in urban sociology. The six courses cited are the minimum number required; students may take more than six courses and use the additional courses as electives. One of the required courses taken in fulfillment of the urban sociology minor may be used simultaneously to fulfill major or other minor program requirements.

## I. Both of the following:

106 Urban Sociology
201 Foundations of Sociology

## II. One of the following courses:

109 Contemporary American Social Problems
130 Criminology
218 Wealth, Power, and Inequality

## III. One of the following courses:

303 Introduction to Research Design
304 Introduction to Research Analysis

## IV. One of the following courses:

619 Urban Organization
660 Urban Policy and Planning

## V. An additional sociology course from the $\mathbf{6 0 0}$ level*

* In consultation with the minor advisor, students may elect to substitute a single upper-level undergraduate course of urban interest from another LAS department in lieu of the second 600level course, for example: Economics 332 Urban Economics, or History 342 Urban America.


## SOCI 103 Sociology of the Family (3)

Staff. Consideration of the family as a social institution and a special form of small group. Examination of theoretical and empirical research focusing upon mate selection, marital interaction, and child socialization. Topics include contemporary demographic trends and cultural practices.

## SOCI 104 Gender and Society (3)

Staff. Examines the social construction of gender and the consequences of gender equality. Topics include socialization, intimate relations, paid and unpaid work, violence, and social change.
SOCI 106 Urban Sociology (3)
Staff. The social patterns, processes, and institutional structure of urban life.
SOCI 108 Deviant Behavior (3)
Staff. Examines forms of human behavior that have been defined as "deviant" by the larger society. An emphasis is placed on understanding the social construction of such definitions, especially their cross-cultural variations, as well as motivations and social implications for those whose behavior is judged as deviant.

## SOCI 109 Social Problems (3)

Staff. Examination of critical contemporary social problems and social policy options. Emphasis is placed on understanding the multidimensional sources of crisis, unrest, and instability as well as policy options and tradeoffs associated with ameliorative efforts. Topics vary by semester and instructor.

## SOCI 115 Introduction to Social Work (3)

Staff. Introduces students to the profession and practice of social work. Examines principles, functions, knowledge base, and history of social work. Topics include the change process, levels of practice, and social problems affecting clients and practitioners.

## SOCI 121 Sociology of Religion (3)

Staff. Introduces students to sociological study of religious phenomena, including religious beliefs, practices, and behaviors as conditioned by sociological factors. A key emphasis is the relationship between religious systems and other social institutions, e.g., politics, family, economy, and social stratification.

## SOCI 130 Criminology (3)

Staff. Emphasizes the public's perception of "the crime problem" and various sociological measures of amounts and trends of criminal behavior in society. Causal and noncausal theories of criminality, and the sociological implications of various selected offenses are explored.
SOCI 140 Sociology of Sport (3)
Staff. An analysis of the structure and functions of sports in contemporary American society. Topics include the relationship between sports, socialization, ideology, sports and totemism, the organization of sports, and the economics of sports.

## SOCI 146 Asian American Communities (3)

Staff. This course will provide a sociological introduction to America's rapidly growing Asian American populations and to the major issues facing these populations.

## SOCI 147 Global Social Change (3)

Staff. Examines global change and its implications for individuals and groups via exploration of issues of globalization of the economy, international development, urbanization, immigration, social movements, changing gender relations, etc. Emphasis will be placed on how such changes have come about and course focus will be international in scope with emphasis on Latin America, Asia, and/or Africa.

## SOCI 151 Work in American Society (3)

Staff. Examines the concepts of occupations, professions, and work organizations. It considers issues about employee selection, job involvement, alienation, satisfaction, performance, and compensation; industrial mental health, occupation safety, health and medicine; social conditions of work in bureaucratic organizations, work groups and union membership; supervision and human resource management; and the changing conditions of work resulting from technological change, social change, shifts in the occupational structure and the interface of work with other institutions such as the family.

## SOCI 160 Environmental Sociology (3)

Staff. This course examines political and economic aspects of global and local environmental problems. Topics include how societies and the environment interact, why some environmental risks have gained most attention, how support for environmental concerns can be measured, responses by environmental social movements, and visions of sustainable societies in the First and Third Worlds.

## SOCI 201 Foundations of Sociology (3)

Staff. Prerequisite: three credits of sociology at the 100 level or approval of instructor. To provide substantive exposure to basic sociological concepts, theories, methods, and tools.

## SOCI 205 Population and Society (3)

Staff. Prerequisite: SOCI 201 or approval of instructor. An examination of the dynamic relationship between population and society. The course focuses on the contemporary demography of developed and developing countries, with an emphasis on societal problems linked to population.

## SOCI 210 Special Topics in Sociology (3)

Staff. Prerequisite: SOCI 201 or approval of instructor. Special topic announced each semester.

## SOCI 218 Wealth, Power and Inequality (3)

Staff. Prerequisite: SOCI 201 or approval of instructor. Survey of theoretical and empirical literature on the distribution of wealth, power, and prestige within and across societies and historical periods. Emphasis is placed on the impact of social change on stratification systems.

## SOCI 245 Society through Cinema (3)

Staff. Prerequisite: SOCI 201 or approval of instructor. Examination of social organization, interaction, issues, and problems via the depiction of these issues and themes in selected commercial and documentary cinematic statements as illustrative material. Weekly class meetings are divided into lecture, screening, and discussion. Specific topical foci differ by semester.

## SOCI 249 Latin American Social Structure (3)

Staff. Prerequisite: SOCI 201 or approval of instructor. An historical examination of the human condition in Latin America emphasizing three primary spheres of social relations: political, economic, and ideological. Within each sphere the following themes are addressed: nationalinternational relations, urbanization, rural social structure, demographic trends, cultural change, and stability.

## SOCI 250 Organizational Behavior (3)

Staff. Prerequisite: SOCI 201 or approval of instructor. An introduction to the sociological study of organizations in the private and public sectors. Topics include models for studying organizations, organization processes (communication, decision-making, negotiation, leadership), the impact of structural culture, and environmental factors on organizational behavior.

## SOCI 270 Mind, Self, and Society (3)

Staff. Prerequisite: SOCI 201 or approval of instructor. Introduction to sociological perspectives on social psychology. Individuals, groups, society, and their interrelationships. Formation and measurement of identity, norms, attitudes, cognition, affect/emotion, perceptions, and group processes.

## SOCI 288 Writing Practicum (1)

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Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three credit departmental course. Fulfills the college intensive-writing requirement.

## SOCI 303 Introduction to Research Design (3)

Staff. Prerequisite: SOCI 201 or approval of instructor. Logic and techniques of social research, the relationships between theory and method, and alternative strategies in data collection.

SOCI 304 Introduction to Research Analysis (3)
Staff. Prerequisite: SOCI 303 or approval of instructor. Basic training in descriptive and inferential statistics with social science applications. Topics include measurement, tabular and graphic displays of data, central tendency, dispersion, probability, estimation, hypothesis testing, and linear regression.
SOCI 322 Social Theory (3)
Staff. Prerequisite: SOCI 201 or approval of instructor. An introduction to classical and contemporary sociological theory.

## SOCI 388 Writing Practicum (1)

Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.

## SOCI 389 Service Learning (1)

Staff. Prerequisite: approval of department. Students complete a service activity in the community in conjunction with the content of a three-credit corequisite course.
SOCI 456, 457 Internship Studies (1-3, 1-3)
Staff. Prerequisites: SOCI 304, approval of instructor and department. Open to especially qualified upper level students.

## SOCI 491, 492 Independent Studies (1-3, 1-3)

Staff. Prerequisites: SOCI 304, approval of instructor and department. Open to especially qualified upper level students with approval of instructor.

## SOCI H499-H500 Honors Thesis $(3,4)$

Staff. Prerequisites: SOCI 304, approval of instructor, and department. For senior honors candidates and other qualified senior majors. Intensive reading and research in a selected field of sociology.

## SOCI 601 Advanced Topics in Sociology (3)

Staff. Prerequisites: SOCI 304 and SOCI 322 or approval of instructor. Special topic announced each semester.

## SOCI 602 Political Sociology (3)

Staff. Prerequisites: SOCI 304 and SOCI 322 or approval of instructor. Analysis of both the distribution and institutional bases of power in society and the values which legitimate them. Class, bureaucracy, occupations, and political participation as these correlate with power.

## SOCI 605 Issues in Social Demography (3)

Staff. Prerequisites: SOCI 304 and SOCI 322 or approval of instructor. An examination of the social causes and consequences of population change. Analysis of current issues of demographic concern focusing on the social variables which differentially affect, and are affected by, the demographic processes of fertility, migrations, and mortality.
SOCI 606 Issues in the Sociology of Gender (3)
Staff. Prerequisites: SOCI 304 and SOCI 322 or approval of instructor. This course examines research in several areas of the sociology of gender. Topics include the acquisition of gender identity, face to face interactions, the changing roles of women and men, the intersection of work and family, and social movements. Students will conduct original research in one of these areas.

## SOCI 608 Symbolic Interactionism (3)

Staff. Prerequisites: SOCI 304 and SOCI 322 or approval of instructor. Explores the perspective within social psychology known as symbolic interactionism. Includes discussion of the work of pioneering scholars in the field, as well as recent theoretical and empirical studies. Topics to be covered include the self, socialization, identity, social interaction, the dramaturgical metaphor, human nature, social structure, and the definition of the situation.

## SOCI 609 Sociology of Medicine (3)

Staff. Prerequisites: SOCI 304 and SOCI 322 or approval of instructor. An examination of social and psychological factors affecting the prevalence and incidence of disease in human populations. Topics also considered include the organization of the health professions, comparative medical systems, social change and health care, and social factors affecting the utilization of health services.

## SOCI 611 Sociology of Work and Leisure (3)

Staff. Prerequisites: SOCI 304 and SOCI 322 or approval of instructor. An historical analysis of both the forms and the functions of work from ancient times to the present, with emphasis on Western cultures. Projections of the nature and purposes of work in the post-industrial era.

## SOCI 612 Race and Ethnic Relations in America (3)

Staff. Prerequisites: SOCI 304 and SOCI 322 or approval of instructor. Sociological examination of the dynamics of race and ethnic relations in the United States. This course provides an opportunity for students to read about, think, and discuss issues of racial and ethnic relations in society. Topics include the social construction of racial classification systems, the historical record of the interaction between the races in America, public policy, and possible mechanisms for dealing with some of the issues that many consider most problematic in our society.

## SOCI 613 Sociology of Science (3)

Staff. Prerequisites: SOCI 304 and SOCI 322 or approval of instructor. Examination of science as a social institution and the processes of research as sociological phenomena. Special attention to factors accounting for scientific productivity and a case analysis of sociology as an emerging scientific specialty.

## SOCI 614 Problems in the Sociology of Deviance (3)

Staff. Prerequisites: SOCI 304 and SOCI 322 or approval of instructor. Consideration in depth of one or more current problems of theory and research in the sociology of deviance: societal reaction theory, organizations for management of deviance, the design of prevention. Independent student research projects encouraged.

## SOCI 617 Problems in the Sociology of Inequality (3)

Staff. Prerequisites: SOCI 304 and SOCI 322 or approval of instructor. Consideration in depth of one or more current problems of theory and research in sociology in inequality: Poverty, Homelessness and the Cities; The American Underclass; Labor Markets.
SOCI 618 Wealth, Power and Inequality (3)
Staff. Prerequisites: SOCI 304 and SOCI 322 or approval of instructor. Theories of stratification, status systems in various societies, measurement and research of social classes in the United States.

## SOCI 619 Urban Organization (3)

Staff. Prerequisites: SOCI 304 and SOCI 322 or approval of instructor. A study of the causes and social effects of urban growth and decay in rich and poor countries. An examination of contemporary urban social classes and political coalitions, and how these are changing with shifting regional economies.

## SOCI 620 Issues in Sociology of the Family (3)

Staff. Prerequisites: SOCI 304 and SOCI 322 or approval of instructor. This course will consider the sociological, political, and cultural criticisms of the traditional definitions of family. The course focuses on family demography, gay/lesbian family issues, African-American families, and the "family values" wars as organizing topics.

## SOCI 625 Sociology of Childhood (3)

Staff. Prerequisites: SOCI 304 and SOCI 322 or approval of instructor. This course examines theories, methods, and empirical research in several areas of the sociology of childhood. Major themes are (1) how social structure constrains children's lives, (2) how children negotiate, share, and create culture, and (3) how children's experiences vary within and across societies. Topics include historical trends in thinking about children, cultural reproduction in early childhood, children's social worlds, contemporary attitudes toward children, and social policies for children. Students will design and carry out original research projects.

## SOCI 628 Comparative Latin American Demography (3)

Staff. Prerequisites: SOCI 304 and SOCI 322 or approval of instructor. An examination of historical trends and current conditions in population structure and population processes in Central and South America.

## SOCI 629 Urban Organization Laboratory (1)

Staff. Prerequisites: SOCI 304 and SOCI 322 or approval of instructor. Corequisite: SOCI 619. A community service and/or research internship with a community agency or program in the New Orleans, metropolitan area. Placement in the internship is coordinated though the course instructor and a representative of the community service agency or program.

## SOCI 630 Urban Policy and Planning (3)

Staff. Prerequisites: SOCI 304 and SOCI 322 or approval of instructor. Investigates how urban planning efforts and government polices and programs have affected U.S. cities and metropolitan areas over the last hundred years. Students are introduced to traditional, mainstream, and radical planning theories and policy critique. Examines urban policy formulation and implementation, conflicts and struggles, and the relationship between theory, research, and planning/policy.

## SOCI 633 Sociology of Education (3)

Staff. Prerequisites: SOCI 304 and SOCI 322 or approval of instructor. This course will examine the social functions of educational institutions, the role of education in the American social and economic structure, and major controversies and debates concerning educational policy as social policy.

## SOCI 640 Sociology of Criminal Justice (3)

Staff. Prerequisites: SOCI 304 and SOCI 322 or approval of instructor. Various aspects of the criminal justice system are examined with special attention devoted to organizational and decision-making features. The discretionary powers of criminal justice agencies are explored in light of their effect on the composition and size of this society's criminal population. Discussed are the legislature, police, courts, and corrections agencies.

## SOCI 644 Language Behavior and Communication (3)

Staff. Prerequisites: SOCI 304 and SOCI 322 or approval of instructor. An examination of the intersection of psychosocial processes and the machinery of grammar and lexicon. Examination of the areas of aphasia, mental disorders, language acquisition, and cognition with an emphasis on cross-cultural methods and experimental design.

## SOCI 656 Social Movements and Collective Behavior (3)

Staff. Prerequisites: SOCI 304 and SOCI 322 or approval of instructor. An advanced theoretical and empirical analysis of the determinants of organized non-institutionalized forms of collective action. Topics include the interplay of structural conditions and voluntaristic actions, the logic of collective action, culture, and ideology as they shape social movement outcomes. The specific types or dimensions of collective action examined may vary from semester to semester.

## SOCI 660 Social Policy and Evaluation Research (3)

Staff. Prerequisites: SOCI 304 and SOCI 322 or approval of instructor. Course focuses on the applied methods required to determine whether an intervention (or policy) achieve intended ends. Relevant topics include: problem identification, needs assessment, values clarification, policy description, evaluative tools, ethical considerations, problems and pitfalls of applied evaluative research, and efficiency and cost-benefit analysis.

## SOCI 664 Sociology of Organizations (3)

Staff. Prerequisites: SOCI 304 and SOCI 322 or approval of instructor. Exploration and development of organizational structures, processes and consequences. Interdisciplinary focus drawing conceptual, theoretical, and methodological tools from sociology, management, economics, and applied fields such as law and public administration. The seminar will examine classic and current issues in the sociology of organizations and the influence of complex organizations on different contexts and institutions (e.g., economy, family, healthcare, politics).

SOCI 667 Organization Ethnography (3)
Staff. Prerequisites: SOCI 304 and SOCI 322 or approval of instructor. Ethnographic and qualitative study of organizations, methods thereof, and research literatures thereon. Topics include qualitative data collection methods, application of these methods to organizations, and the contributions of recent ethnographic work to the study and practice of organizations. Course will take the form of comparative assessment of ethnographic and qualitative research on organizations.

## SOCI 670 Sociology of Law (3)

Staff. Prerequisites: SOCI 304 and SOCI 322 or approval of instructor. An examination of the implications of law in the persistence and change of social systems, the relation of sociological theory and research to legal institutions, and law as an organization and profession.
SOCI 680 Society and Economy (3)
Staff. Prerequisites: SOCI 304 and SOCI 322 or approval of instructor. The overall relationships of the economy to other components of society and specific institutions: economy and government, economy and family, economy and gender. The social organization of the firm, the market, organizations and economic culture and how each affects the other.

## SOCI 688 Writing Practicum (1)

Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.

## SOCI 689 Field Work Methods in the Americas (3)

Staff. Prerequisites: SOCI 304 and SOCI 322 or approval of instructor. An examination of field methods, the kind of data such methods generate, and how to analyze such data. The class will follow field research from entry into a field site to writing up the research project.

## SOCI 690 Sociology of Development in Latin America (3)

Staff. Prerequisites: SOCI 249 or LAST 101, SOCI 304 and SOCI 322 or approval of instructor. An examination of the transitions from premodern to modern, and from modern to post-modern economies and societies in Latin America. An inquiry into the causes and social effects of rapid "modernizing" social changes such as increases in urban residence, schooling, factory work, and mass media exposure.

## SOCI 691 Social Theory and Latin America (3)

Staff. Prerequisites: SOCI 249 or LAST 101, SOCI 304 and SOCI 322 or approval of instructor. This course introduces students of Latin America to overviews of 19th- and 20th-century social theory, including conflict, rational/utilitarian, network, and cultural theory, and links these perspectives to analysis of Latin American societies, including research on peasants and urban workers, neighborhood associations, and the impact of clientelism on state bureaucracy.

## SOCI 692 Social Stratification and Mobility in Latin America (3)

Staff. Prerequisites: SOCI 249 or LAST 101, SOCI 304 and SOCI 322 or approval of instructor. An examination of the extent and social bases of wealth and power inequalities in Central and South America along lines of class, gender, race, ethnicity, and regional origin.

## SOCI 693 Social Movements in Latin America (3)

Staff. Prerequisites: SOCI 249 or LAST 101, SOCI 304 and SOCI 322 or approval of instructor. An examination of the factors shaping the emergence, development, and decline of social movements in Latin America. Issues addressed include why people join movements, what constraints there are on building of social movement organizations, and in what ways are leaders and ideologies crucial to movement development.

## SOCI 694 Political Sociology of Latin America (3)

Staff. Prerequisites: SOCI 249 or LAST 101, SOCI 304 and SOCI 322 or approval of instructor. This course examines theories of the bases and distribution of power in Latin America. Topics include the role of elites and domestic class coalitions in state formation and regime transitions,
the role of civil society -labor, popular associations, political parties-in democratization, and the role of culture, including religion, in political life.

## SOCI 695 Migration in the Americas (3)

Staff. Prerequisites: SOCI 304 and SOCI 322 or approval of instructor. From the colonization of the continent up to the present, countries in North and South America have been receiving communities for migrants from all over the world. Course focus on 20th century international migration flows to and within the Americas with three main themes: (1) theories of international migration, (2) immigrant adaptation, assimilation and incorporation, and (3) international migration policies.

## SOCI 696 Urban Latin America (3)

Staff. Prerequisites: SOCI 249 or LAST 101, SOCI 304 and SOCI 322 or approval of instructor. This course is a study of the causes and social effects of urban growth and decay in rich and poor countries in the Americas. Examines contemporary urban social classes and political coalitions, and how these are changing with shifting regional economies. The course discusses theories of urban societies and regional growth, and examines case studies and theories from Latin America.

## SOCI 698 Brazilian Society (3)

Staff. Prerequisites: SOCI 249 or LAST 101, SOCI 304 and SOCI 322 or approval of instructor. This course examines Brazilian society through texts, films and speakers. The topics include Brazil's history, politics, work and workers' movements, squatters, the Amazon conflict, religion, gender, and the mass media.

## SOCI 699 Special Topics in the Sociology of Latin

 America (3)Staff. Prerequisites: SOCI 249 or LAST 101, SOCI 304 and SOCI 322 or approval of instructor. Course topics vary. Courses will include: Latin American Immigration, Race and Ethnicity in the Americas, Caribbean Societies, and Drugs and Alcohol in the Americas.

## Spanish and Portuguese

Office: 304 Newcomb Hall
Phone: (504) 865-5518
Fax: (504) 862-8752
Website: www.tulane.edu/~spanport/
Professors
Christopher Soufas, Ph.D., Duke
Teresa S. Soufas, Ph.D., Duke (Dean, Faculty of the Liberal Arts and Sciences)
Henry Sullivan, Ph.D., Harvard
Associate Professors
Idelber Avelar, Ph.D., Duke
Christopher Dunn, Ph.D., BrownHarry Howard, Ph.D., Cornell
Maureen E. Shea, Ph.D., Arizona
Nicasio Urbina, Ph.D., Georgetown (Chair)
Assistant Professors
Niyi Afolabi, Ph.D., Wisconsin
Laura Bass, Ph. D. Princeton
Jean Dangler, Ph. D. Emory
Kathleen Davis, Ph.D., California, Berkeley
Robert Irwin, Ph.D., New York University
Marilyn G. Miller, Ph. D. U. of Oregon
Tatjana Pavlovic, Ph.D., Washington
Emeritus
Thomas Montgomery, Ph.D., Wisconsin
Entering freshmen who have had Spanish or Portuguese in high school are placed at the appropriate level by assessment of their high school records.
Language laboratory work is encouraged in 101, 102, and 112, 203 and in certain advanced courses. Spanish and Portuguese 101, 102, and 112 meet five hours a week; all other courses meet three hours per week unless otherwise stated in the course description. Successful completion of Spanish 203 or Portuguese 203 or placement above the 203 level in one of those languages fulfills the proficiency requirement for graduation.
Spanish 203 is the normal prerequisite to any course numbered 300, and a 300 -level course is required before entering 400 or 600 . Departmental placement can waive all prerequisites except that freshmen may not enter a course numbered 600. The well-prepared native speaker of Spanish begins in courses numbered 400; native speakers of Spanish should consult with the department about which courses would be most appropriate.

## SPANISH MAJOR

Students majoring in Spanish must complete 11 courses ( 33 credits) beyond the 200 level. A maximum of three courses taken at the 300 level may count towards the major. Of these 300 -level courses, 325 is required for Junior Year Abroad students. Native speakers may take 300-level courses only by approval. Spanish 326 does not count towards the major or minor.

All majors must take four 400-level courses and a minimum of four 600-level courses including the Senior Seminar 685, except for those participating in the Junior Year Abroad program, who are required to take at least three 600-level courses in the department. Senior majors in Spanish must enroll in courses above the 400 level. Majors who have taken a 400 -level course may not take a 300-level course for credit. Similarly, majors and minors who have completed a 600-level course may not take 300- or 400-level courses for credit. All students are expected to progress to courses at higher levels. At least three credits must be selected from each of the five following groups:

Medieval-Renaissance-Golden Age: 424, 443, 631, 633, 641, 643, 644, 681
18th, 19th, 20th centuries: $415,417,428,625,626,627,629,657,661,665,667,668,669,673$
Spanish American 20th Century: 410, 411, 412, 413, 416, 419, 614, 615, 617, 618, 619, 620, 621, 645, 646, 652, 654, 671, 672, 674, 676
Spanish American Colonial and 19th Century: 621, 622, 623, 645, 652, 654, 672, 674, 676
Language, Linguistics, and Literary Theory: 329 (former 426), 401, 402, 403, 425, 601, 604, 608, 610, 651, 656.

Students preparing for teaching careers must take 601. Majors are encouraged to elect work in related fields. Students interested in the junior year in Madrid are advised to begin planning during their freshman year, especially if they are considering a double major. Inquire in the department or in the Junior Year Abroad office.

## PORTUGUESE MAJOR

Students majoring in Portuguese must complete ten courses (30 credits) beyond the 200 level. All majors must take at least three 600-level courses except for Junior Year Abroad students, who are required to take two 600-level courses in the department.

## SPANISH MINOR

A minor in Spanish consists of 18 credits above the 200 level, at least one of which must be at the 600 level and two at the 400 level. The courses should be selected in consultation with the major advisor and according to the interest of the student, whether in language, literature and culture, or a combination. Minors who have taken a 400-level course may not take a 300 -level course for credit. Similarly, majors and minors who have completed a 600 -level course for credit may not take a 300- or 400 -level course for credit. All students are expected to progress to courses at higher levels. Spanish 326 and 601 do not count toward the minor.

## PORTUGUESE MINOR

A minor in Portuguese consists of 15 credits above the 200 level, at least one of which must be at the 600 level The courses should be selected in consultation with the major advisor and according to the interest of the student, whether in language, literature and culture, or a combination.

## 4+1 M.A. IN SPANISH OR PORTUGUESE

The aim of this new program is to permit undergraduates to obtain an M.A. in one year, by applying three graduate level courses ( 9 credits hours) towards the M.A. and taking a fifth year of studies. The $4+1$ M.A. asks the student to take four graduate courses in the fall semester of the 5th year, and three graduate courses in the spring semester of their 5th year, for a total of seven graduate courses (21 credit hours).

## SPANISH

## SPAN 101 Introductory Spanish I (4)

Staff. Prerequisite: departmental placement only. The overall goal of this course is developing proficiency in the 4 language skills (listening, reading, speaking, and writing) essential to communicative language learning. The course uses a task-based approach which provides the learner with opportunities to use the language interactively.

## SPAN 102 Introductory Spanish II (4)

Staff. Prerequisite: for students who have completed 101 at Tulane; other introductory students must enroll in 112. Continuation of SPAN 101. The overall goal of this course is developing proficiency in the four language skills (listening, reading, speaking, and writing) essential to communicative language learning. The course uses a task-based approach which provides the learner with opportunities to use the language interactively.

## SPAN 112 Intensive Introductory Spanish (4)

Prerequisite: departmental placement only. In the place of SPAN 101 and SPAN 102. The overall goal of this course is developing proficiency in the four language skills (listening, reading, speaking, and writing) essential to communicative language learning. The course uses a taskbased approach which provides the learner with opportunities to use the language interactively.
SPAN 203 Intermediate Spanish (4)
Prerequisite: departmental placement only. Continuation of SPAN 102 or 112. The overall goal of this course is developing proficiency in the four language skills (listening, reading, speaking, and writing) essential to communicative language learning. The course uses a task-based approach which provides the learner with opportunities to use the language interactively. The overall goal of this course is developing proficiency in the four language skills (listening, reading, speaking, and writing) essential to communicative language learning. The course uses a task-based approach which provides the learner with opportunities to use the language interactively.

## SPAN 301 Introduction to Reading in Spanish (3)

Staff. Students are led through the reading task via reading strategies. Readings include a collection of articles taken from Hispanic newspapers and magazines and a variety of literary readings, such as poems, short stories, and excerpts from novels and plays.

SPAN 303 Readings in Spanish Peninsular Literature (3)
Ms. Davis, Mr. Soufas. Ms. Bass, Ms. Dangler Prerequisite: departmental placement or SPAN 203. Not open to native speakers. Readings in major Spanish authors.

## SPAN 313 Introduction to Latin American Culture (3)

Mr. Avelar, Mr. Irwin, Ms. Miller, Ms. Shea, Mr. Urbina. Prerequisite: SPAN 203 or departmental placement. Not open to native speakers. Introduction to the cultural diversity of Latin America through the study of contemporary literary, social, political, and popular culture trends as observed by selected literary figures, intellectuals, and artists.
SPAN 323 Readings in Spanish American Literature (3)
Mr. Avelar, Mr. Irwin, Ms. Miller, Ms. Shea, Mr. Urbina. Prerequisite: departmental placement or SPAN 203. Not open to native speakers. Representative examples of the modern novel, short story, essay, drama, and poetry.
SPAN 324 Introduction to Spanish Culture (3)
Ms. Davis, Mr. Soufas. Ms. Bass, Ms. Dangler . This course offers the intermediate student a brief introduction and survey of Spanish culture beginning during the earliest moments of the Spanish nation and continuing through the present, primarily though nonliterary means. This discussions will be supplemented by cultural readings and visual media to give an overview of Spanish culture.

SPAN 325 Advanced Composition and Grammar (3)
Staff. Prerequisite: SPAN 203. Not open to native speakers. Analysis and practice in the written language. With addition of the registration number Spanish 388 Writing Practicum, this course fulfills the college writing requirement for Spanish majors.
SPAN 326 Spanish Conversation (2)
Staff. Prerequisites: SPAN 203 and approval of instructor. Not open to native speakers. Practice in oral discussion based on Spanish topics of current interest. Two meetings per week. Does not count toward the major or minor.
SPAN 336 Oral Proficiency in Spanish (3)
Staff. Prerequisite: 203. Not open to native speakers. A practice course based on recorded and written materials on topics of current interest. Emphasis on building ready command of vocabulary and phrase structures, with an articulate oral style as the main goal. Attention where needed to problems of pronunciation and grammar.
SPAN 388 Writing Practicum (1)
Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Fulfills the college writing requirement for Spanish majors. Taken in tandem with SPAN 325.

SPAN 389 Service Learning (1)
Staff. Prerequisite: Departmental approval. Students complete a service activity in the community in conjunction with the content of a three-credit corequisite course.
SPAN 401 Introduction to Literature (3)
Staff. Prerequisite: SPAN 325. This course will provide an introduction to the principles of literary analysis through selected Hispanic authors. Special attention will be devoted to the specificity of each genre, to literary terminology, and to research methods.

## SPAN 402 Business and Legal Spanish (3)

Staff. Prerequisite: one 300 -level Spanish course or departmental approval. This course will study the Spanish language as it is used in business and law, providing students with the knowledge about the lexicon, usages, and practices in the Spanish-speaking world.
SPAN 403 Spanish for the Health Sciences (3)
Staff. This course will provide a well-rounded introduction of Spanish for health sciences. The course is designed for intermediate to advanced proficiency students. It is intended for premedical and public health majors and minors, as well as for graduate students at the medical and public health schools. Spanish majors, and double majors from other fields, are also encouraged to enroll.

SPAN 410 Constructions of Gender and Sexuality in Hispanic Culture (3)
Ms. Bass, Ms. Dangler, Mr. Irwin, Ms. Miller, Ms. Pavlovic, Ms. Shea. This course will focus on issues of gender and sexuality in Spain and/or Latin America with emphasis on one area or the other depending of the staffing in a given year. It will include consideration of literary and other texts, including popular music, art, and cinema.
SPAN 411 Modern Spanish American Literature (3)
Mr. Avelar, Mr. Irwin, Ms. Miller, Ms. Shea, Mr. Urbina. Prerequisite: departmental placement or 300-level Spanish literature. Not open to senior majors. Major authors of the 19th and 20th centuries, including Martí, Darío, Vallejo, Alfonso Reyes, Borges, Rulfo, Paz, and Carpentier.

## SPAN 412 Social Problems in Spanish American Literature (3)

Mr. Avelar, Mr. Irwin, Ms. Miller, Ms. Shea, Mr. Urbina. Not open to senior majors. The chief problems of Latin American society as reflected in poetry, short fiction, essay, and theatre. Representative works concerning the Mexican revolution; the social status of women, Indians and blacks; the life of urban and rural working classes; tyranny and political repression. Offered in the fall.

## SPAN 413 Topics in Spanish American Literature (3)

Mr. Avelar, Mr. Irwin, Ms. Miller, Ms. Shea, Mr. Urbina. Not open to senior majors. Readings in Spanish American stories, essays, and poems, focusing on a topic of historical and cultural importance. Some themes: women in Spanish American literature, regionalism and indigenismo, Afro-Latin American writing, testimonio. The precise topic varies from year to year.
SPAN 415 Spanish Literature of the 20th Century (3)
Ms. Davis, Ms. Pavlovic, Ms. Soufas. Prerequisite: departmental placement or 300-level Spanish literature. Not open to senior majors. Selections from the writings in all genres from the Generation of 1898 to the present.

## SPAN 416 Africans in Latin America (3)

Mr. Dunn, Ms. Miller This course will examine history, literature, and culture of Afro-Latin Americans from the colonial period up to the present. Throughout the course, students will read articles concerning slavery, race relations, Afro-Atlantic religions, music, and Black political movements in Latin America. These readings will provide socio-cultural context from the analysis of selected literary texts.

## SPAN 417 Introduction to Spanish Film (3)

Ms. Pavlovic. Prerequisite: basic comprehension of spoken Spanish (class conducted in English but some films may not be subtitled); to receive credit towards the Spanish major or minor all written work and selected readings must be completed in Spanish. The development of the cinema in Spain from its origins to the present. Contextual topics such as the effects of civil war and censorship will be discussed. Emphasis on a theoretical approach to the medium, with close analysis of individual films by directors such as Bunuel, Saura, Erice, and Almodovar, among others.

## SPAN 419 Introduction to Latin American Film (3)

Mr. Irwin, Ms. Lûpez. Prerequisite: basic comprehension of spoken Spanish (class conducted in English but some films may not be subtitled); to receive credit towards the Spanish major or minor all written work and selected readings must be completed in Spanish. The development of the cinema in Latin America from its arrival as an imported technology to the present. Films studied in relation to the sociopolitical environment and emphasis placed on close analysis as well as a contextual understanding of the material. Topics to be discussed include the struggle to create national film industries, the "art film" and New Cinema movements, and recent trends in countries such as Mexico and Argentina. Same as COMM 419.

SPAN 424 Origins and Continuities of Spanish Culture (3)
Ms. Dangler, Ms. Bass, Mr. Sullivan. This course is intended to offer at a more advanced level issues and problems of Spanish culture that were introduced in Spanish 324 to trace the origin of certain cultural aspects, phenomena, and problems specific to Spain yet also to account for their enduring influence and continuity in contemporary culture and society.
SPAN 425 Explorations and Writing Analysis (3)
Mr. Sullivan. Prerequisite: departmental placement or skill course at the 300 level. Not open to senior majors. Attention on forms of the written language and discussion in Spanish of student prepared essays. With the addition of the registration number Spanish 488 Writing Practicum, this course fulfills the college writing requirement for Spanish majors.
SPAN 426 Spanish Phonetics and Phonology (3)
Mr. Howard. Prerequisite: SPAN 203. A detailed investigation of the speech sounds of Spanish, their organization, and their proper articulation. Practice both in class and with recorded material.

SPAN 427 Iberoamerican Dialectology (3)
Mr. Howard. Survey of the varieties of Spanish spoken in Spain, Latin America, and the United States. We will look at variation in pronunciation and grammatical usage, such as the tu/usted/vos, as well as variation by age, gender, and social class.

SPAN 428 Literature of the 18th and 19th Centuries (3)
Ms. Davis. Prerequisite: departmental placement or 300-level Spanish literature. Not open to senior majors. An introductory survey of the principal literary movements of the 18th and 19th centuries. Only the outstanding works and authors of the various literary genres are discussed.
SPAN 435 Topics in Spanish Literature (3)
Staff. Not open to senior majors. A topics course on the literature and culture of Spain. Possible themes include science and literature, construction of gender and sexuality, revolution and repression, honor and violence, popular culture, satire, and metanarrative.

## SPAN 443 Literature of the Golden Age (3)

Ms. Bass, Ms. Soufas, Mr. Sullivan. Prerequisite: departmental placement or 300-level Spanish literature. Not open to senior majors. Readings and discussions of selected dramatic, poetic, and prose works of the Siglo de Oro by Cervantes, Lope de Vega, Tirso de Molina, Calderûn, Quevedo and Gûngora.

## SPAN 488 Writing Practicum(1)

Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Fulfills the college writing requirement for Spanish majors. Taken in tandem with SPAN 425.
SPAN H491, H492 Independent Studies (1-3)
Staff. Prerequisites: completion of proficiency requirement and departmental approval.
SPAN H499-H500 Honors Thesis $(3,4)$
Staff. Requires approval of department and Honors Committee.
SPAN 600 Independent Studies (1-3)
Staff. Prerequisites: completion of proficiency requirement and departmental approval.
SPAN 601 Methods of Teaching Spanish and Portuguese (3)
Mr. Howard, Mr. Urbina. Prerequisite: junior standing. A general survey of applied linguistics, teaching and testing methodology, and language laboratory use.

## SPAN 604 Advanced Spanish (3)

Staff. Prerequisite: a 400-level grammar course or equivalent. Consideration of finer points of grammar, vocabulary, and style. Practice in writing and speaking. With the addition of the registration number Spanish 688 Writing Practicum, this course fulfills the college writing requirement for Spanish majors.

## SPAN 606 Bilingualism in the Hispanic World (3)

Mr. Howard. This course is to teach students about the sociology of language from specific cases of language content and bilingualism in the Spanish-speaking world. The student will learn about Spanish in many varied social settings, as well as about first and second language acquisition; language maintenance, shift, and death; code switching; speech production and processing; and bilingual education and language policy.

## SPAN 608 Special Topics in Applied Linguistics (3)

Staff. The purpose of this course is to assist future teachers interested in second language learning and teaching, both in terms of theoretical issues and practical implications. Subject varies every semester.
SPAN 610 Literary Theory (3)
Mr. Avelar, Ms. Bass, Ms. Dangler, Ms. Miller, Mr. Soufas, Ms. Soufas, Mr. Sullivan, Mr. Urbina. An introduction to modern theories of literary analysis. Readings will consist of primary texts in the schools of thought to be studied, which may include formalism, stylistics, semiotics, reader-oriented approaches, structuralism, deconstruction, feminism, poststructuralism, queer theory, and postcolonial studies.

## SPAN 614 The Literature of Central America (3)

Ms. Shea, Mr. Urbina. Representative literary figures of the six Central American countries, including Darío, Asturias, Cardenal, Alegrìa, and Cuadra.
SPAN 615 The Literature of the Spanish Caribbean (3)
Ms. Miller, Ms. Shea. With emphasis on the 19th and 20th centuries, the course traces the literary development of the Spanish Antilles (Cuba, Dominican Republic, Puerto Rico) through the works of Heredia, Hostos, Villaverde, Martİ, Avellaneda, Palés Matos, Guillén, Bosch, Marqués, Carpentier, Lezama Lima, Cabrera Infante, Sarduy, L. R. S•nchez, and Ferré, among others.

SPAN 617 Modernism in Spanish American Literature (3)
Mr. Irwin, Mr. Urbina. Study of the modernista movement through the works of Martí, Gutiérrez N•jera, Casal, Silva, Darío, Rodu, Agustini and others.
SPAN 618 Contemporary Spanish American Short
Story (3)
Mr. Avelar, Ms. Shea, Mr. Urbina. A study of the contemporary short story of Spanish America with emphasis on major authors such as Borges, Cort•zar, Onetti, Rulfo, Carpentier, García $\mathrm{M} \cdot \mathrm{rquez}$, Silvina Ocampo and others.

## SPAN 619 Avant-Garde Movements in Latin America (3)

Mr. Avelar, Mr. Irwin, Ms. Luiselli, Ms. Shea, Mr. Urbina. This course will survey the avantgarde movements in Spanish America and Brazil, focusing on the period from 1916 to 1935. Some of the movements to be examined include Huidobro's creacionismo, ultraismo, Brazilian modernismo and verdeamarelismo, Mexican estridentismo and the "Contempor-neos" group and the impact in Latin America of surrealism and other European avant-garde movements. Readings in both Spanish and Portuguese, and the class will be taught in both languages, but fluency in both languages will not be expected. Same as PORT 619.

## SPAN 620 Trends in the Recent Spanish American

Novel (3)
Mr. Avelar, Ms. Miller, Ms. Shea, Mr. Urbina. A study of the major achievements and experiments in the contemporary Spanish American novel.
SPAN 621 The Essay in Spanish America (3)
Mr. Avelar, Mr. Irwin, Ms. Miller Ms. Shea, Mr. Urbina. A panoramic view of the essay in Spanish America. The leading authors (Bello, Sarmiento, Hostos, Martí, Rodû, Mari•tegui, Borges, Castellanos, Ferré, Paz and others) are studied with emphasis on their contributions to the genre.

## SPAN 622 Colonial Latin American Literature I (3)

Ms. Bass, Ms. Miller. Examination of literary, historical and legal texts written in colonial Latin America from 1492, Columbus's arrival to the New World, to 1650, the firm establishment of Spanish and Portuguese settlements throughout the Caribbean, Mesoamerica, and South America.

## SPAN 623 Colonial Latin American Literature II (3)

Ms. Bass, Ms. Miller. Examination of literary, historical and legal texts from 1650, the firm establishment of Spanish and Portuguese settlements throughout Latin America, to 1810, the beginning of the revolutionary movements towards independence from Spain.

SPAN 625 La Ilustraciûn: Spanish Literature of the 18th Century (3)
Ms. Davis, Mr. Sullivan. This course will examine Spanish literature of the 18th century. There will be special emphasis on the attempts of the ilustrados to direct and regulate cultural production and the popular resistance to such attempts.
SPAN 626 Spanish Novel of the 19th Century (3)
Ms. Davis, Mr. Soufas. The development of the novel in the 19th century, its different forms and literary trends: romanticism, realism, naturalism. Special attention is paid to Fern•n Caballero, Alarcûn, Valera, Palacio Valdés, Pereda, Galdus, Pardo Bazn, Alas, Blasco Ibez.

## SPAN 627 Spanish Romanticism (3)

Ms. Davis, Mr. Soufas, Mr. Sullivan. This course will examine Spanish romanticism in the context of European trends. Special attention will be given to the economic and political upheavals of the early 19th century and the connection of these to the privileging of the individual subject.

## SPAN 629 Spanish Literature - Fin de SiËcle (3)

Ms. Davis, Mr. Soufas. This course will examine a number of cultural movements of the latter part of the 19th century: post-romantic, and anti-romantic poetry, the commercialization of theatre, new forms of bourgeois entertainment, and renaissance movements in regional cultures especially Catalan and Galician.

## SPAN 631 The Spanish Renaissance (3)

Ms. Bass, Ms. Soufas, Mr. Sullivan. Study of works by Fernando de Rojas, Juan del Encina, Torres Naharro, Gil Vicente, Valdés, Garcilaso, Lope de Rueda, Santa Teresa, and Luis de Leûn.

SPAN 633 Spanish Prose of the Golden Age (3)
Ms. Bass, Ms. Soufas, Mr. Sullivan. Lectures and discussions of Lazarillo de Tormes, Cervantes’s Novelas ejemplares, selections from Guzm•n de Alfarache by Mateo Alem•n, El Buscûn and Los Sueoos of Quevedo, and the novels of MarÌa de Zayas as well as the writings of Santa Teresa and Graci•n.

## SPAN 641 Don Quijote (3)

Ms. Bass, Ms. Soufas, Mr. Sullivan. Discussions of Don Quijote in its entirety in the context of the intellectual and cultural tendencies of the Siglo de Oro and modern critical approaches.

SPAN 643 Drama of the Golden Age (3)
Ms. Bass, Ms. Soufas, Mr. Sullivan. Discussions of the plays of Lope de Vega, Calderûn de la Barca, Tirso de Molina, Ruiz de Alarcun and other dramatists in the context of modern critical studies.

## SPAN 644 Poetry of the Golden Age (3)

Ms. Bass, Ms. Soufas, Mr. Sullivan. Discussions of the pivotal movements represented by the poetry of Bosc•n, Garcilaso, Luis de Leûn, Santa Teresa, San Juan de la Cruz, Lope de Vega, Gungora, and Quevedo.

SPAN 645 Spanish American Theatre (3)
Staff. Main tendencies of the contemporary Spanish American theatre with emphasis upon such writers as Usigli, Marqués, Solûrzano, Buenaventura, Arrufat, Pioera, Garro, and Chocrun.
SPAN 646 Major Contemporary Spanish American Poets (3)
Mr. Avelar, Ms. Miller, Mr. Urbina. The poetry in Latin America after modernismo. Special attention in each semester the course is offered is given to the work of four or five poets selected from among Vallejo, Huidobro, Agustini, Storni, Borges, Neruda, Parra, Paz, Guillén, Mistral, Cardenal and Lezama Lima.

## SPAN 651 History of the Spanish Language (3)

Ms. Dangler, Mr. Howard. Evolution of Castilian from pre-Roman times through the Middle Ages with consideration of internal change and outside influences.
SPAN 652 Mexican Literature (3)
Mr. Irwin, Ms. Shea. Study of the various tendencies of Mexican literature from the colonial period to the present. Special attention is given to representative authors such as Balbuena, Sor Juana, Fern•ndez de Lizardi, Gutiérrez N•jera, Azuela, Rulfo, Fuentes, Paz, Garro and others.

## SPAN 653 Literature of the Andean Countries (3)

Ms. Shea. Representative works from Peru, Bolivia, Ecuador, Colombia and Venezuela, with special emphasis on the 20th century. Study of such authors as the Inca Garcilaso, Guam•n Poma, Isaacs, Matto de Turner, Gonz•lez Prada, Mari•tegui, Arguedas, Vallejo, Gallegos, Vargas Llosa, García Marquez, Teresa de la Parra.

SPAN 654 Literature of the Southern Cone (3)
Mr. Avelar, Mr. Urbina. Survey of the literature of Argentina, Uruguay, Paraguay, and Chile from romanticism to the present. Study of such authors as Sarmiento, José Hern•ndez, Blest Gana, Gsiraldes, Quiroga, Huidobro, Mistral, Neruda, Borges, Bombal, Felisberto Hern•ndez, Silvina Ocampo, Roa Bastos, Donoso, Parra, Eltit.

SPAN 657 Spanish Poetry and Poetics, 1900-1939 (3)
Mr. Soufas. Examines the evolution of early 20th-century Spanish poetry, then-current theories of poetry, and accompanying attitudes in literary criticism, especially canon formation.
SPAN 661 Spanish Novel, Theory, and Criticism, 1900-1939 (3)
Mr. Soufas. Examines the evolution of the novel in the early part of the 20th century, with attention given to its relationship to philosophical and literary critical writing.
SPAN 665 Modernism and Spain (3)
Mr. Soufas. Examines Spanish participation in Modernism, the international literary movement of the early 20th century, with emphasis of Spanish relationships to Modernism in Europe.
SPAN 667 The Spanish Novel from Post-War to Post-Franco (3)
Ms. Pavlovic. This course will study developments in the novel in Spain from the 1940's to the present. Special attention will be given to the national context during this time, including the experience of dictatorship, transition, and democracy, as well as to the way in which the Spanish novel has interfaced with trends in Europe and the Americas; theoretical selections from formalism to post-structuralism will also be discussed.
SPAN 668 Spectacle and Popular Culture in Spain Since 1939 (3)
Ms. Pavlovic. This course will examine the significance of diverse forms of spectacle and popular culture, principally theatre and film but discussion of phenomena such as the novela rosa, comic books, or the bolero may also be included, within the changing context of Spain since the Civil War. The role of these media in the formation of a national subject will be foregrounded, as will related theoretical issues such as high culture/low culture and modernism/postmodernism.
SPAN 669 Spanish Poetry and Poetics Since 1939 (3)
Mr. Soufas. This course will examine Spanish poetry published from the Civil War to the present. While working to situate Spanish poetry within a larger European and American context, the course will also consider and critique the attempts by critics and creative writers to theorize a poetical practice and construct a literary history and canon.

## SPAN 671 Contemporary Fiction in Spanish America and Brazil (3)

Mr. Avelar. A comparison of the contemporary fiction of Spanish America and Brazil. Topics will vary, but may include: the short story; race, gender and nationalism; the regionalist novel; experimental fiction; fiction and popular culture. Among the selected authors are Julio Cort•zar, Guimares Rosa, Fonseca, Borges, Clarice Lispector, Rulfo, Donoso, Icaza, Ramos, Rivera. Reading competence in Spanish and Portuguese to be established by previous course work or judgment of instructor. Same as PORT 671.

## SPAN 672 19th-Century Spanish American Literature (3)

Mr. Irwin, Ms. Shea. A study of the literature of the emerging nations in Spanish America, with special attention to new genres such as the anti-slavery novel, gauchesque poetry, and the indigenist novel. Authors include Bolívar, Bello, Gûmez de Avellaneda, Manzano, Sarmiento, Hern•ndez, Isaacs, Galv•n, and Matto de Turner.

## SPAN 673 Women Writers in Spain (3)

Ms. Bass, Ms. Dangler, Ms. Davis, Ms. Pavlovic, Ms. Soufas. This course covers literature by women authors from the Middle Ages through the 20th century. Examination of the poetic, prose, dramatic, and cinematic works by women in Spain from a theoretical perspective that considers how the writers studied, communicate their experiences as women and authors in various historical, political, social, and artistic contexts.

## SPAN 674 Women Writers of Latin America (3)

Ms. Shea. A literary analysis of prose, poetry, and theatre by Latin American women tracing the development of intellectual thought in various Latin American societies. Cinematic works included. Special attention to the evolution of gender roles in conjunction with the development of a race, class, and ethnic consciousness as reflected in the literature of women. Authors include: Sor Juana, Gûmez de Avellaneda, Matto de Turner, Storni, Agustini, Parra, Castellanos, Ferré, Allende, Eltit, Poniatowska.

## SPAN 676 Border Studies (3)

Mr. Irwin. Explores contemporary border theory from an historical perspective in the context of the Americas. Examines postmodern/postcolonial notions of racial and cultural difference and otherness as they play out in 19th-century literature. Looks at border culture along the USMexican border as well as in other Latin American contexts.

SPAN 681 Medieval Spanish Literature (3)
Ms. Dangler. Spanish literature from the beginnings through Jorge Manrique. Offered every spring.

## SPAN 685 Senior Seminar on Major Authors (3)

Staff. This course is a seminar on major authors of the Hispanic literary tradition. Each seminar will include two Spanish and/or Spanish-American authors, focusing on cases where a rationale can be made for the comparison.
SPAN 688 Writing Practicum (1)
Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Fulfills the college intensive-writing requirement. Taken in tandem with a 600 -level Spanish course.

SPAN 691, 692 Special Topics $(3,3)$
Staff.

## COURSES TAUGHT IN ENGLISH

Note: courses taught in English do not count toward the Spanish major or minor unless reading and writing are done in Spanish. Consult with the department about which courses are appropriate.

## SPAN 307 Spanish American Prose in English Translation (3)

Ms. Shea. A survey of Spanish American literary writings of special cultural and historical interest, for students not prepared to read the Spanish original. Does not count toward the Spanish major or minor.

## SPAN 345 Don Quijote in Translation (3)

Ms. Bass, Ms. Soufas, Mr. Sullivan. Conducted in English with readings in translation. Not open to majors or native speakers. A study of Cervantes' masterpiece'Don Quijote and the two outstanding picaresque novels, the anonymous Lazarillo de Tormes and Francisco de Quevedo’s Buscûn. The works are studied within the context of the period, with some emphasis given to their importance in the development of the modern European novel. Does not count toward the Spanish major or minor.

## SPAN 483 Hispanic Literature Topics in English Translation (3)

Mr. Avelar A study of Spanish and/or Latin American literary works in translation within a specific interdisciplinary topics format based on a central theme or problem. To receive credit toward the Spanish major or minor, all written work and selected weekly readings must be completed in Spanish.

## PORTUGUESE

## PORT 112 Intensive Portuguese (4)

Staff. Prerequisite: Approval of instructor required for students with no prior experience with the Spanish language. An intensive one-semester introduction to Portuguese with an emphasis on listening and speaking skills designed to quickly prepare students for more advanced study of language, literature, and culture. Students may not earn credit for PORT 112 and PORT 200.

## PORT 200 Portuguese for Spanish Speakers (4)

Staff. Language course that uses students’ previous knowledge of Spanish to achieve quick command of Portuguese.
PORT 203 Elements of Brazilian Portuguese III (4)
Staff. Review of fundamental skills taught in preceding units. Brief introduction to major literary figures of Brazil seen in their historical, sociological, and aesthetic context. Practice in composition. Meets four hours a week.

PORT 313 Readings in Luso-Brazilian Literature (3)
Mr. Afolabi, Mr. Dunn. A combined survey course of Brazilian and Portuguese literatures, looking at issues such as realism, regionalism, and modernism; questions of cultural identities, relations between "high" and""low" culture, representations of race, gender, class, and sexuality.

## PORT 325 Composition and Conversation (3)

Mr. Afolabi, Mr. Dunn. Reinforcement of spoken Portuguese and review of grammatical structures. Short stories and plays serve as the basis for further development of speaking and writing. Emphasis in dealing with the texts is on their utility for skill practice rather than literary analysis.
PORT 414 Women of the Lusophone World (3)
Mr. Afolabi. Using a comparative thematic approach in the exploration of such issues as gender, memory, national identity, war (revolutionary and civil), the aftermath, and the problematic of representation, this course examines the commonality of preoccupations and anxieties in the literatures and cultures of the Portuguese speaking world from the viewpoint of subjectivity and desire.

## PORT 461 Brazilian Cinema (3)

Mr. Avelar, Ms. Lopez, Mr. Dunn. This survey of Brazilian cinema and film criticism will cover key phases in national film production including early experiments, the failed Vera Cruz enterprise, Cinema Novo, Cinema Marginal, Embrafilme productions, and recent films. Directors will include M•rio Peixoto, Humberto Mauro, Anselmo Duarte, Nelson Pereira dos Santos, Ruy Guerra, Glauber Rocha, Carlos Diegues, Walter Lima Junior, Luiz Carlos Barreto, Paulo César Saraceni, Joaquim Pedro de Andrade, Rogério Sganzerla, J`lio Bressane, Suzana Amaral, and Carla Camurati.
PORT H491, H492 Independent Studies (1-3)
Staff. Prerequisites: departmental approval and completion of proficiency requirement.
PORT H499, H500 Honors Thesis $(3,4)$
Staff. Requires approval of the department and the Honors Committee.

## PORT 613 Lusophone Africa: Literature and Society (3)

Mr. Afolabi, Mr. Dunn. This course focuses primarily on Angola and Mozambique, the largest of the five Lusophone African nations, which have experienced the longest and most destructive colonial and post-colonial wars on the entire continent. Historical texts will provide the background for the analysis of selected texts from Angola and Mozambique.

PORT 614 Major Authors of Brazil (3)
Mr. Afolabi, Mr. Avelar, Mr. Dunn. This course will focus on the literary production of several canonical authors of Brazil from the nineteenth and twentieth centuries. The prose fiction of no more than two or three authors will be covered in any given semester. Selected literary figures for in-depth study may include JosE de Alencar, Machado de Assis, Lima Barreto, Graciliano Ramos, Joo Guimares Rosa, Clarice Lispector, Joo Ubaldo Ribeiro, and Nélida Pióon.

PORT 616 Afro-Brazilians: Historical, Literary, and Cultural Perspectives (3)
Mr. Afolabi, Mr. Dunn. This course provides an introduction to the history of Brazilian race relations, the fiction and poetry of black writers from Brazil, and the study of recent AfroBrazilian political and cultural movements.

## PORT 619 Avant-Garde Movements in Latin America (3)

Mr. Avelar, Mr. Irwin, Ms. Luiselli, Ms. Shea, Mr. Urbina. This course will survey the avantgarde movements in Spanish America and Brazil, focusing on the period from 1916 to 1935. Some of the movements to be examined include Huidobro's creacionismo, ultraísmo, Brazilian modernismo and verdeamarelismo, Mexican estridentismo and the "Contempor-neos" group, and the impact in Latin America of surrealism and other European avant-garde movements. Readings in both Spanish and Portuguese, and the class will be taught in both languages, but fluency in both languages will not be expected. Same as SPAN 619.

## PORT 621 The Literature of Portugal (3)

Mr. Afolabi, Mr. Avelar. In-depth study of Portuguese literature from its beginning to the present. Identification of main themes and literary motifs and their evolution. Major authors: Ferno Lopes, Gil Vicente, Luis de Camıes, Antonio Vieira, Camilo Castelo Branco, Eça de Queirûs, Teixeira de Pascoais, Fernando Pessoa, Bernardo Santareno, José Saramago, Lidia Jorge.
PORT 622 The Literature of Brazil (3)
Mr. Afolabi, Mr. Avelar, Mr. Dunn. In-depth study of Brazilian literature from its beginning to the present. Authors: Manuel Antûnio de Almeida, José de Alencar, Gonçalves Dias, Castro Alves, Machado de Assis, Aluisio Azevedo, Graciliano Ramos, José Lins do Régo, Mario de Andrade, Oswald de Andrade, Manuel Bandeira, Joo Cabral de Melo Neto, Jorge Amado, Carlos Drummond de Andrade, Guimares Rosa, Clarice Lispector, Antúnio Callado, Lygia Fagundes Telles, Rubem Fonseca, Sérgio Sant'anna, Roberto Drummond, and others.

## PORT 629 Brazilian Cultural Studies (3)

Mr. Avelar, Mr. Dunn. An advanced survey of Brazilian social and cultural critics of the twentieth century including Silvio Romero, Euclides da Cunha, Gilberto Freyre, Sérgio Buarque de Hollanda, Guerrero Ramos, Roland Corbisier, Florestan Fernandes, Antúnio Candido, Roberto Schwarz, Ferreira Gullar, Silviano Santiago, Luiz Costa Lima, Flora S,ssekind, Renato Ortiz, Muniz Sodré, and Marilena Chauí. The course will foreground historic and contemporary debates in Brazil surrounding nationality and modernity while examining key interventions associated with modernismo, conretismo, Tropicalia, and the new social and cultural movements to emerge during and after the military dictatorship.

## PORT 671 Contemporary Fiction in Spanish America and Brazil (3)

Mr. Avelar. A comparison of the contemporary fiction of Spanish America and Brazil. Topics will vary but may include: the short story; race, gender, and nationalism; the regionalist novel; experimental fiction; fiction and popular culture. Among the selected authors are Julio Cortazar, Guimares Rosa, Fonseca, Borges, Clarice Lispector, Rulfo, Donoso, Icaza, Ramos, Rivera. Reading competence in Spanish and Portuguese to be established by previous course work or judgment of instructor. Same as SPAN 671.
PORT 691, 692 Special Topics $(3,3)$
Staff.

## Theatre and Dance

Office: Elleonora P. McWilliams Hall
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Fax: (504) 865-6737
Website: www.Tulane.edu/~theatre/
Professor
Hugh Lester, M.F.A., New Orleans (Director Innovative Learning Center)
Associate Professors
Ronald A. Gural, M.F.A., Yale
Barbara Hayley, M.F.A., New York University Tisch School of the Arts (Chair)
Alice Pascal Escher, M.F.A., Temple
Bruce D. Podewell, Ph.D., New York University
Martin L. Sachs, M.F.A., Florida State
Paul R. Schierhorn, M.F.A., Yale
Beverly Trask, M.F.A., Southern Mississippi
Assistant Professors
Lisa Jo Epstein, Ph.D., Texas
William Liotta, M.F.A., California Institute of the Arts
William Walters, M.F.A., Southern Methodist

## Bachelor of Arts in Theatre

An early decision to major in theatre is highly encouraged. Majors should finish the core curriculum as early as possible, as they are prerequisites for all other departmental courses. The Bachelors of Arts degree with a major in theatre consists of 40 credits that include: THEA 105, 201, 202, 334, 335, 399 taken twice, 471, 472, 473, DANC 203 plus one additional dance course as the 31 -credit core curriculum. Three courses ( 9 credits) from Performance Emphasis: THEA 301, 401, 109, 309, 490 or Design/Tech Emphasis: THEA 631, 633, 655, 670, 676. Students aiming toward graduate study in this discipline should take additional courses according to a planned sequence.
Courses both in theatre and in such disciplines as English, history, music, art, and dramatic literature courses in classics, French Italian, German, Russian, and English are expressly recommended for this purpose.

MINOR
The following courses are required for a minor in theatre: THEA 105, 201, 202, 334, 335, 399 (taken twice), and two from THEA 471, 472, 473 for a total of 23 credits.

## Bachelor of Fine Arts in Theatre

The Bachelor of Fine Arts degree with major in theatre is designed for students who want professional training in theatre performance or production. The student concentrates in either the acting or design/production area.
For admission to either program, students must apply no earlier than the end of the freshman year and no later than the first semester of their junior year.

## PERFORMANCE EMPHASIS

Entry into the B.F.A. Performance Track is by audition only. The major consists of the same core curriculum as the B.A. track ( 31 credits). In addition, the student takes 27 credits of performance courses THEA 321, 301, 401, 601, 602, 109, 209, 309, and 699. The total is 58 credits.

## DESIGN TECH/PRODUCTION EMPHASIS

Entry into the B.F.A. Design/Production Track is by application to the Head of the Design Program. The major consists of the same core curriculum as the B.A. track (31 credits). In addition, the student takes 27 credits of design and technology courses THEA 321, 653, 654, 641, 642, 631, 633, 699, plus one three-credit elective which must be at the 300 level or above. The total is 58 credits.

## THEA 101 Plays and Playwrights (3)

Staff. An introduction to the literature of theatre from the Greeks to the present with emphasis on the script in performance. Does not count toward the major.

## THEA 102 Theatre Arts (3)

Staff. From script to production: theories, methods and personnel involved in staging the dramatic work. Does not count toward the major.
THEA 105 Language of Performance (3)
Ms. Epstein, Mr. Podewell. An interdisciplinary discussion course. This course meets three times per week, and is required of all theatre and dance majors. An introduction to the ways in which dance, theatre, and other related performative forms create and communicate meanings through various modes of production of languages or performance. This course examines the various verbal, visual, and kinesthetic languages employed by artists to generate and exchange meaning in performance. Same a DANC 105.
THEA 109 Voice I (3)
Mr. Schierhorn. Development of relaxation habits, physical alignment, breath control and release, tone production, and articulation.

THEA 201, 202 Performance I, II $(3,3)$
Mr. Schierhorn. Corequisite or Prerequisite: THEA 105. A structured and at times spontaneous exploration of space, time, shape, sound, scenario, motion, and expenditure of energy to the end of attracting and holding the attention of the audience. Same as DANC 201, 202. Students may not receive credit for both DANC 151 and DANC 201/THEA 201. Students may not receive credit for both DANC 152 and DANC 202/THEA 202.

THEA 209 Voice II (3)
Mr. Schierhorn. Developmnt of relaxation habits, physical alignment, breath control and release, tone production, and articulation with emphasis on corrective tutorial work.

THEA 210 Fundamentals of Acting (3)
Staff. Class and workshop sessions in developing fundamental skills in the art and craft of acting as a creative process. Does not count toward the major.

## THEA 301 Intermediate Acting (3)

Staff. Prerequisites: THEA 201 and 202. Continuing development of acting skills focused primarily on work within the text. (Scenes, monologues, two other texts related exercises)

## THEA 309 Stage Speech I (3)

Mr. Schierhorn. Corrective work on individual regional speech habits, articulation, and phrasing.
THEA 321 Directing I (3)
Mr. Podewell. Prerequisites: THEA 201, 202, and approval of instructor. A theoretic and applied study of the basic elements of directing, including script analysis, blocking, composition, dramatic focus, and actor coaching. Staged scenes using outside actors make up a major part of the course activities.

## THEA 322 Directing II (3)

Mr. Podewell, Staff. Prerequisites: THEA 321 and approval of instructor. Advanced studies in the principles and practice of directing. Course activities involve scene study and staging with special emphasis give to advanced techniques in composition, working with actors, and design collaboration.

THEA 334 Theatre Production and Design I (3)
Mr. Sachs, Staff. Corequisite: THEA 399. Corequisite or prerequisite: THEA 105. An integrated introduction to the disciplines of scenic, costume, and lighting design coupled with the practical considerations of construction and execution of the design process. First of two semester course with Theatre 335. One year sequence required of all theatre majors.

## THEA 335 Theatre Production and Design II (3)

Mr. Sachs, Staff. Prerequisite: THEA 334. Corequisite: THEA 205 or 305. Second semester in the sequence of Theatre Production and Design. A continued exploration of the disciplines of scenic, costume, and lighting design coupled with the practical considerations of construction and execution of the design process. A finished final presentation will be required. One year sequence required of all theatre majors.

## THEA 341 History of Costume (3)

Staff. An illustrated history of dress and society from the ancient Greeks to the present. Assignments emphasizing interpretation of costume research for the stage. Laboratory required.
THEA 351 Rehearsal Techniques for Actors and Directors (3)
Mr. Podewell. Exploration of the interaction between actor and director during scene study with emphasis on developing the analytic and rehearsal techniques fundamental to the production process.

## THEA 391, 392 Special Topics (3, 3)

Staff. Specialty courses for undergraduates in performance techniques, projects, and theatre related subjects as designed by visiting or permanent theatre faculty. For specific offering, see the Schedule of Classes. For description, consult the department.

## THEA 399 Theatre Practicum (1)

Mr. Sachs, Staff. Required of all theatre majors. Course is open with credit to all students of the University and is designed to provide the student with practical production experience in the areas of set, costume, lighting, sound, and box office management. May be taken a total of four times.
THEA 401 Advanced Acting (3)
Staff. Prerequistes: THEA 201, 202, and 301. Continuing development of acting skills focused primarily on characterization, the use of subtext and imagery for the actor.
THEA 409 Stage Speech II (3)
Mr. Schierhorn. Corrective work on individual regional speech habits, articulation, and phrasing with added emphasis on the speaking of verse material.

THEA 432 Movement Stories (3)
Ms. Epstein, Ms. Hayley. An interdisciplinary studio course that examines creation of and communication of stories through movement and theatre approaches with emphasis on creativity and invention. Same as DANC 432.

## THEA 440 Clowning and Improvisation (3)

Ms. Epstein. Prerequisites: THEA 105, 201, 202. A course that will teach students a form of French clowning popularized by Bataclown. The act of clowning as will be practiced in this class is based on corporeal, emotional, and vocal expression. Each student will create her or his own individualized clown character through improvisational exercises. A midterm research paper with presentation and final performance will be required of all.

## THEA 441 Theatre and Social Change (3)

Ms. Epstein. Prerequisites: THEA 105, 201, 202. Students are introduced to Augusto Boal's "Theatre of the Oppressed" techniques. They will be used to explore such issues as identity and representation, gender, oppression, empowerment, racism, and environmental racism, homophobia, and peer pressure.

## THEA 456, 457 Internship Studies (1-3, 1-3)

Staff. Prerequisites: approval of instructor and department. An experiential learning process coupled with pertinent academic course work. Open only to juniors and seniors in good standing. Registration is completed in the academic department sponsoring the internship on TUTOR. Only one internship may be completed per semester. Note: A maximum of three credits may be earned in one or two courses.

THEA 471 History of Theatre I (3)
Staff. Prerequisite: THEA 105. A introductory course in the conventions, physical conditions, and techniques of theatrical production in the Western tradition from the Greek classical period through the Elizabethan period. Emphasis will be placed on the study of seminal texts from Aeschylus to Webster.

## THEA 472 History of Theatre II (3)

Staff. Prerequisites: THEA 105 and 471. Studies of Neoclassical France, the Enlightenment, the romantic period, and the rise of realism. Emphasis will be placed on the achievements of such figures as Voltaire, Garrick, and Goethe, and seminal texts from Racine to Dumas fils.
THEA 473 History of Theatre III (3)
Staff. Prerequisites: THEA 105, 471, 472. A survey of the history of theatre from naturalism to modernism and beyond. Emphasis will be placed on the achievements of such figures as Wagner, Stanislavski, Meyerhold, and Brecht, and the seminal texts from Ibsen to Kushner.
THEA 488 Writing Practicum (1)
Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement.

## THEA 490 Capstone Theatre History Seminar (3)

Mr. Epstein, Mr. Podewell. Prerequisite: approval of instructor. In this course students will undertake in-depth research on a topic of contemporary relevance to the discipline of theater. A complete description will be available the semester it is taught by the respective professor.
THEA 491, 492 Independent Studies (1-3, 1-3)
Staff. Prerequisite: approval of instructor.
THEA H499-H500 Honors Thesis (3, 3-4)
Staff. Prerequisites: approval of chair of department and Honors Committee. For qualified seniors.

THEA 601 Approaches to the Style and Genre of Acting (3)
Staff. Prerequisite: approval of instructor. Investigation and work with theatrical styles and genres in acting.
THEA 602 Special Topics in Acting (3)
Staff. Prerequisite: approval of instructor. One or more topics will be covered each semester, e.g., Acting Shakespeare.

## THEA 611 Acting for Other Media (3)

Mr. Gural, Mr. Schierhorn. Prerequisites: THEA 201, 202, and approval of instructor. This course is designed to train the acting student in techniques that are required for successful performance in film, television, and radio. Students will explore the differences between acting for the stage and for the "mechanical" media and will be assigned scenes and copy to perform on camera and on microphone.
THEA 613, 614 Ensemble Production (1-3, 1-3)
Staff. Prerequisites: THEA 105, 201, 202. Development of the ensemble in relation to specific genres and playwrights culminating in a public performance.

## THEA 622 Theatre Makeup (3)

Staff. This studio style course explores the different types of theatrical makeup and it uses in different venues. The student is provided with supervised time in class to develop application skills both on themselves and using live models as well as thinking critically about an application. Topics covered during a semester include the use of wigs and ventilated hairpieces, using appliances or latex prosthetics; character makeup, design.
THEA 623 Special Effects (3)
Mr. Liotta. Introductory course designed to expose the student to the various types of special effects available, and their uses in the entertainment industry.

## THEA 631 Advanced Technology Production I (3)

Mr. Sachs. A survey of the traditional methods of constructing and mounting scenery for theatre. A practical approach to planning technical production. Includes budgets for time and material, organization of shops and crews, and standards in drafting the production.

## THEA 632 Advanced Technology Production II (3)

Mr. Sachs. A survey of the nontraditional methods of constructing and mounting scenery. Includes welding for the stage, an introduction to sound design, and stage furniture repair and refinishing. Laboratory in addition to lecture.

THEA 633 Fundamentals of Lighting (3)
Mr. Liotta, Mr. Sachs. A course in the art and craft of stage lighting. Basic electricity and color theory. Lighting instruments and their control. Practical experience in lighting the production. Laboratory in addition to lecture.

## THEA 634 Computer Technology for Lighting (3)

Mr. Liotta, Mr. Sachs. Advanced problems in stage lighting. Structured approach to the development of lighting for the stage. Analysis of available lighting control options. Practical experience in preparation of light designs for production. Laboratory in addition to lecture.
THEA 635 Theatrical Drafting (1)
Mr. Sachs. Prerequisite: THEA 334, 335. A course in the nomenclature and techniques of theatrical drafting and their application to projects at hand.
THEA 641 Design Fundamentals I (4)
Staff. Prerequisite: approval of instructor. The development of scenic and costume designs from the modern viewpoint. Techniques of drawing, rendering, and perspective in relation to designers’ presentation and portfolio. Laboratory.

## THEA 642 Design Fundamentals II (4)

Staff. Prerequisite: THEA 641. A continuation of Theatre 641. Equal emphasis on the designers’ process and rendering techniques. Watercolor, pen and ink, scenic models.
THEA 644 Rendering for Designers (3)
Staff. The development of the individual's graphic skills in regard to rendering for theatrical purposes. Stress will be placed on accurately representing designs on plates in a professional fashion and on the manipulation of different mediums.
THEA 653 Period Styles for Designers I (4)
Staff. In-depth study of the styles of architecture, decor, furniture, and costume from antiquity through Elizabethan England, 1625. Research and design adaptation assignments.
THEA 654 Period Styles for Designers II (4)
Staff. Further study in architecture, decor, furniture, and costume from Charles I through modern including Eastern cultures. Research and design adaptation assignments.
THEA 655 Stage Management (3)
Mr. Liotta. Introduction to the multifaceted job of stage management.
THEA 670 Sound Technology (3)
Mr. Liotta. Introductory level course designed to expose the student to the theories and technology of the professional audio world.
THEA 671 Modern Drama From Ibsen to Brecht (3)
Staff. Seminar on five modern European dramatists. Ibsen, Strindberg, Chekhov, Pirandello, Brecht.
THEA 672 Seminar in Contemporary Drama (3)
Staff. Analysis of principal trends in the contemporary European and American theatres.

## THEA 676 Costume Technology (3)

Staff. Concentrated introduction to the methods, tools, and techniques used in the construction of costumes for the theatre. Focus will be placed on standard shop equipment, fabrics, and general construction techniques.
THEA 678 Topics in Advanced Costume Technology (3)
Staff. Prerequisite: THEA 676 or approval of instructo. (1) Advanced study in two primary pattern development techniques as well as with patterning software. Some time will be spend of dressmaker details and simple tailoring. (2) Men's and women’s tailoring techniques. Focus will be placed on traditional methods of hand and machine tailoring as applied to theatrical attire. (3) Millinery. Focus will be place on the primary construction methods for historic and/or contemporary hats: felt bodies, and frames. Various types and styles of finishes and decoration will also be explored.

## THEA 680 Practical Applications (1-3)

Staff. A design lab where the students put theory into practice. The lab assignments will be tailored by the faculty to the individual students needs. The objective is to provide actualized work experience in conjunction with faculty mentoring on design work productions. May be repeated 4 times for credit.

## THEA 681 Theatrical Photography (3)

Mr. Sachs. Prerequisite: approval of instructor. Basic photography and darkroom techniques designed specifically for theatre design students to document their work. Both black and white and color will be covered.

## THEA 682 Scene Design CAD (3)

Staff. Prerequisites: THEA 334, 335, 641, 642. We will introduce and explore Computer Aided Design using primarily the Vector Works program with its practical applications to theatrical scene design.

## THEA 683 Scene Painting (3)

Mr. Hall. Prerequisites: THEA 343, 344, 641, 642. This is a collaborative class based upon professional practices of scenic studios. We will examine the working relationship between the scenic designer and the scenic artist, and look at historical changes to the profession over the past 400 years. There will be extensive time spent drawing and painting and learning techniques to realize different faux finishes. This introductory class will culminate will a full sized color drop, with all in the class participating.

THEA 690 Portfolio Techniques (3)
Staff. Prerequisite: final academic year standing. This course will prepare the student's portfolio, as well as the student, for the professional world. Stress placed upon plate layout, organization of materials, selection of pieces for inclusion, etc. Additionally, job search techniques and interview preparation will be explored.

## THEA 691, 692 Special Topics (3, 3)

Staff. Courses offered by visiting professors or permanent faculty. For specific offering, see the Schedule of Classes. For description, consult department.
THEA 699 B.F.A. Thesis Production (3)
Staff. Required for B.F.A. designers. Student's work in area of emphasis culminates in the design of a mainstage production.

## Dance

## DANCE FACULTY

Barbara Hayley, M.F.A, New York University Tisch School of the Arts
Alice Pascal Escher, M.F.A., Temple
Beverly A. Trask, M.F.A., Southern Mississippi

## MINOR

Newcomb and Tulane students participate in many dance activities while working toward degrees in other fields. Newcomb students may also minor in dance.
A minor in dance consists of a minimum of 22 credits as follows:
DANC 201, 202 Performance I, II
DANC 352 Intermediate Dance Composition
DANC 471 Dance History: Primitive through 19th Century
or
DANC 471 Dance History: 20th-Century United States
DANC 380, 382, 480, 482
DANC 399 Performance Practicum
(two semesters of performing requirement

- see below)

In addition to these courses, the minor has the following requirements: Minors must be enrolled in a technique class and must reach the 400 level in either ballet or modern dance technique at least two semesters before graduation. Minors must continue to be enrolled for credit in advanced ballet or modern technique through graduation and must reach the intermediate level in the other dance form.
Note: a minimum of two semesters of ballet and a minimum of two semesters of modern dance are required. Minors must dance in two Newcomb Dance Program concerts before graduation.

* Students who demonstrate proficiency at the intermediate technique level in modern dance or ballet $(380,382)$ will be placed at the advanced level $(480,482)$. Each of these courses may be repeated for credit.


## ADMISSIONSIAUDITION INFORMATION

Admission is a two part process. Prospective dance majors must be admitted by both the University and the Dance Program. Tulane University Office of Undergraduate Admissions evaluates applicants according to university admissions procedures. The Dance Program accepts students on the basis of an audition.

## BACHELOR OF ARTS IN DANCE

The bachelor of arts with a major in dance is designed for students who want professional training in dance and comprehensive knowledge and understanding of the role of dance in history and society, within a liberal arts education.
The dance major requires 40 credits as follows:

## Core Courses

DANC 105 Language of Performance
DANC 201, 202 Performance I, II
THEA 334 Theatre Production and Design

## (13 credits)

THEA 399 Theatre Practicum
(1)

## Dance Technique

## (8 credits)

One course per semester for eight semesters in ballet or modern dance. Students must achieve advanced level in either ballet or modern dance technique and intermediate level in the other in order to graduate. Students who demonstrate proficiency at the intermediate technique level in modern dance or ballet $(380,382)$ will be placed at the advanced level $(480,482)$. Each of these courses may be repeated for credit. Note: a minimum of two semesters of ballet and a minimum of two semesters of modern dance are required. Students will be evaluated at the end of each academic year.
DANC 382 Intermediate Ballet
(1)

DANC 482 Advanced Ballet
DANC 380 Intermediate Modern Dance
DANC 480 Advanced Modern Dance
Dance History
(6 credits)
DANC 471 Dance History: Primitive - 19th Century
DANC 472 Dance History: 20th Century U.S.
(3)

Dance Composition
(11 credits)
DANC 352 Intermediate Dance Composition
DANC 452 Advanced Dance Composition
MUSC 105 Introduction to Music
DANC 458 Dance Company - two semesters
Theatre or Dance Elective

## BACHELOR OF FINE ARTS IN DANCE

The bachelor of fine arts with a major in dance is designed for students who want professional training in dance within a liberal arts education. The bachelor of fine arts curriculum focuses on development of technical abilities, choreographic skill, and broad knowledge and attitudes essential to the dance professional.
The B.F.A. dance major requires 60 credits as follows:
Core Courses
(13 credits)
DANC 105 Language of Performance
DANC 201, 202 Performance I, II
THEA 334 Theatre Production and Design
THEA 399 Theatre Practicum
(1)

Dance Technique Ballet and Modern
(16 credits)
Two courses per semester for eight semesters, in ballet and modern dance. Students must achieve advanced level in both ballet and modern dance technique in order to graduate and will be evaluated at the end of each academic year.
*Students who demonstrate proficiency at the intermediate technique level in modern dance or ballet $(380,382)$ will be placed at the advanced level $(480,482)$. Each of these courses may be repeated for credit.
DANC 382 Intermediate Ballet
DANC 482 Advanced Ballet
DANC 380 Intermediate Modern Dance
DANC 480 Advanced Modern Dance

## Jazz Dance Technique

(2 credits)
DANC 395 Intermediate Jazz Dance
DANC 495 Advanced Jazz Dance
Dance Technique Elective
DANC 181 Beginning Tap Dance I
DANC 182 Beginning Tap Dance II
DANC 296 Intermediate Tap Dance
DANC 191 Beginning African Dance I

DANC 472 Dance History: 20th Century U.S.

## Dance Composition

DANC 352 Intermediate Dance Composition
DANC 452 Advanced Dance Composition
DANC 459 Senior Production - two semesters
DANC 458 Dance Company - four semesters
Music
MUSC 105 Introduction to Music

## Exercise Physiology

One of the following:
EXSS 202 Physiology of Exercise
EXSS 310 Biomechanics of Exercise and Sport
EXSS 311 Mental and Behavioral Aspects of Sport
Theatre or Dance Elective

## DANC 105 Language of Performance (3)

Ms. Epstein, Mr. Podewell. An interdisciplinary discussion course. This course meets three times per week, and is required of all theatre and dance majors. An introduction to the ways in which dance, theatre, and other related performative forms create and communicate meanings through various modes of production of languages or performance. This course examines the various verbal, visual, and kinesthetic languages employed by artists to generate and exchange meaning in performance. Same as THEA 105.

## DANC 151 Beginning Dance Composition I (3)

Staff. Prerequisites: DANC 201 and 202 or approval of instructor. An introduction to dance composition with an emphasis on spatial design, sources of movement, viewing choreography, and the basic elements of space, time, shape, and motion. Students may not receive credit for both DANC 151 and DANC 201/THEA 201.

## DANC 152 Beginning Dance Composition II (3)

Staff. Prerequisite: DANC 151. A continuation of Dance 151 with emphasis on dynamics, rhythm, sound sources for choreography, and the structure of a dance work. Students may not receive credit for both DANC 152 and DANC 202/THEA 202.
DANC 181 Beginning Tap I (2)
Ms. Trask. A beginning course in tap introducing basic rhythmic movement skills necessary for various tap styles. May be taken for credit two times.
DANC 182 Beginning Tap II (2)
Ms. Trask. Prerequisite: DANC 181. A continuation of the development of movement skills and an expanded tap vocabulary. May be taken for credit four times.

DANC 191 Beginning African Dance I (2)
Staff. Introduction to basic technique and African ethnic dance forms including three traditional dances. May be taken for credit two times.
DANC 193 Beginning Ballet I (2)
Staff. An introduction to classical ballet. Basic theory and techniques of classical ballet as well as the appreciation of the art form. May be taken for credit two times.

DANC 194 Beginning Ballet II (2)
Staff. Continuation of 193. May be taken for credit four times.

## DANC 195 Beginning Jazz Dance I (2)

Ms. Trask. An introductory course to the basic foundations of jazz dance, emphasizing body placement, isolations, and rhythmic qualities of jazz. May be taken for credit two times.

## DANC 196 Beginning Jazz Dance II (2)

Ms. Trask. A continuation of the development of movement skills with emphasis on alignment and expanded jazz dance vocabulary. May be taken for credit four times.
DANC 197 Beginning Modern Dance I (2)
Staff. Introduction to modern dance technique, with emphasis on alignment and basic elements of space, shape, time, and motion. Includes theory and application of dance as an art form. May be taken for credit two times.

DANC 198 Beginning Modern Dance II (2)
Staff. Continuation of 197. May be taken for credit four times.
DANC 201, 202 Performance I, II (3, 3)
Mr. Schierhorn. Corequisite or prerequisite: DANC 105. A structured and at times spontaneous exploration of space, time, shape, sound, scenario, motion, and expenditure of energy to the end of attracting and holding the attention of the audience. Same as THEA 201, 202. Students may not receive credit for both DANC 151 and THEA 201/DANC 201. Students may not receive credit for both DANC 152 and THEA 201/DANC 202.

DANC 203 Movement for Actors (3)
Mr. Walters. This course is intended to introduce physical technique within the craft of acting, through investigation into physical structure, function and use, and exploration of physical character.

DANC 221 Introduction to Dance - Ballet (3)
Staff. An introduction to classical ballet including beginning ballet technique and an overview of ballet history from its inception to the present day.
DANC 222 Introduction to Dance - Modern Dance (3)
Staff. An introduction to modern dance including beginning modern dance technique and an overview of modern dance history from its inception to the present day.

DANC 223 Introduction to Dance - Jazz Dance (3)
Ms. Trask, Staff. An introductory course for students who seek information regarding the different aspects of the dance world, including different genres (ballet, modern, jazz, and world dance). Special emphasis is given to the role of American Vernacular dance - jazz dance and its identity in the dance scene of America.

DANC 296 Intermediate Tap Dancing (2)
Ms. Trask. Prerequisite: previous training in tap and other dance forms required. An intermediate course in tap dance with emphasis on alignment and rhythmic skills. May be taken for credit six times.

## DANC 352 Intermediate Dance Composition (3)

Ms. Hayley, Ms. Pascal Escher. Prerequisites 201 and 202. An in-depth study of dance composition with an emphasis on choreographic design and dynamics, creating new movement materials, working with music, and choreographing complete solo works.
DANC 361 Dance Practicum in the Elementary School (3)
Staff. Prerequisites: DANC 151 and intermediate modern dance standing. A dance teaching and choreographic practicum in the New Orleans public school system, elementary level, targeted to complement existing language arts programs. Students work with dance faculty in selected public schools. Course work to include development of approach, practicum, performance by school children and evaluation.
DANC 362 Dance for Children (3)
Staff. Prerequisite: approval of instructor. Practical experience teaching dance to children. Students plan and teach dance to children in a workshop setting.
DANC 380 Intermediate Modern Dance (1)
Ms. Pascal Escher, Staff. Continuation of the development of modern dance skills with emphasis on alignment and an expanded movement vocabulary. Combining the different elements of dance: time, space, and motion. Includes theory of dance as an art form. May be taken for credit six times.

## DANC 382 Intermediate Ballet (1)

Ms. Hayley, Staff. Continuation of the development of classical ballet technique with emphasis on alignment and expanded movement vocabulary. Includes theory of ballet and appreciation of ballet as an art form. May be taken for credit six times.
DANC 389 Service Learning (1)
Staff. Prerequisite: Departmental approval. Students complete a service activity in the community in conjunction with the content of a three-credit croquets course.

DANC 391 Intermediate African Dance (2)
Ms. Jackson. Continuation of the development of African dance skills with emphasis on understanding and demonstrating basic components necessary to choreograph traditional African dance movements. May be taken for credit six times.
DANC 395 Intermediate Jazz Dance (1)
Ms. Trask. A study of jazz dance at the intermediate level, including warm-ups, isolations, and locomotor movements specific to the jazz dance style. Historical developments of jazz and musical theatre dance are emphasized. May be taken for credit six times.
DANC 396 New Orleans Jazz Dance Project: Newcomb College Summer Dance Festival (2)
Ms. Trask, staff. The New Orleans Jazz Project: Newcomb College Summer Dance Festival is presented for two weeks annually in June offering an intensive schedule of technique classes in jazz, African, musical theatre, tap, hip hop, and modern dance forms, with repertory classes which culminates in performance by the participants. Lecture-demonstration projects, special lectures, and professional performances complete programming for evening events. Final decision on placement of students in technique and repertory classes will be determined by the faculty at the beginning of the workshop. The minimum requirement for credit is three classes per day, one repertory class/rehearsals, attendance for all evening sessions and special events, and performance in repertory concert. Combined activities total 76 hours.
DANC 397 Professional Track Project (3)
Staff. Prerequisite: approval of dance faculty. An intensive three-week dance residency and performance tour throughout the southeast that culminates in a public performance in New York City. The project serves as a bridge for pre-professional dancers between the University and the professional career in dance.
DANC 399 Performance Practicum (1)
Staff. Particle performing experience in dance. Required for the dance minor. May be taken for credit two times.

## DANC 432 Movement Stories (3)

Ms. Epstein, Ms. Hayley. An interdisciplinary studio course that examines creation of and communication of stories through movement and theatre approaches with emphasis on creativity and invention. Same as THEA 432.

DANC 452 Advanced Dance Composition (3)
Staff. Prerequisite: DANC 201, 202, and 352. A continuation of DANC 352 with emphasis on group forms, sound sources for dance and development of fully designed dance pieces.

## DANC 458 Dance Company (1)

Ms. Pascal Escher, Staff. Corequisite: intermediate or advanced technique class. Performing experience, advanced-level dance techniques and practical experience in dance production. By audition or invitation of the dance faculty. May be taken for credit eight times.

## DANC 459 Senior Production (3)

Staff. Prerequisites: DANC 201, 202, 352, 452. A continuation of dance composition with emphasis on development, research and production of senior concert pieces with written analysis of process.
DANC 471 Dance History: Primitive through 19th Century (3)
Staff. Prerequisite: DANC 105, 221, 222, or 223. A survey of dance, including the anthropological aspects of dance, in primitive cultures and the development of dance in the Western World.
DANC 472 Dance History: 20th-Century United States (3)
Staff. A survey of dance in the 20th-century United States emphasizing the development of modern dance, its impact on classical ballet and on dance in the Western World.

## DANC 480 Advanced Modern Dance (1)

Staff. A kinesthetic, nonstylized approach to movement. Exploration of complex movement skills integrating alignment, dynamics, spatial design, and rhythmic structure. Includes theory and appreciation of dance as an art form. May be taken for credit eight times.
DANC 481 Special Topics (1-3)
Staff. Specialty courses in dance techniques, projects, and dance related subjects as designed by dance faculty.

## DANC 482 Advanced Ballet (1)

Ms. Pascal Escher, Staff. Classical ballet technique with emphasis on alignment, complex movement combinations, and precision in execution. Includes pointe work and theory of ballet as an art form. May be taken for credit eight times.
DANC 491 Independent Study (1-3)
Staff. Independent practical and research study in dance or dance-related areas. Open to qualified juniors and seniors with approval of instructor.
DANC 495 Advanced Jazz Dance (1)
Ms. Trask. An advanced study of dance devoted to movement exploration involving spatial, dynamic, and rhythmic combinations of various jazz and musical theatre dance styles. Historical study of jazz dance development is emphasized. May be taken for credit eight times.
DANC H499, H500 Honors Thesis (3, 4)
Staff. Requires approval department and Honors Committee.

## Women's Studies

Office: 301B Newcomb Hall
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Website: www.tulane.edu/~womenstu
Program Administrator
Anne McCall, French and Italian (Director)
Faculty Associates and Teaching Staff
Joan Bennett, Cell and Molecular Biology
Ila Berman, School of Architecture
April Brayfield, Sociology
Linda Carroll, Italian
Rachel Devlin, History
Gary Dohanich, Psychology
Shanshan Du, Anthropology
Lisa Jo Epstein, Theatre and Dance
Sylvia Frey, History
Joy Fuqua, Communication
Hope Glidden, French and Italian
Margaret King, Assistant Vice-President of Student Affairs
Karen Kingsley, School of Architecture
Amy Koritz, English
Ana Lopez, Communication
Cynthia Lowenthal, English
Rebecca Mark, English
Adeline Masquelier, Anthropology
Nancy Maveety, Political Science
Judy Maxwell, Anthropology
Anne McCall, French and Italian
Deborah McGrady, French and Italian
Melanie McGrath, Psychology
Supriya Nair, English
Stephen Pierce, History
Gary Remer, Political Science
Molly Rothenberg, English
Maureen Shea, Spanish and Portuguese

Teresa Soufas, Spanish and Portuguese
Carole Spitzack, Communication
Molly Travis, English
Gertrude Yeager, History

## Michael Zimmerman, Philosophy

Women's Studies is an interdisciplinary program that encourages students to engage fully in the major activities of a liberal arts education-reading, writing, thinking and remembering-in order to consider how women's lives differ because of race, class, region, religion, age, sexual orientation, historical period, and cultural context.

The program of study recognizes the role of Newcomb College as a coordinate college for women within a major research university and encourages the participation of students in the production of new research on women. The program also acknowledges the roots of women's studies within the women's movement and offers students the opportunity to link theory and practice through internships in community agencies and designated service learning courses. Students are encouraged to use this knowledge and experience in careers benefiting the lives of both women and men.

The intellectual project of the major and minor in Women's Studies is supported by lectures, films, discussions and other programs organized and funded through Newcomb College Center for Research on Women, and the resources available at the Nadine R. Vorhoff (Women's Studies) Library, the Newcomb Archives, and the Sophie B. Wired Computer/Multimedia Cluster. All of these resources are housed around the Newcomb College quad of the Uptown Campus. Students interested in Women's Studies as an academic major or minor should consult with the director.

## MAJOR

A major in women's studies consists of a minimum of 33 credits. Three courses are required: the prerequisite course 290 Introduction to Women's Studies; 399 Feminist Theories; and 497 Research in Women's Studies. The remaining courses must be selected from among those approved by the Women's Studies Program with the following distribution requirements: a minimum of six credits from the subject area Humanities and Fine Arts and six credits from Social Sciences, with not more than nine credits in a single department. Normally, the elective courses are taken at the 300 level and above. A maximum of 12 credits taken to satisfy the college distribution requirement may be applied toward the major in women's studies. Students electing women's studies as one of two majors must complete all requirements for the women's studies major and complete a total of at least 27 credits in different (non-overlapping) courses in each major.

## MINOR

A minor in women's studies consists of a minimum of 18 credits. Two courses are required: 290 Introduction to Women's Studies and 399 Feminist Theories. The remaining courses must be selected from among those approved by the Women's Studies Program with not more than two courses selected from the same department. Courses applied to the student's major field of study may not be applied toward the women's studies minor.

## WMST 250 Women and Leadership (3)

Staff. This course explores the contexts of leadership and examines how those contexts affect women. Students should increase their understanding of different styles of leadership, reconcile femininity with leadership, increase their knowledge of leadership strategies for women, and apply the ideas and research presented to their own pursuits of leadership.

## WMST 290 Introduction to Women's Studies (3)

Staff. This course is an introduction to key concepts, theoretical frameworks, and interdisciplinary research in the field of women's studies. Its primary focus is on the diverse experiences of women in the contemporary United States.

## WMST 350 African-American Womanhood (3)

Staff. Prerequisite: WMST 290 or approval of instructor. Through a variety of written and visual texts, this course surveys the intellectual tradition developed and elaborated by U.S. AfricanAmerican women in the nineteenth and twentieth centuries. Course materials and lectures trace African-American women's legacy of struggle and resistance against economic limitations and stereotypic representations, define their contributions to African-American communities and the larger U.S. American culture, explore the sexual politics of African-American relationships, and delineate the dimensions of a black feminist epistemology.

## WMST 388 Writing Practicum (1)

Staff. Prerequisite: successful completion of the First-Year Writing Requirement. Corequisite: three-credit departmental course. Fulfills the college intensive-writing requirement. Students will write one or more papers exploring major topics in feminist theory.
WMST 389 Service Learning (1)
Staff. Prerequisite: Departmental approval. Students complete a service activity in the community in conjunction with the content of a three-credit corequisite course.
WMST 390 Research in the History of the Higher Education of Women (4)
Staff. Prerequisite: WMST 290 or approval of instructor. This course introduces the history of women's education through readings and archival research. Students will be required to analyze documents in archives, respond to the findings of historians, and write about their own research. Additionally, the course explores theories concerned with the educational development of women in the United States. Fulfills the college writing requirement.

## WMST 399 Feminist Theories (3)

Staff. Prerequisite WMST 290 or approval of instructor. In this advanced seminar, students will study the major theoretical perspectives such as liberal, radical, psychoanalytic, post-modern and Marxist feminism to evaluate their ability to describe women's subordination, to explain its causes and consequences, and to prescribe strategies for liberation. Writing practicum available.

## WMST 457 Internship Studies (1-3)

Staff. Prerequisites: approval of instructor and program director prior to the semester in which the internship is to be conducted; open to upper level majors and minors. A 3.0 grade-point average in women's studies courses is normally required. An experiential learning process coupled with pertinent academic course work. Registration is completed in the academic department sponsoring the internship on TUTOR. Credit hours earned are dependent on the requirements of
the project. A maximum of four credits of internship studies may be applied toward the major or minor in women's studies.

## WMST 491, 492 Independent Studies (2, 3)

Staff. Prerequisites: approval of instructor and program director; open to upper-level majors and minors. Qualified students may arrange for independent study with an instructor to pursue a project of interest to the student. Ordinarily, independent study earns three credits. Requirements will vary depending on the project but will involve some combination of readings, oral reports, and written work. A maximum of four credits of independent studies may be applied toward the major in women's studies and three credits toward the minor.

## WMST 493 Special Topics in Women's Studies (3)

Staff. An in-depth examination of a particular topic relevant to women's lives and experiences informed by feminist theoretical perspectives. Topics for discussion focus on a theme or question that is best understood within an interdisciplinary framework.

## WMST 497 Research in Women's Studies (4)

Staff. Prerequisite: WMST 290 or approval of instructor. A seminar exploring the issues and controversies regarding feminist methods, methodologies, and epistemology. Emphasis is given to the relationship between theory and research in designing, collecting, and analyzing data. Fulfills the college writing requirement.

## WMST 498 Senior Project (4)

Staff. Prerequisite: WMST 497 or approval of instructor and program director. A student initiated research project resulting in a detailed written report of all aspects of the research process. Fulfills the college writing requirement.
WMST H499-H500 Honors Thesis (3, 4)
Staff. Open to senior honors candidates and other qualified senior majors with approval of instructor and program director. Intensive interdisciplinary reading and research in the area of women's studies.

## ELECTIVES

Women's Studies electives are to be selected from among the courses offered by cooperating departments and approved by the Women's Studies Program Committee. In addition to the courses listed below, colloquia, independent studies, and special topics courses may be applied to the major or minor subject to approval. For complete information about these courses, consult the'Schedule of Classes or obtain a current course description from the office of the Newcomb College Center for Research on Women.

## Humanities and Fine Arts

## Communication

COMM 426 Communication, Culture, and Body
COMM 435 Gender and the Cinema
COMM 445 Communication, Language and Gender
COMM 460 Intercultural Communication
COMM 462 Women, Development, Communication
COMM 484 Aids and the Media
English
ENLS 389 Introduction to Women’s Literature
ENLS 442 Southern Literature

ENLS 472 Feminist Literary Theory
ENLS 483 Race, Class and Gender

## French

FREN 302 French Feminisms

## Jewish Studies

JWST 360 Women in the Hebrew Bible
JWST 415 Women in Judaism and Jewish Culture
Philosophy
PHIL 357 Ethics of Abortion: A Study of Competing Values
PHIL 653 Philosophy and Gender
Spanish
SPAN 410 Constructions of Gender and Sexuality in Hispanic Culture
SPAN 673 Women Writers of Spain
SPAN 674 Women Writers of Latin America

## Social Sciences

## History

HISB 607 Africa and Gender Theory
HISE 314 Household, Gender, and Sexuality in Early Modern Europe
HISL 378 Women in Latin American History
HISU 340 Women and Gender in U.S. History to 1830
HISU 341 Women and Gender in U.S. History 1830 to the Present
HISU 649 Sexuality and the Advent of Modern American Culture
Political Science
POLA 426 Race, Sex, and Power
POLT 378 Feminist Political Theory
Sociology
SOCI 104 Gender and Society
SOCI 606 Issues in the Sociology of Gender
SOCI 620 Issues in the Sociology of the Family

## Science and Mathematics

## Cell and Molecular Biology

CELL 210 Biology of Human Reproduction
CELL 600 Biomedical Ethics

## Psychology

PSYC 363 Psychology and Women’s Health
PSYC 655 Behavioral Neuroendocrinology

## Courses Offered by Other Schools

Architecture
*THRY 375 Women and the Arts
*THRY 376 Research on Women Architects
*THRY 463 Sexual Subjectivity and Space

## Law School

*4LAW 512 Feminist Legal Theories

## School of Public Health and Tropical Medicine

*CHSC 630 Gender Race and Ethnicity in Health Education
*CHSC 638 Maternal and Child Health Education
*Non-LAS course. See the college SPC restrictions.

## Allied Programs

The following courses and programs are available to students enrolled in Tulane College and Newcomb College. Minors listed under Allied Programs are offered through the Schools of Architecture, Engineering, Business, and University College. All courses not marked by a double asterisk are counted as Supplementary Program Credits (SPCs). Students may earn toward graduation a maximum of fifteen SPCs, and no more than nine of these credits may be taken in courses listed exclusively as University College courses. Consequently, courses in Exercise and Sport Sciences listed as EXSS will count toward the 15-credit SPC limit; courses listed as UESS will count toward the nine-credit SPC limit on University College courses.

* *LAS course and does not count as SPC.


## Architecture

Office: School of Architecture

303 Richardson Memorial
Phone: (504) 865-5389
Fax: (504) 862-8798
Website: www.tulane.edu/~tsahome/
Peggy Messina, Academic Programs Coordinator

## ARCHITECTURAL STUDIES MINOR

The purpose of the minor in Architectural Studies is to encourage and give official recognition to students who study architecture beyond the introductory level but who do not wish to pursue a major or a professional degree in the field. The requirements are designed to allow students as much flexibility as possible in pursuing their individual interests while also providing a basic overview of the discipline. Students wishing to minor in architectural studies should meet with the Director of Academic Affairs of the School of Architecture to establish a curriculum conforming to the following requirements. (The alphanumeric code in parenthesis following each course title is the course identification code.)
A minor in architectural studies requires that at least four courses and a minimum of 15 hours of course work within the School of Architecture. The only specifically required course is Introduction to Architecture for Non-majors (HTEL 230) [Instead of this course, students may substitute Introduction to Architecture (HSTA 111), but the later course is normally taken in conjunction with its co-requisite, Architecture Studio (DSGN 101). Students do not normally receive credit for both HTEL 230 and HSTA 111.]

In addition to the introduction course, the minor requires two courses from the design, history, structures, technology, and/or theory curricula (courses with designations DSGN, HSTA, STEC, and THRY). Some of these courses have prerequisites, and in order to enroll in them minors must satisfy the prerequisites or have permission of the instructor. [There is one exception to the corequisite requirement; students who have completed Introduction to Architecture for Non-Majors and wish to take the beginning studio course (DSGN 101) do not have to take Introduction to Architecture.] Students may satisfy the remainder of the credit requirement for a minor with any courses offered within the School of Architecture.

LAS students take 15 credits of Architecture courses; 12 credits count as free options in LAS leaving three credits as an overload. Students should be advised by the Architecture Director of Academic Affairs about the minor and the Director will certify the architecture studies minor. The following chart summarizes the two ways to fulfill the requirement for the minor in architectural studies.

## Alternative A

HTEL 230 Introduction to Architecture for Non-majors

Elective*
Elective
Elective (if necessary to complete 15 credits) (3, 4 or 6 )

## Alternative B

HSTA 111 Introduction to Architecture

DSGN 101 Architecture Studio
(6)

Elective*
( 3,4 or 6 )
Elective
(3, 4 or 6 )
*These electives must be from the design, history, structures, technology, and/or theory curricula (courses with designations DSGN, HSTY, STEC, and THRY). In Alternative A, the remaining electives, if necessary, may be courses with any designation within the School of Architecture. Students should see the Architecture Director of Academic Affairs for permission to register in Architecture courses.

## Business

Office: A. B. Freeman School of Business
200B Goldring/Woldenberg Hall
Phone: (504) 865-5418
Fax: (504) 862-8733
Website: freeman.tulane.edu

## Program Administrator

Paulette Douglas, Director of Undergraduate Education

## MINOR

For students in Newcomb College and Tulane College, the following selection of seven courses leads to a minor recognized by the Freeman School. Group I must be taken as a prerequisite to Group II.

## I. Required courses:

**ECON 101 Microeconomics
ACCT 203 Financial Accounting

## II. Any four of the following eight Freeman School core courses:

ACCT 301 Managerial Accounting
FINC 352 Financial Management
ISDS 375 Introduction to Information Systems
MCOM 335 Management Communications
MKTG 382 Marketing Management
OBHR 331 Organizational Behavior
PERS 321 Managerial Perspectives
PSOM 371 Operations Management

## III. One elective Freeman course

The additional elective may be any Freeman course for which the student has the necessary prerequisites. The Freeman School recommends, however, that minors select their additional course from the list above. Students may substitute both semesters of TIDB 101 and 111 More Than Just Business for the Freeman elective. Only freshmen may enroll in TIDB 101 and 111.
Students should see the Director of Undergraduate Education for permission to register in Freeman courses at the 300 level or above. Students should be advised by Freeman advisors about the minor, and the advisor will certify the business minor.
Students may not receive transfer credit for any of the eight Freeman core courses.
** LAS course and does not count toward SPC.

## Computer Science

Office: 204 Stanley Thomas Hall
Phone: (504) 865-5785
Fax: (504) 862-3293
Email: info@eecs.tulane.edu
Website: www.eecs.tulane.edu

## School of Engineering

Mark Benard, Ph.D., Yale, Undergraduate Program Director
Parviz Rastgoufard, Ph.D., Michigan State (Chair)
For students in Newcomb College and Tulane College, the following selection of courses leads to a minor in computer science. These computer science courses, as well as many others, are offered by the electrical engineering and computer science department in the School of Engineering.
The Electrical Engineering and Computer Science department offers B.S. and B.S.E. degrees in the School of Engineering. Students interested in these programs should see the Computer Science and Computer Engineering listings in the Engineering section of this catalog.

## MINOR

## Computer Science

## Six courses including:

CPSC 101 Software Design and Programming
CPSC 102 Object-oriented Design and Programming
CPSC 118 Data Structures
CPEN 201 Computer Organization
and at least two courses at the 300 or 400 level.

## Mathematics

**MATH 121-122 Calculus I and II
** MATH 217 Discrete Mathematics
The 300 and 400 level courses must be three or four credit CPSC courses excluding 497 and 498. Students must meet all prerequisites for these courses.
** LAS course and does not count toward SPC.

## Education

Office: 419 Newcomb Hall
Phone: 504-865-5342
Website: www.teacher.tulane.edu
Program Administrator
Teri C. Davis, Ed.D., Kansas State

## TEACHER CERTIFICATION - SECONDARY EDUCATION LEVEL

In addition to the B.A., B.S., or B.F.A. degree from Tulane University, students through a collaborative program with Loyola University, may earn Teacher Certification in Secondary Education (grades 7-12) from the Louisiana State Department of Education which can then be transferred to other states. Students must fulfill all Tulane degree and major requirements, general education requirements of the state, content teaching fields, and teacher certification course work. Students should consider the "content teaching fields" requirements in choosing a major.

## I. State General Education Requirements

All of the following:
English
Mathematics
PSYC 212 may be taken in lieu of the second mathematics course for teacher certification.
PSYC 212 does not count towards the mathematics requirement for the Tulane B.S. degree.
Sciences
Social Sciences
Arts

## II. Content Teaching Fields Requirements

Two of the following teaching fields: 31 credits in the primary teaching area and 19 credits in the secondary teaching area.
English, Mathematics, Social Studies (combination of economics, history, political science), French, Spanish, Italian, German, General Science (combination of chemistry, physics, biology), Environmental Science, Biology, Chemistry. Courses taken to fulfill general education requirements and major in content field requirement count towards the Primary and Secondary teaching certification area requirements.

## III. Teacher Certification Coursework (34 credits)

Knowledge of the Learner and the Learning Environment (16 credits)
EDUC 200 Introduction to Education
(3)

EDUC 389 Service Learning in Public School
(1)

PSYC 320 Educational Psychology
PSYC 334 Childhood Behavior Disorders
(3)

PSYC 339 Adolescent Psychology
Loyola EDSE A343 Classroom Management
(3)

Methodology and Teaching (18 hours)
EDUC 608 Secondary School Methods of Teaching
Loyola EDSE 610 Methods of Teaching in the Content Field (3)
Loyola EDSE A305 Secondary Methods of Reading
Instruction (3)
Loyola EDSE A410 Student Teaching

## PRAXIS Requirements

Praxis I (PPST) - Complete prior to enrolling in courses at Loyola/admission to program.
Praxis II - Complete before Student Teaching
Of the 18 credit hours of required Loyola course work, nine credits of Loyola course work will be transferred to Tulane as Supplementary Program Credits (SPC); three credits of student teaching will be transferred to Tulane as SPC; and six credits of student teaching will be transferred as equivalent to the LAS internship.

## EDUC 200 Introduction to Education (3)

Staff. Corequisite: EDUC 389. An introductory course for those preparing for certification to teach. This course examines the historical, philosophical, sociological, psychological, organizational and socio-cultural bases of American education and the political influences as they relate to contemporary issues in education in the United States. It is designed to assist students in determining if they want to pursue teaching as a career and it helps perspective teachers to gain a valid and comprehensive knowledge of what is involved in a teaching career. Emphasis is placed upon reflection, inquiry and personal involvement in planning an effective and successful career in education.

## EDUC 389 Service Learning (1)

Staff. Prerequisite: approval of program administrator. This course provides opportunities for observation and participation for students who are exploring an interest in teacher preparation. Students observe and participate in a variety of school and classroom settings, including urban, suburban, and inner city schools in grades seven through twelve for a total of forty hours. Students meet for debriefing sessions during the semester and complete a final project.

EDUC 608 Secondary Education Methods (3)
Staff. Prerequisite: EDUC 200. This course provides the opportunity for inquiry into prominent methodological issues and for the development of core teaching skills. Students will analyze information from a variety of sources, synthesize such information, and draw/ defend conclusions. In addition, students will interpret and demonstrate their understanding and general teaching practices and opportunity to apply that information in a laboratory setting.

## Engineering Science

Office: School of Engineering

200 Lindy Boggs Center
Phone: (504) 865-5764
Fax: (504) 862-8747
Website: www.eng.tulane.edu/undergrad/IDM/IDM_new.htm For students enrolled in Tulane College or Newcomb College.

## MINOR

## I. Prerequisite LAS Courses:

**MATH 121 Calculus I
**MATH 122 Calculus II 4
**MATH 221 Calculus III 4
**MATH 224 Introduction to Applied Mathematics 4
and either
**CHEM 107/117; CHEM 108/118 General
Chemistry I and II 4, 4
or
**PHYS 131; PHYS 132 4, 4 General Physics I and II $\underline{4,4}$

## II. School of Engineering Courses:

## Required of all Engineering Science minors:

ENGR 100 Seminar1
MCEN 229 Engineering Design ..... 3
Elective 300-400 level elective in the School of Engineering ..... $\underline{3}$

## Plus one course chosen from the following list:

CPSC 101 Software Design and Programming 4
MCEN 201 Computer Aided Engineering 3
CENG 221 Chemical Engineering Design I 3
CPSC 300 Principles of Computer Science $\underline{3}$
3-4
And three courses chosen from the following list:(appropriate for students who have taken Physics 131 and Physics 132)
ENGR 201 Electric Circuits I ..... 3
ENGR 241 Statics ..... 3
ENGR 242 Dynamics ..... 3
ENGR 243 Mechanics of Materials ..... 3
ENGR 344 Fluid Mechanics ..... $\underline{3}$9
(appropriate for students who have taken Chemistry 107/117 and Chemistry 108/118)
ENGR 201 Electric Circuits I ..... 3
ENGR 213 Thermodynamics ..... 3
ENGR 312 Materials Science and Engineering ..... 3
MCEN 302 Heat Transfer ..... $\underline{3}$9** LAS course and does not count toward SPC.

## Exercise and Sport Sciences

Office: 105 Reily Center
Phone: (504) 865-5301
Fax: (504) 862-8754
Website: www.tulane.edu/~exersci/
Associate Professor
Lance B. Green, Ed.D., Northern Colorado (Chair)

## Assistant Professors

Michael J. Dancisak, Ph.D., Minnesota
Melanie H. Morris, M.S., Southern Mississippi
Loretta Quinnan Wilson, Ph.D., Virginia
The courses listed below are approved for credit for students in the liberal arts and sciences. These courses, as well as many others, are offered by the Department of Exercise and Sport Sciences in University College. The Department of Exercise and Sport Sciences offers B.S. degrees through University College as well as a minor program available to all students. Students interested in these programs should consult with the department.

## LECTURE COURSES

## EXSS 202 Physiology of Exercise (3)

Ms. Wilson. This course provides a detailed understanding of the physiology of exercise, e.g., how the body responds and adapts to exercise and physical activity at the skeletal, muscular, and neurohormonal level. An integrative systems approach to exercise will be presented. The bioenergetics of muscular work and the cellular mechanisms of muscle contraction will be emphasized and applied to issues of health and performance.

## EXSS 303 Human Anatomy and Physiology I (3)

Mr. Dancisak. Prerequisites: CELL 101/111, EEOB 101/111, CHEM 107/117, CHEM 108/118 or approval of instructor. Corequisite: EXSS 313. The first of two sequenced courses intended to address human anatomy and physiology. Special emphasis is given to the chemical basis of life; cells and cellular metabolism; histology and tissues; the endocrine, skeletal, and neurological systems.

## EXSS 304 Human Anatomy and Physiology II (3)

Mr. Dancisak. Prerequisites: EXSS 303/313 or approval of instructor. Corequisite: EXSS 314. The second in a sequence of courses intended to address human anatomy and physiology. Special emphasis is given to the respiratory, digestive, cardiovascular, lymphatic and reproductive systems; nutrition and metabolism; water, electrolyte, and acid base balance; human growth and development.

## EXSS 310 Biomechanics of Exercise and Sport (3)

Mr. Dancisak. Prerequisites: EXSS 303/313, 304/314 or approval of instructor. Corequisite: EXSS 312. An investigation of the principles of physics, e.g. Newtonian mechanics, as they relate to human movement. Topical areas include force and motion relationships, mechanics of projectile motion, applications of fluid mechanics in aquatics, applications to instrumentation.

EXSS 311 Mental and Behavioral Aspects of Sport (3)
Mr. Green. Prerequisite: PSYC 100, 101 or 102. This course presents an overview of exercise and sport psychology and is composed of three sections: the social psychology of sport, performance enhancement techniques, and health psychology. Topics such as group dynamics, motivation, team cohesion, self-regulation, self-talk, concentration, exercise adherence, stress management, and self-conceptualization are included.
EXSS 402 Advanced Exercise Physiology (3)
Ms. Wilson. Prerequisite: EXSS 202 or approval of instructor. Corequisite: EXSS 413. A continuation of EXSS 202, the major focus of the course is on cardiovascular and respiratory physiology. Additional topics include exercise in extreme environments, exercise during pregnancy, exercise and aging. Students will gain understanding of the integrative nature and broad application of exercise physiology as well as the principles and techniques applicable to athletic, clinical, and sedentary populations. Service learning component available.

## EXSS 407 Motor Learning, Development and Control (3)

Mr. Dancisak. Prerequisite: EXSS 304 or approval of instructor. Corequisite: EXSS 417. This course explores the observable movement behavior patterns of humans from early infancy to late adulthood. Concomitant physiological, psychological and anatomical stages of human development will serve as the foundation of the investigation. Students will study the various methods of learning movement skills and the latest theories about the manner in which humans control their musculoskeletal system.

## EXSS 418 Philosophy of Sport (3)

Mr. Green. This course is intended to assist the student in the development of his or her own philosophy toward sport. The content of the course will include three main sections: (1) how to do philosophy (2) an overview of various philosophical camps (e.g., dualism, materialism, humanism, Zen, and existentialism), and (3) the application of philosophy to sport. The ultimate objective of developing one's own philosophy will be realized through library/internet research, introspection, and the acquisition of knowledge.
EXSS 472 Seminar in Sports Medicine (3)
Mr. Green. Prerequisites: EXSS 303/313, 304/314. Methods and procedures in restoring and ameliorating the physically handicapped with corrective exercises for specific disabilities and adapted sports. Emphasis is placed on the treatment of injuries, both new and recurring, sustained as a result of sports participation. The course is taught by a physician.

## LABORATORY COURSES

## EXSS 312 Biomechanics of Exercise and Sport Laboratory (1)

Mr. Dancisak. Corequisite: EXSS 310. The laboratory provides the opportunity for students to construct and experience qualitative and quantitative methods for assessing movement; design and apply mechanical principles toward improving movement quality or reducing injury in sport and work place settings; develop knowledge and experience using kinetic and kinematic data collection instrumentation.

## EXSS 313 Human Anatomy \& Physiology Laboratory I (1)

Mr. Dancisak. Corequisite: EXSS 303. The laboratory is designed to actively involve students in learning the gross anatomy of the musculoskeletal system supporting structures. Dissection and exploration of human cadavers are integral components of the lab experience. Subject matter will
include but not be limited to the following: levels of organization, metabolism, histology, the integumentary, skeletal, muscular, and endocrine systems.

## EXSS 314 Human Anatomy \& Physiology Laboratory II (1)

Mr. Dancisak. Corequisite: EXSS 304. The laboratory is designed to actively involve students in learning the principles and applications of anatomy and physiology. Gross dissection and exploration of human cadavers are integral components of the lab experience. Subject matter will include the following: blood, the cardiovascular system, the lymphatic system, the digestive system, and the reproductive system.

## EXSS 413 Advanced Exercise Physiology Laboratory (1)

Ms. Wilson. Prerequisite: EXSS 202 or approval of instructor. Corequisite: EXSS 402. This course is designed to provide students with the knowledge and skills necessary to perform laboratory testing used in the study of exercise physiology. Students will learn to operate equipment used to assess fitness and athletic performance, e.g., metabolic cart, electrocardiograph, lactate analyzer, oxygen saturation body composition analysis. In addition, students will learn to develop exercise programs as well as risk assessment and safety procedures involved in exercise testing.

## EXSS 417 Motor Learning, Development and Control Laboratory (1)

Mr. Dancisak. Corequisite: EXSS 407. This laboratory explores and documents observable movement patterns of humans, from early infancy to late childhood. The exploratory process begins by having each student write a "movement autobiography." The self-history will be referenced throughout the semester with the specific topics addressed in the companion lecture series. Each lab experience is designed to give course participants an opportunity to observe, collect, and analyze data. Results will be presented to the entire lab group during presentation periods.

## SPECIAL PROJECTS AND TOPICS COURSES

## EXSS 399 Directed Study in Exercise and Sport Sciences (1-3)

Staff. For study, research, and projects in programs of special interest not covered in normal course offerings. Liberal arts and sciences credit by petition only.
EXSS 496, 497 Special Topics in Exercise and Sport Sciences (3)
Staff. Courses offered by visiting professors or permanent faculty. For specific course offerings see the Schedule of Classes. For description, consult the department. Liberal arts and sciences credit by petition only.

## Less Commonly Taught Languages

Office: 311 Newcomb Hall
Phone: (504) 865-5115 or 862-3121
Fax: (504) 865-5367

## Program Administrator

Thomas Klingler, French and Italian (Director)

## Faculty Advisory Committee

Harry Howard, Spanish and Portuguese
William Lennon, International Students' Center
Students who enroll in LCTL courses should normally have completed the language requirements for graduation. Classes meet once a week, and are conducted by instructors who, in most cases, are native speakers of the language. Students are expected to work independently with the text books and an audio-taped program. Grades are assigned by the instructor in consultation with the program directors.
LCTL 121 Hungarian (2)
Staff. Introduction to essential skills in Hungarian
LCTL 151 Swahili (2)
Staff. Introduction to essential skills in Swahili.

## LCTL 161 Special Language Offerings (2)

Staff. To be offered as demand arises and resources permit. Currently includes elementary Hindi and intermediate Swahili.
Please note that Haitian Creole and Arabic, which were formerly offered through the Less Commonly Taught Languages program, are now offered as 3-credit LAS courses (HACR 111 and ARBC 111 \& 112) through the Department of French and Italian.

## Pharmacology

Note: minor program only
Office: 1430 Tulane Avenue, John Bennett Johnston
Bldg. room 371
Phone: (504) 584-2631
Fax: (504) 588-5283
Website: www.tmc.tulane.edu/departments/pharmacology/pharm.html

## Program Administrator

Barbara Beckman, Ph.D., Johns Hopkins School of Medicine (Director)
The interdisciplinary minor in pharmacology is open to students majoring in biology, chemistry or psychology. Courses at the 700-level may be taken by junior and senior undergraduates by special permission. Prerequisites include Chemistry 241 and 243 Organic Chemistry I and Laboratory, Chemistry 242 and 244 Organic Chemistry II and Laboratory, and Ecology and Evolutionary Biology 333 Human Physiology.

## MINOR

A minor in pharmacology requires the successful completion of 15 credits of required and elective courses. All students working toward the minor will be required to take Chemistry 305 Drugs and Their Actions (same as Cell and Molecular Biology 305, Pharmacology 605). No more than one of the courses counting toward a pharmacology minor will count toward a departmental major.
The four electives are to be selected from among the approved list. Electives other than those listed may be substituted upon approval of the Chair of the Department of Pharmacology under special conditions. Medical School courses count as SPC in LAS.

## ELECTIVE COURSES

## Cell and Molecular Biology

**CELL 331 Cellular Neuroscience
**CELL 608 Advanced Developmental and Cell Biology
**CELL 633 Cellular Gene Regulation and Expression
**CELL 663 Cellular Neurophysiology
Ecology and Evolutionary Biology
**EEOB 201 Evolution in Human Health and Disease
**EEOB 245 Darwinian Medicine

## Chemistry

**CHEM 383 Introduction to Biochemistry
**CHEM 384 Intermediate Biochemistry
Psychology
**PSYC 651 Biological Psychology
**PSYC 653 Psychopharmacology
**PSYC 655 Behavioral Neuroendocrinology
**PSYC 657 Cognitive Neuroscience

## Pharmacology

GPHR 703 Clinical Toxicology
GPHR 704 Physiological and Biochemical Bases of Neuropharmacology
GPHR 717 General Principles of Toxicology
GPHR 718 Special Topics in Pharmacology
GPHR 719, 720 Seminar in Pharmacology
GPHR 721, 722 Advances in Pharmacology
GPHR 723, 724 Principles in Pharmacology
GPHR 750 Research in Pharmacology
GPHR 756 Mechanisms of Hormone Action
GPHR 706 Endocrine Pharmacology
** LAS course and does not count toward SPC.

## ROTC

## AEROSPACE STUDIES (AIR FORCE)

Office: 207 Monk Simons Building
Phone: (504) 865-5394
Fax: (504) 865-5390
Web site: http://www.afrotc@tulane.edu
Professor
John S. Chilstrom, Colonel, USAF, Master of Airpower Art \& Science, Air University (Chair)

## Assistant Professors

Brandon B. Fisher, Captain, USAF, B.S., U.S. Air Force Academy
Ghia P. Simmons, Captain, USAF, B.S., Texas Christian
The Air Force Reserve Officer Training Corps (ROTC) provides the opportunity to become an Air Force officer while completing a bachelors or masters degree. All coursework includes the study of the profession of arms, communication skills, leadership, and military/international security issues. Aerospace Studies 100- and 200-level courses meet an hour each week for one credit hour and comprise the General Military Course (GMC). The GMC courses are open to nonROTC students and no obligation for military service is incurred. Three hundred and 400-level courses comprise the Professional Officer Course (POC) and meet for three hours each week. The POC courses are open only to ROTC cadets, or to students by specific department approval. In addition, all cadets attend two hours of leadership laboratory weekly.

## AERO 101 Foundations of the U.S. Air Force I (1)

Staff. A survey course introducing students to the United States Air Force and Air Force Reserve Officer Training Corps. Topics include: mission and organization of the Air Force, officership and professionalism, military customs and courtesies, Air Force officer opportunities, and an introduction to communication skills.

## AERO 102 Foundations of the U.S. Air Force II (1)

Staff. A continuation survey course, introducing students to the United States Air Force and Air Force Reserve Officer Training Corps. Topics include: US Air Force installations, and professions; introduction to flight; geographical awareness, U.S. defense policy; military balance; terrorism and a study of other branches of the Armed Forces; and communication skills.

## AERO 201 The Evolution of USAF Air and Space

Power I (1)
Staff. The course examines general aspects of air and space power through a historical perspective, from the first balloons and dirigibles to World War II. Historical examples are used to show the development of present day Air Force capabilities and missions. Also covered are doctrine, principles of war, and tenets of air and space power.

## AERO 202 The Evolution of USAF Air and Space Power II (1)

Staff. The course examines general aspects of air and space power through a historical perspective, from World War II to the modern day conflicts, including terrorism and combat in Afghanistan. Historical examples are used to show the development of present day Air Force capabilities and missions. Also covered are doctrine, principles of war, and tenets of air and space power.
AERO 301 Leadership Studies I (3)

Staff. Prerequisite: approval of department. A study of leadership, followership, management fundamentals, personnel and evaluation systems, feedback and counseling, ethics, and communication skills required of Air Force officers. Case studies examine leadership and management situations as a means of demonstrating and exercising practical application of the concepts studied.

## AERO 302 Leadership Studies II (3)

Staff. Prerequisite: approval of department. A continuation course on leadership, followership, management fundamentals, personnel and evaluation systems, feedback and counseling, ethics, and communication skills required of Air Force officers. Case studies examine leadership and management situations as a means of demonstrating and exercising practical application of the concepts studied.

## AERO 401 National Security Affairs I (3)

Staff. Prerequisite: approval of department. The course examines the national security process, regional studies, advanced leadership ethics, and Air Force doctrine. Special topics of interest focus on the military as a profession, officership, responsibilities of command, military justice, civilian control of the military, preparation for active duty, and current issues affecting military professionalism. Continued emphasis is given to refining communication skills.

## AERO 402 National Security Affairs II (3)

Staff. Prerequisite: approval of department. A continuation course examining the national security process, regional studies, advanced leadership ethics, and Air Force doctrine. Special topics of interest focus on the military as a profession, officership, responsibilities of command, military justice, civilian control of the military, preparation for active duty, and current issues affecting military professionalism. Continued emphasis is given to refining communication skills.

## MILITARY SCIENCE (ARMY)

Office: 104 Monk Simons Building
Phone: (504) 865-5594
Fax: (504) 865-6798
Professor
Benjamin A. Kirkland, Sr., M.S., Georgia Institute of Technology (Chair)
Assistant Professors
Floyd Dickson, Major, M.B.A., Western New England
Robert Ballagh, Major, B.A., University of West Florida
Michael Kazmierzak, B.S., Purdue
Gilberto Harris, Master Sergeant
Ralph Buford, Sergeant First Class
Ezzard Pickett, Sergeant First Class
Army Reserve Officers’ Training Corps (ROTC) is a comprehensive program of studies through which a student can qualify to be commissioned as an officer in the United States Army, the National Guard, or the United States Army Reserve. Students learn leadership and management skills that will help in any profession. The Army ROTC program consists of a two-year Basic Course, which is open to freshmen and sophomores only, and a two-year Advanced Course. Nonscholarship students participating in the first two years of ROTC do not incur any obligation to the U.S. Army.
MILS 101 Foundations of Officership (1)
Introduces students to issues and competencies that are central to a commissioned officer's responsibilities. Establish framework for understanding officership, leadership, and Army values followed and "life skills" such as physical fitness and time management. Course includes periodic field trips. Two hours of lecture and one hour of laboratory. Fall semester.
MILS 102 Basic Leadership (1)
Establishes foundation of basic leadership fundamentals such as problem solving, communications, briefings and effective writing, goal setting, techniques for improving listening and speaking skills and an introduction to counseling. Course includes periodic field trips. Two hours of lecture and one hour of laboratory. Spring semseter.
MILS 201 Individual Leadership Studies (1)
Students identify successful leadership characteristics through observation of others and self through experiential learning exercises. Students record observed traits (good and bad) in a dimensional leadership journal and discuss observations in small group settings. Course includes training in physical conditioning and periodic field trips. Two hours of lecture and one hour of laboratory. Fall semester.

## MILS 202 Leadership \& Teamwork (1)

Staff. Prerequisite: passing grade in MILS 201 or approval of department. Study examines how to build successful teams, various methods for influencing action, effective communication in setting and achieving goals, the importance of timing the decision, creativity in the problem solving process, and obtaining team buy-in through immediate feedback. Course includes training in physical conditioning and periodic field trips. Two hours of lecture and one hour of laboratory. Spring semester.

## MILS 301 Leadership \& Problem Solving (2)

Staff. Prerequisite: approval of department. Students conduct self-assessment of leadership style, develop personal fitness regimen, and learn to plan and conduct individual/small unit tactical training while testing reasoning and problem-solving techniques. Students receive direct feedback on leadership abilities. Course includes training in physical conditioning and periodic field trips. Three hours of lecture and one hour of laboratory. Fall semester.

MILS 302 Leadership \& Ethics (2)
Staff. Prerequisite: MILS 301. Examines the role communications, values, and ethics play in effective leadership. Topics include ethical decision-making, consideration of others, spirituality in the military, and survey Army leadership doctrine. Emphasis on improving oral and written communication abilities. Course includes training in physical conditioning and periodic field trips. Three hours of lecture and one hour of laboratory. Spring semester.

## MILS 401 Leadership and Management (1)

Staff. Prerequisite: MILS 302. Develops student proficiency in planning and executing complex operations, functioning as a member of a staff, and mentoring subordinates. Students explore training management, methods of effective staff collaboration, and developmental counseling techniques. Course includes training in physical conditioning and periodic field trips. Three hours of lecture and one hour of laboratory. Fall semester.

## MILS 402 Officership (1)

Staff. Prerequisite: MILS 401. Study includes case study analysis of military law and practical exercises on establishing an ethical command climate. Students must complete a semester long Senior Leadership Project that requires them to plan, organize, collaborate, analyze, and demonstrate their leadership skills. Course includes training in physical conditioning and periodic field trips. Three hours of lecture and one hour of laboratory. Spring semester.
MILS 492 Independent Studies (1)
Staff. Prerequisite: Open only to those students who have completed Military Science requirements and have extended scholarship benefits. Approval of the department chair required.

## NAVAL SCIENCE (NAVY)

Office: Navy Building
Phone: (504) 865-5104
Fax: (504) 862-8768
Professor
Richard E. Davis, Jr. CAPT, USN, M.A., Salve Regina
Associate Professor
Michael P. Hallal, CDR, USN, M.S., Naval Postgraduate School
Assistant Professors
Timothy W. Thomasson, CAPT, USMC, B.S., North Carolina State
Richard J. Gorman, LT, USN, B.S., University of Florida
Erik J. Powell, LT, USN, B.S., Montana State
Brian R. Weisker, LT, USN, B.S., United States Naval Academy
The Naval ROTC curriculum leads to commissions in the U.S. Naval Reserve or U.S. Marine Corps Reserve.
Candidates for commissions in the Naval Reserve are required to complete Naval Science 101, 102, 200, 201, 301, 302, 401, and 402. Candidates for commission in the Marine Corps Reserve take Naval Science 101, 102, 200, 303, 402, and 403. Up to 15 credits of naval science course work may be counted in the credits required for graduation.
In addition to required naval science courses, all Navy-option scholarship students must complete two semesters each in calculus prior to completion of their sophomore year and calculus-based physics prior to completion of their junior year. All NROTC students attend naval science laboratories at 7 a.m. Thursday.
Non-NROTC students may be admitted to any of the naval science courses.

## NAVS 101 Introduction to Naval Science (3)

Staff. A general introduction to the Navy and Marine Corps. The instruction places particular emphasis on the mission, organization, regulations, and broad warfare components of the Navy. Included is an overview of officer and enlisted rank and rating structures, the basic tenets of naval courtesy and customs, discipline, Navy Core Values, naval leadership, and ship's nomenclature. The course also provides a conceptual framework/working vocabulary for NROTC students to use on Summer Cruise. The student is made cognizant of the major challenges facing today's naval officer.

NAVS 102 Seapower and Maritime Affairs (3)
Staff. Designed to develop the student's knowledge and interest in sea power and maritime affairs, this course is oriented towards the influence of sea power upon history and the implementation of sea power as an instrument of national policy. The survey begins with the age of galley warfare and concludes with an analysis of current military operations.

NAVS 200 Leadership and Management (3)
Staff. Comprehensive study of organizational behavior and management. Topics include survey of management functions of planning, organizing, and controlling; an introduction to individual/group behavior in organizations; and extensive study of motivation/leadership. Major behavior theories explored in detail. Practical applications explored through using experiential exercises, case studies, and laboratory discussions. Other topics include decision making, communication, responsibility, authority, accountability, and total quality leadership.
NAVS 201 Naval Ships Systems I (3)
Staff. An introduction to the principles of ship design and operation. Ship stability, structure, main propulsion system, and auxiliary subsystems are carefully examined with emphasis on the interdependency of the subsystems which comprise the overall ship system.
NAVS 301 Navigation (3)
Staff. A comprehensive study designed to introduce the theory and practical applications of marine navigation. Topics include an understanding of the marine environment, terrestrial and celestial navigation theory, navigational equipment, visual navigation aids, nautical charts and publications, and electronic navigation theory.
NAVS 302 Navigation II (3)
Staff. A comprehensive study of relative motion, vector-analysis theory, formation tactics, and ship employment. Also included are introductions to naval operations and operations analysis, ships behavior and characteristics in maneuvering, applied aspects of shiphandling, afloat communications, and command and control.
NAVS 303 Evolution of Warfare (3)
Staff. This course traces the development of warfare from the dawn of recorded history to present, focusing on the impact of major military theorists, strategists, tacticians, and technological developments. Students acquire a basic sense of strategy, develop an understanding of military alternatives, and see the impact of historical precedence on military thought and actions. This course concludes with a review of the various modern warfare concepts and principles outlined in the National Command Authorities Joint Vision 2010, and briefly explores the future of armed conflict.

NAVS 401 Naval Ships Systems II (3)
Staff. This course provides an introduction to theory and principles of operation of naval weapons systems. It includes coverage of types of weapons and fire control systems, capabilities and limitations, theory of target acquisition, identification and tracking, trajectory principles, and basics of naval ordinance.
NAVS 402 Leadership and Ethics (3)
Staff. Completes final preparations of NROTC ensigns/2nd Lieutenants for their first fleet assignments as division officers or platoon commanders. Topics of discussion include: military leadership, values/professional ethics; the Uniform code of Military Justice and Navy regulations emphasizing Navy/Marine Corps junior officer's typical application of law; and separate discussions of Navy and Marine Corps personnel policies and practices relating to the roles of enlisted members, junior and senior officers, personnel counseling, evaluation, advancement, career planning, personal finances, drug and alcohol abuse, fraternization and sexual harassment, and reporting aboard to their first command.

## NAVS 403 Amphibious Warfare (3)

Staff. This course surveys the historical development of amphibious doctrine and the conduct of amphibious operations. Emphasis is placed on the evolution of amphibious warfare in the 20th century, especially during World War II. The course explores present day capabilities, limitations, and force structure of current amphibious forces, and establishes a foundation for understanding the future of littoral warfare.

## University College

University College offers bachelor and associate degree, certificate, and professional development programs to meet the needs of the Greater New Orleans and Mississippi Gulf Coast communities, as well as the demands of full-time students working in special degree areas. The constant evolution of academic professional communities provides challenges that University College answers with sophisticated and specialized curricula. University College shares the traditions of Tulane University and extends the commitments and resources of a University founded in 1832 to its extensive and diverse student body. Courses are designed for the needs of adults returning for part-time study, for international students, for employed persons improving their skills through non-credit short courses and seminars, and for "traditional" college students recently graduated from high school. Special programs are also available for pre-college students and senior citizens.
Tulane's traditions of part-time education are as old as the university itself. In 1888, University President William Preston Johnston established a threefold objective for Tulane: the education of youth, community-oriented adult education, and the advancement of knowledge through research. In 1942, largely through the efforts of the late Roger P. McCutcheon, Dean of the Graduate School, University College was established: so named because its offerings cut across the university's many academic fields.
Today, University College offices located in Gibson Hall on Tulane University’s Uptown Campus, but also makes its programs available at campuses downtown at the New Orleans Centre, in Harahan at the Elmwood Campus, and in Biloxi at the Mississippi Coast Campus in Edgewater Mall. It also offers courses online.
The University College curricula are designed to fill the needs of its distinctive population. Current offerings include

- Degree programs in the liberal arts and sciences
- A program leading to a Bachelor of General Studies
- A program leading to a Bachelor of Arts in Social Sciences
- A full-time program leading to a Bachelor of Science with a major in Exercise Science
- Bachelor Degree programs in Computer Information Systems, Organizational Information Technology, Media Arts, and Paralegal Studies
- Post-Baccalaureate certificate programs in Advanced Database Systems, Applied Business, Computer Information Systems, Computer Literacy (for certified K-12 teachers only), Human Resource Management, Marketing, Media Arts, Paralegal Studies, and Small Business Development
- A Master of Liberal Arts for those already holding a baccalaureate degree
- An associate degree in Applied Business, Computer Information Systems, Organizational Information Technology, Human Resource Management, Marketing, Media Arts, Paralegal Studies, and Small Business Development
- Minors in Business Studies, Accounting and Finance, Marketing, Small Business Development, Computer Information Systems, Human Resource Management, Information Technology, Exercise and Sport Sciences, Louisiana Studies, Media Arts, Paralegal Studies, Social Work, Telecommunications, Web Site Development, Advertising, Accounting, Organizational Information Technology, and the liberal arts and sciences
- Certificates of completion in certain business areas, human resource management, and web site development
- A variety of professional development courses and seminars, ranging from standard instruction in professional and academic fields to workshops in business, health, and human relations.
Most part-time students take from five to eight years to complete a bachelor's degree, but with planning, part-time students may complete a bachelor's degree in as few as four years by enrolling in four courses each semester and in two courses each summer.


## The "Trimester" System

University College features three terms during the year-fall, spring, and summer-with approximately the same number of classes offered in each trimester. The summer trimester includes two twelve-week sessions and several six-week sessions, offered on the main campus and at satellite locations at Elmwood, Downtown, and on the Mississippi Coast Campus.

## PROGRAMS OF STUDY

One of University College's greatest strengths is the diversity of its academic offerings and the flexibility with which students may approach them. Students may pursue a degree with a major offered by University College, or they may work toward a major offered through another liberal arts and sciences undergraduate division of the University. Students who already have a bachelor's degree or who do not want to make the long-term commitment to a degree in arts and sciences may choose to earn a certificate in one of the specialty programs offered by University College. Students can also prepare to transfer to a degree program elsewhere or take miscellaneous courses that suit their personal interests or professional needs.

## Bachelor's Degree Programs

## Bachelor of Arts

- Liberal Arts majors
- Media Arts
- Organizational Information Technology
- Paralegal Studies
- Social Sciences

Bachelor of Science

- Computer Information Systems
- Exercise and Sport Sciences
- Science majors

Bachelor of Fine Arts
Bachelor of General Studies

- Humanities
- Sciences
- Social Sciences

Master's Degree Program
Master of Liberal Arts

## Associate Degree Programs

- Applied Business
- Human Resource Management
- Marketing
- Organizational Information Technology (ORIT)
- Small Business Development
- Media Arts
- Paralegal Studies
- Computer Information Systems


## Minors

- Accounting
- Accounting and Finance
- Advertising
- Business Studies
- Computer Information Systems
- Exercise and Sport Sciences
- Human Resource Management
- Information Technology
- Liberal Arts and Sciences
- Louisiana Studies
- Marketing
- Media Arts
- ORIT
- Paralegal Studies
- Small Business Development
- Social Work
- Telecommunications
- Web Site Development


## Post-Baccalaureate Certificate Programs

- Advanced Database Systems
- Applied Business
- Computer Information Systems
- Computer Literacy (for certified K-12 teachers)
- Human Resource Management
- Marketing
- Media Arts
- Paralegal Studies
- Small Business Development


## Certificates of Completion

- Business Certificates (9)
- Human Resource Management
- Website Development


## Special Programs

- Concurrent Enrollment for Advanced High School Students
- Professional Development Classes


## BACHELOR OF GENERAL STUDIES

The Bachelor of General Studies offers a broad liberal arts curriculum with a choice of a multidisciplinary, in-depth study in the sciences, social sciences, or humanities. To earn the degree, students must complete University College's proficiency requirements (7 credits in English/Writing, 3 credits of formal thought, 3 credits in foreign language, or Non-Western Culture), supporting requirements ( 3 credits each in oral communications and computer applications), and distribution requirements (12 credits from two different disciplines in the humanities, 12 credits from two different disciplines in the social sciences, and 12 credits from two different disciplines in the sciences).
Students also take 30 credits within one of the following groups of disciplines:

## Social Science

- Anthropology
- Economics
- Geography
- History
- Latin American Studies
- Political Economy
- Political Science
- Sociology
- Women's Studies


## Science

- Astronomy
- Biological Sciences
- Chemistry
- Geology
- Mathematics
- Physics
- Psychology


## Humanities

- African Diaspora Studies
- Architecture
- Art Studio
- Art History
- Chinese
- Classics
- Communication
- English
- French
- German
- Hebrew
- Italian
- Japanese
- Jewish Studies
- Linguistics
- Music
- Philosophy
- Russian
- Spanish
- Theater and Dance

Five courses must be numbered 300 or higher. One course must be numbered 400 or higher.
As with all other University College degrees, students seeking the Bachelor of General Studies degree must also complete a minor of 15-24 credits.

## Business Studies

Our increasingly sophisticated business community demands effective leaders, those who possess strong analytical skills, an ability to deal with diverse audiences, and an awareness of current trends in business practices. Tulane's evening programs in Business Studies provide valuable opportunities for individuals seeking business career advancement. There is a 27 -credit limit on the number of business courses a student in University College may take.

Note: Business courses at University College are not transferable to A.B. Freeman School of Business.

## MINORS OFFERED

## Minor in Accounting (UACT)

Any baccalaureate degree program offered by University College may be completed with a minor in Accounting. This minor program provides students with a background in the beginning and intermediate accounting. This minor in Accounting consists of Accounting 111, Accounting 112, Intermediate Accounting 221, Intermediate Accounting 222, and any other two courses in Accounting with the UACT prefix.
Minor in Accounting and Finance (ACFI)
Any baccalaureate degree program offered by University College may be completed with a minor in Accounting and Finance. This minor consists of Accounting 111 and 112, Intermediate Accounting 221 and 222, Introduction to Finance 221, Financial Markets 346, and one of the following: Introduction to Investing 254, or Money and Banking 331, or Personal Financial Planning 356. Though it is not required, students are encouraged to complete at least one economics course.

## Minor in Advertising (UADV)

Any baccalaureate program offered by University College may be completed with a minor in Advertising. This minor program provides students with a background in the fundamentals of advertising. This minor in Advertising consists of Intro to Public Relations 301, Intro to Graphic Design 280, Principles of Marketing 320, Advertising 340, Advertising II 341, and one of the following: E-Commerce 260, Editing, Layout and Design 330, or Expository Writing 263. Note: For Media Arts majors only: three credits can count towards both a major and a minor.
Minor in Business Studies (USBN)
Any baccalaureate degree program offered by University College may be completed with a minor in Business Studies. This minor program provides students with a background in accounting, finance, management, marketing, and personnel. The minor in Business Studies consists of Accounting 111; Business Law 340 or 345; Finance 221; Management 231 or 336; Human Resource Management 333 or Business Ethics 338; and Marketing 320. Although not required, it is strongly recommended that the student also take one course in economics.

## Minor in Human Resource Management (HRMG)

Any baccalaureate degree program offered by University College may be completed with a minor in Human Resource Management. This minor program provides students with a background in accounting, management, and Human Resource Management. This minor consists of Accounting 111; Management 231; Human Resource Management 333; Human Resource Management 352; Human Resource Management 365; and Human Resource Management 370.

## Minor in Marketing (UMKT)

Any baccalaureate degree program offered by University College may be completed with a minor in Marketing. This minor program provides students with a background in accounting, management, business communication, consumer behavior, advertising, and marketing. This minor in Marketing consists of Management 225; Marketing 320; Marketing 330; Marketing 340; Management 231 or 336; and Marketing 341.

## Minor in Small Business Development (USBD)

Any baccalaureate degree program offered by University College may be completed with a minor in Small Business Development. This minor program provides students with a background in accounting, management, marketing, and small business planning. This minor in consists of Accounting 111; Management 231 or 336; Management 225; Management 260; Management 365 and Marketing 320.
Note: For all minors in business, at least half of the credits must be completed at Tulane, with a 2.0 GPA in all required course work for the minor.

## ASSOCIATE DEGREES OFFERED IN APPLIED BUSINESS

## Associate Degrees in Business

University College offers Associate of Arts degrees in Applied Business Studies, Human Resource Management, Marketing and Small Business Development. These degrees are designed to recognize satisfactory completion of a two-year program of specialized business study.
Students must have a 2.0 grade point average in all required coursework as well as a 2.0 cumulative GPA. At least half of the general requirements of 37 credits and at least 12 credits of the core requirement of 24 credits must be completed at Tulane. There is a 27 credit limit on the number of business courses a student in University College may take. Note: Business courses at University College are not transferable to A.B. Freeman School of Business.
I. General Requirements for all Associate Degrees in Business
The following 37 credits are required for all of the four Applied Business Associates Degrees:
Course
English 101 or UENG 125 ..... 4
Credits
UENG 331 or English 367 ..... 3
Math 111 or UMGT 325 or Phil 106 or 121 ..... 3
Econ 101
Oral Communications: USPC 140 Intro to Public Speaking, USPC 311 Small Group Communication, or THEA 210 Fundamentals of Acting ..... 3
Any 3-Credit Computer Course ..... 3
Social Science Electives ..... 6
Humanities Electives ..... 6
Science Electives ..... 6
Total ..... 37
In addition to the 37 credits of general requirements, the Associate of Arts in Business studies requires 24 credits of business core requirements for a total of 61 credits.

## II. Core Requirement

At least 12 of these core credits must be completed at Tulane.

## 1. Core requirements for the Associate in Applied Business (APBS):

## Course

UACT 111 Elementary Accounting
UFIN 221 Intro to Finance 3
UMGT 231 Principles of Management or
UMGT 336 Intro to Modern Organizations 3
UBSL 340 Legal Aspects of Business or
UBSL 345 Commercial Law 3
UMGT 338 Business Ethics 3
$\begin{array}{lll}\text { UHRM } 333 & \text { Intro Human Resource Mgmt or } \\ & \text { Business Elective }\end{array}$
UMKT 320 Intro to Marketing Principles 3
Business Elective 3
Total 24
2. Core requirements for the Associate in Human Resource Management (UHRM):

Course
Credits
UACT 111 Elementary Accounting I ..... 3
UMGT 231 Principles of Management or
UMGT 336 Introduction to Mod Org ..... 3
UHRM 333 Human Resource Mgmt ..... 3
UHRM 352 Compensation \& Benefits ..... 3
UHRM 365 Planning, Recruiting \& Selection of Human Resources ..... 3
UHRM 370 Performance Appraisal \& Productivity ..... 3
UHRM 392 Employment \& Labor Law ..... 3
Business Elective ..... 3
Total ..... 24
3. Core requirements for the Associate in Marketing (UMKT):
Course
Credits
UACT 111 Elementary Accounting ..... 3
UMGT 231 Principles of Management or
UMGT 336 Intro to Modern Organizations ..... 3
3UMGT 225 Business Communications ..... 3
UMKT 320 Intro to Marketing Principles ..... 3
UMKT 330 Consumer Behavior ..... 3
UMKT 340 Principles of Advertising ..... 3
UMKT 341 Advertising II or a business elective ..... 3
Business Elective ..... 3
Total ..... 24
4. Core requirements for the Associate in Small Business Development (USBD):
Course

## Credits

UACT 111 Elementary Accounting ..... 3
UMGT 231 Principles of Management or
UMGT 336 Intro to Modern Organizations ..... 3
UBSL 340 Legal Aspects of Business or
UBSL 345 Commercial Law ..... 3
UMGT 365 Developing a Small Business ..... 3
UMGT 225 Business Communication ..... 3
UMKT 320 Intro to Marketing Principles ..... 3
UMGT 260 E-Commerce or a Business elective ..... 3
Business elective ..... 3
Total ..... 24
Post-Baccalaureate Certificates in Applied Business, Human Resource Management, Marketing, and Small Business DevelopmentStudents must have a 2.0 grade point average in all required coursework. Half of all the required24 credits must be completed at Tulane. Courses taken for a Baccalaureate degree will not beaccepted for transfer credit towards the PBC program. Only those courses successfully completed,"C" or better, after a student received a Baccalaureate Degree will be considered for credit.

1. Requirements for the Applied Business PBC (PBC/APBS/CB):
Course
UACT 111 Elementary Accounting ..... 3
Credits
UFIN 221 Intro to Finance
UMGT 231 Principles of Management or
UMGT 336 Intro to Modern Organizations ..... 3
UBSL 340 Legal Aspects of Business or
UBSL 345 Commercial Law ..... 3
UMGT 338 Business Ethics ..... 3
UHRM 333 Intro to Human Resource Management or a business elective ..... 3
UMKT 320 Introduction to Marketing Principles ..... 3
Business Elective ..... 3
Total ..... 24
2. Requirements for the Human Resource Management PBC (PBC/UHRM/CB):
Course
UACT 111 Elementary Accounting
UMGT 231 Principles of Management or
UMGT 336 Introduction to Mod Org
UHRM 333 Human Resource Management Credits3
UHRM 352 Compensation and Benefits ..... 3
UHRM 365 Planning, Recruiting and Selection of Human Resources ..... 3
UHRM 370 Performance Appraisal and Productivity ..... 3
UHRM 392 Employment and Labor Law ..... 3
Business Elective ..... 3
Total ..... 24
3. Requirements for the Marketing PBC (PBC/UMKT/CB):
Course
Credits
UACT 111 Elementary Accounting ..... 3
UMGT 231 Principles of Management or
UMGT 336 Intro to Modern Organizations ..... 3
UMGT 225 Business Communications ..... 3
UMKT 320 Intro to Marketing Principles ..... 3
UMKT 330 Consumer Behavior ..... 3
UMKT 340 Principles of Advertising ..... 3
UMKT 341 Advertising II or a business elective ..... 3
Business Elective ..... 3
Total ..... 24

## 4. Requirements for the Small Business Development PBC (PBC/USBD/CB): <br> Course

UACT 111 Elementary Accounting
UMGT 231 Principles of Management or
UMGT 336 Intro to Modern Organizations 3
UBSL 340 Legal Aspects of Business or
UBSL 345 Commercial Law 3
UMGT 365 Developing a Small Business 3
UMGT 225 Business Communication 3
UMKT 320 Intro to Marketing Principles 3
UMGT 260 E-Commerce or a business elective 3
Business Elective 3
Total 24
Certificates of Completion

- Beginning Accounting Certificate: Requires six credits, Elementary Accounting (UACT 111)(3) and Elementary Accounting (UACT 112)(3). (ACBG)
- Intermediate Accounting Certificate: Requires six credits, Intermediate Accounting (UACT 221)(3) and Intermediate Accounting (UACT 222)(3). (ACIN)
- Accounting Certificate: Requires 12 credits of accounting of which six credits must be Elementary Accounting (UACT 111)(3) and Elementary Accounting (UACT 112)(3). The other six hours can be taken from any of the (UACT) accounting courses. (CA)
- Management Certificate: Requires six credits, Principles of Management (UMGT 231)(3) and Business Law (USBL 340 or 345)(3). (MGMT)
- Marketing Certificate: Requires six credits, Introduction to Marketing (UMKT 320)(3) and Principles of Advertising (UMKT 340)(3). (MKTG)
- New Ventures Certificate: Requires 9 credits, Principles of Management (UMGT 231)(3) or Human Resources (UHRM 333)(3); Business Law (UBSL 340 or 345)(3); and Introduction to Marketing (UMKT 320)(3) or Principles of Advertising (UMKT 340)(3). (VENT)
- Investments Certificate: Requires six credits, Introduction to Investments (UFIN 254)(3) and Personal Financial Planning (UFIN 356)(3). (INVT)
- Finance Certificate: Requires 12 credits, of which six hours must be Introduction to Finance (UFIN 221)(3) and Introduction to Investments (UFIN 254)(3). The other six credits can be taken from any of the finance courses (UFIN). (FINC)
- Human Resource Management Certificate: Requires 12 credits, of which 9 credits must be in the courses Human Resources (UHRM 333)(3); Planning, Recruiting, and Selection of Human Resources (UHRM 365)(3); and Compensation and Benefits (UHRM 352)(3). The remaining three credits can be taken from any HR course (UHRM). (HRMG)
- Certificate in Banking: Requires 12 credits, Elementary Accounting (UACT 111)(3); Introduction to Finance (UFIN 221)(3); Legal Aspects of Business (UBSL 340)(3); and Money and Banking (UFIN 331)(3) or a designated elective in the banking area. (UCIB)(Electives to be added in the future)


## Baccalaureate and Masters Degrees in Business

Students who wish to pursue a Bachelor of Science in Management or a Master of Business Administration Degree (full- or part-time) should contact the Admissions Office, A.B. Freeman School of Business, (504) 865-5410.

## Computer Information Systems

The Computer Information Systems program provides students with the necessary knowledge and ability to function effectively in programming, database, systems analysis, networking, and other careers in applied computing. It incorporates the latest technologies, new methods of information systems development, and the practical demands of business and industry. Graduates are able to apply their skills to the applied computing problems of a great variety of organizations. This program offers a Bachelor of Science, an Associate of Science, a minor, and post-baccalaureate certificate.

## BACHELOR OF SCIENCE

To receive a Bachelor of Science, students must complete at least 124 credits with a cumulative grade point average of at least 2.0 (C) in the major courses and at least a 2.0 in all required coursework. All required courses are offered during the early evening hours.

Requirements for the degree include: University College's proficiency requirements (7 credits in English/Writing, 6-8 credits of mathematics), supporting requirements (3 credits each in oral communications and computer applications), foreign language/culture (6 credits) and distribution requirements ( 12 credits from two different disciplines in the humanities, 12 credits from two different disciplines in the social sciences, and 12 credits from two different disciplines in the sciences); 10 to 21 credits of general electives; a minor ( 15 to 24 credits); and 11 courses in Computer Information Systems.
These 11 courses ( 33 credits) consist of Computer Information Systems 110, 160 (or 165), 221 (or 291 or 293), 282 (or 295), 322, 323, 340 (or 342), and 341 (or 343); and four CIS elective courses, only one of which may be at the 100 level, two of which must be at the 300 level, and one of which must be in the 370 series.

Students who believe they are qualified to replace lower level CIS courses with higher level ones should consult the CIS Director and Advisor to safely and expertly explore their options.

## ASSOCIATE OF SCIENCE

A two-year degree program is offered for those students who have little or no prior college experience. This option requires that students successfully complete 62 credit hours. The requirements for this degree are Computer Information Systems 110, 160 (or 165), 221 (or 291 or 293), 282 (or 295), 322, 323, 340 (or 342), and 341 (or 343); one course in mathematics; English 101 or UENG 125; one humanities elective; one social science elective; one science elective; and general electives (23-25 credits).

## POST-BACCALAUREATE CERTIFICATE

This program is offered for those students who already hold a baccalaureate degree. The certificate will be earned upon successfully completing the 33 credits in Computer Information Systems required for the major (see Bachelor of Science for listing).

## MINOR IN COMPUTER INFORMATION SYSTEMS

Students in a baccalaureate degree program other than Computer Information Systems may minor in CIS by completing Computer Information Systems 110, 160 (or 165), 221 (or 291 or 293), 282 (or 295), 322, and 340 (or 342).
The minor is designed to be a strong program that introduces the student to the foundations of Computer Information Systems. The student may elect to take additional courses in CIS or in applied computing areas. Consultation with the Director of CIS is strongly recommended.

## MINOR IN INFORMATION TECHNOLOGY

Computer Information Systems offers a minor in Information Technology. This includes courses taught mainly hands-on using a variety of microcomputer "package" tools. A total of eighteen credits (6 courses) are required for completion of this minor. Students can put together an Information Technology minor from classes involving UINS, UTEL, UMAR, UPAR courses. Details can be found in the Degrees and Certificates booklet. At least two courses must be taken at the 300 level.

While not preparing students to be programmers, programmer-analysts, or data communications experts-which is rather the focus of Computer Information Systems-Information Technology employs commercial software packages and provides education for end users from an organizational problem-solving perspective.

## MINOR IN TELECOMMUNICATIONS

Telecommunications is becoming what applied computing was in the 1970s and 80s-developing in many directions. Computer networking, server administration, telephony, the Internet, distance learning, telecommuting, videoconferences, voice/data/image/motion video integration, global communications - these are only a few of the directions. Topics and objectives for student learning range from the foundational to the detailed and complex.
At University College, Telecommunications is emerging as a critical field. The College now provides an academic minor and will continue to gradually expand offerings as the field is more clearly defined.

The requirements for the minor in Telecommunications are as follows (six courses total): a) required for all students: UTEL 200 and UTEL 261; b) two courses from the range UTEL 201 through 289, or UINS 227; c) two courses from the range UTEL 291 through 399, or UINS 312. Consult with the CIS director before enrolling in UTEL 290.

## ADVANCED POST-BACCALAUREATE CERTIFICATE FOR THE DATABASE SYSTEMS PROFESSIONAL

The Advanced Post-Baccalaureate Certificate program is designed to assist the computer professional in developing the understandings and skills required to advance a career in database systems. Students who complete this program will be prepared to pursue a variety of high tech career opportunities. The program is infused with Oracle Corporation's relational database software and tools to further the student's career opportunities. Tulane has partnered with Oracle Corporation since 1995 and is currently a member of the Oracle Academic Initiative. Oracle relational database, application development tools, and other products are used extensively in this program. The program offers students the opportunity to learn both a broad range of application development concepts and competencies, but also principles and skills in database administration.
Prerequisites: Any undergraduate degree is accepted as meeting the prerequisite education for this Advanced Post-Baccalaureate Certificate. In addition, those who have not attained the technical prerequisites must complete coursework at Tulane that would give them this required background: UCIS 160/Elementary Pascal (fundamentals of programming); UINS 220/Applications of Database Software (fundamentals of database with Access); and UTEL/261 Networking Essentials (introductory course in networking). Students who do not meet the prerequisites are allowed to pursue some of the courses, on a course-by-course basis; they must obtain approval from the Instructor of each course. Such students are not eligible to receive the Certificate.

Course Requirements: Five semesters should be allocated in the student's plan to complete the eight required courses. To earn the Advanced Postbaccalaureate Certificate, a student must successfully complete 8 courses, including all the following - UCIS 221 Problem Solving with PL/SQL, UCIS 282 Problem Solving with Developer/Forms, UCIS 340 Relational Datebase Analysis \& Logical Design, 341 Relational Database Physical Design \& Implementation, UCIS 347 Database Administration, UCIS 378 Client/Server Database Application Development; and any two of the following - UCIS 348 Advanced Database Administration, UCIS 373 Information Engineering, UCIS 379 Data Warehousing.

## ADD-ON CERTIFICATIONS FOR TEACHERS IN EDUCATIONAL TECHNOLOGY

Tulane’s program in Educational Technology has been created to assist K-12 classroom teachers to incorporate new computing and Internet technologies into their teaching. The Louisiana Department of Education allows teachers to instruct in computer literacy if they hold a Computer Literacy Certification, for which the following courses are required: UINS 100-Introduction to Microcomputers, UINS 227-Working with the Internet, and UEDT 256-Software Integration in Education.

The Louisiana Department of Education allows teachers to instruct in computer science if they meet state minimum requirements of three courses in computer programming. Teachers simply submit an official transcript to the state showing that they have met the minimum requirements. Tulane's CIS program offers numerous courses that teachers can use to meet this requirement. The recommended sequence is: UCIS 150, 160, 251, 293.

## WEBSITE DEVELOPMENT (SEE MEDIA ARTS)

## Exercise Science

Exercise Science is a full-time program designed to introduce students to the interdependence between mind and body during physical activity. It is intended to address not only the anatomical, biomechanical, and physiological consequences of exercise on the body, but also the social and psychological context within which physical activity is pursued. The major's mission is to investigate the effect of physical activity on the lives of individuals who engage in it at all levels of proficiency, i.e., from performance enhancement to wellness for the masses. The major serves as undergraduate preparation for students planning to pursue graduate work in exercise physiology, biomechanics, sport psychology, sport sociology, physical therapy, medicine, or allied health. It also serves to facilitate employment upon graduation in areas such as corporate wellness, cardiac and pulmonary rehabilitation, or personal training. In order to facilitate each student's chosen path of study, three track areas are available, e.g., 1) Exercise Physiology/Wellness, 2) Motor Behavior/Sport Psychology, and 3) Pre-Medicine.

## BACHELOR OF SCIENCE

Students who wish to pursue a Bachelor of Science degree in Exercise Science must earn a minimum of a C - in each of the following prerequisite courses prior to being admitted into the major program: Cell \& Molecular Biology 101; Ecology and Evolutional Biology 101; Chemistry 107/117 and 108/118; Exercise Science 180; and any mathematics course.
Students seeking a Bachelor of Science in Exercise Science must complete proficiency requirements in English ( 7 credits composed of English 101 and one additional class fulfilling the writing requirement, e.g., any designated LAS writing course, any English literature course, or any approved UC writing Course); Mathematics (6-8 credits); and Foreign Language/Culture (completion of the second level of any foreign language or two courses designated as meeting non-Western culture requirements). In addition, students must fulfill Supporting Requirements (3 credits of any oral communication course and 3 credits of any computer application course) and the following General Distribution Requirements: 12 credits in Humanities, 12 credits in Social Sciences, and 12 credits in the Natural Sciences. In each of the General Distribution categories, the student must take courses from at least two different academic departments.
Within the interdisciplinary Exercise Science major, students are required to complete 22 credits of core courses, six courses leading to a minimum of 18 credits of Kinesiology Concentration electives, and 15-24 credits of an academic minor of his or her choosing, unless the student is double majoring or already possesses a degree (in which case the requirement for a minor is waived).

The Exercise Science core consists of Exercise Science 202, 303/313/, 310/312, 311, 402/413, and 407/417.

Courses within the Kinesiology Concentration are: Exercise Science 304/314, 316, 320, 333, 377, 401, 405, 412, 418, 420, 457, 464, and 472; Cell \& Molecular Biology 205, 301, 302, 331, 411, 413, 422; Ecology and Evolutional Biology 333; Chemistry 241/243, 242/244, 383, 385; Physics 121, 122, 131, 132; Psychology 314, 321, 333, 334, 347, 361, 363, 371, 373; and Sociology 109, 140, 218, 270, 303, 304, 606, 609, 615.
The total number of credits required for completion of the Bachelor of Science degree in Exercise Science is 124 and must include an academic minor selected by the student comprised of at least 15 credits. The Exercise Science major also adheres to the University College Residency Requirement that requires one year of full time enrollment. Program design must be undertaken in consultation with faculty within the Department of Exercise Science.

## MINOR IN EXERCISE SCIENCE

A minor in Exercise Science consists of a minimum of 19 credits. A minimum GPA of 2.00 within the minor is required. Exercise Science 202, 303/313, and 311 are required and three additional courses must be selected from the following: Exercise Science 304/314, 310/312, 316, 320, 333, 377, 401, 402/413, 405, 407/417, 418, and 420.

## ADMISSION TO EXERCISE SCIENCE MAJOR

Admission into the university and to the EXSS is competitive. Entering freshmen can seek admission directly into the university and the EXSS major either online or by contacting the Admissions Office and completing the application form, specifically by choosing the University College/EXSS major. Entering freshmen opting for the full-time EXSS major through the University College must meet the same admissions requirements as students entering the College of Arts and Sciences. Once admitted to the university, freshmen who select this option will be granted Provisional Admission into the major. This status will continue until their junior year when formal admission into the major must be met. Formal Admission into the major requires: 1) a minimum overall GPA of 2.3 or better, 2) total credits required for junior status, 3) completion of the EXSS Major Prerequisite courses at the "C-" level or better, 4) consultation with an EXSS advisor, and 5) completion of the Declaration of Major form.
Students transferring from other institutions or other divisions within the Tulane University community must meet the same Formal Admission criteria described above. Once admitted into the University, students transferring from other institutions must initiate a transcript evaluation through the EXSS advisor's office. Those transferring from another division or college from within the University must initiate an interdivisional transfer into University College through the office of the Dean of their respective unit.

## Full-Time Studies

The full-time program of Tulane's University College offers opportunities for full-time studies to a select group of students, those whose test scores or grades may be lower than those required by other undergraduate divisions of the University but whose records show potential for success at Tulane. Applications for this program are submitted to the Tulane's Undergraduate Admissions office and are evaluated by that office and by the dean of University College. Full time students may choose to transfer to another college or school of the University and take their degree there, or they may complete all their work in the College and have their degree conferred by University College.
The College grants to its full time students the following degrees: Bachelor of Arts, Bachelor of Science, Bachelor of Fine Arts, and Bachelor of General Studies. Students who accept admission to the full-time program must maintain full-time status throughout their enrollment in University College. In special circumstances, they may petition the dean to leave the program for the purpose of taking up part-time studies, but they may do this only after having completed one full year of residency as a full-time student. Students may transfer to Tulane or Newcomb College if they earn a 2.3 cumulative GPA at the close of the first full year of study ( 30 credits). They may also transfer to the Freeman School of Business once they have completed the prerequisites (commonly done in two years of full-time study) and if they earn a cumulative GPA acceptable to that school (usually a 2.5 or higher) as well as an acceptable GPA in the core courses.

University College full-time students may select majors in liberal arts and sciences disciplines, the same as those offered by Tulane College and Newcomb College. Each of the academic departments determines requirements for these majors, and descriptions are provided under the department headings in the Liberal Arts and Sciences sections of this catalog. Students choosing this option must complete 124 credits of study, including the proficiency and distribution requirements that apply to all Tulane College and Newcomb College students, except for students taking their degrees through University College, the foreign language proficiency is satisfied by completing the second level of the language or six credits in Non-Western culture or a combination of one language course and one Non-Western culture course. Students who plan to transfer to Newcomb or Tulane College and take their degrees there must complete the 203 level of the language and 120 credits for the baccalaureate degree.

## Liberal Arts and Sciences

University College students may select any major in the Liberal Arts and Sciences offered by the Tulane College or Newcomb College. The academic departments determine the requirements for these majors. Students electing this option must fulfill the Liberal Arts and Sciences curriculum requirements (except that the foreign language requirement may be fulfilled by completing the second level of a language, rather than the third level).
Students should consult with their University College advisor if they wish to pursue a major offered by Tulane College or Newcomb College.
Note: majors completed in areas not sponsored by University College may require some day course enrollment at a higher tuition rate.

## Louisiana Studies

The minor in Louisiana Studies draws on the considerable resources of Tulane faculty who specialize in the study of Louisiana, its people, and culture; and on the Howard-Tilton Library, which has a substantial Louisiana collection. Five courses are required for the minor. Students select three of the following history courses: HISL/HISU 347, HISU 348, 392, 393, or 394, and take two courses from among the following: UANT 340, UARC 131 \& 132, ENLS 401, GEOL 206, MUSC 189, and any ULOU course.

## Master of Liberal Arts

The interdisciplinary Master of Liberal Arts degree at Tulane is designed for college graduates who want to continue their education in a broad but focused context. This program, consisting of nine courses and a thesis, is designed to include classes from many academic areas structured into a cohesive exploration that fits individual interests. It is available on a part-time or full-time basis.

The Master of Liberal Arts Program, established in 1984, draws on the resources of Tulane’s University College and The Graduate School. MLA students are admitted through University College, which sponsors the required core courses and offers them exclusively for MLA students. These courses give an overview of an interdisciplinary area and provide a framework for simultaneous or subsequent course work. Core courses, the focus of the MLA, change from time to time; previous cores have included "History of Western Thought and Culture," "Masterworks of Western Literature," and "Understanding America."
The current core, "The Emerging World Society," builds upon Tulane's traditional strength in international studies to address the fundamental political, economic, social, technological, moral, and intellectual changes occurring in today's world.
MLA students, in consultation with the MLA director, develop an individual plan of study tailored to their interests, choosing from a broad selection of Tulane graduate courses in anthropology, economics, education, English, foreign languages, history, natural sciences, political science, psychology, sociology, and other fields, including special-topic MLA courses.

## DEGREE REQUIREMENTS

Students in the Master of Liberal Arts Program transfer to The Graduate School to complete their work. The Graduate School awards the MLA degree following the completion of (1) two core courses in an MLA track, (2) seven other graduate-level courses, and (3) a thesis/project, including an oral examination on a topic in the student's selected field of interest. All MLA students are expected to maintain a "B" average or above. No graduate credit is granted for grades of "C+" or lower.

## ADMISSION

The basic requirement for admission to the MLA program is a baccalaureate degree from an accredited college or university. Generally applicants have at least a "B" (3.0 GPA) in their undergraduate course work. Applicants may apply for part-time or full-time study; the program is also available for international students.

## PART-TIME MLA STUDIES

The part-time MLA program is designed primarily for students in the New Orleans area. After passing the two core courses with a grade of "B" or above, part-time MLA students transfer to The Graduate School for seven additional graduate courses and a thesis/project with an oral examination. Admission requirements include (1) filling out an application form, including a brief statement about the proposed focus of study; (2) providing college transcripts; and (3) arranging an on-campus interview with the MLA director.

## FULL-TIME MLA STUDIES

Full-time MLA students can come from the local area, the nation, or other countries. They may complete the Master of Liberal Arts degree in one year by taking four core courses during the first semester, four during the second semester, and one course plus the thesis/project during the summer session. Full-time MLA students transfer to The Graduate School after completing the first semester (one core course and three graduate courses) with a grade of " B " or above in each of their courses. Admission requirements include (1) submitting an application with letters of recommendation, (2) preparing a brief statement about the proposed focus of study, (3) providing college transcripts, and (4) providing GRE scores (only for applicants who have received a baccalaureate degree within the last five years).
The MLA Advisory committee (or no fewer than three of the faculty who sit on the committee) will make recommendations concerning the admission of each full-time student.

## MLA FOR INTERNATIONAL STUDENTS

International students should follow the requirements for the full-time MLA option, providing in addition the results of the Test of English as a Foreign Language.

## TRANSFER CREDITS

Upon successful petition, up to nine credits (three courses) of graduate-level work in the liberal arts from other colleges or universities may be transferred to the MLA degree. Only courses with grades of "B" or above completed within five years of enrolling in the MLA program may be transferred. The MLA director will review requests for transfer credit after a part-time student has completed the two core courses or after a full-time student has completed the first semester.

## TUITION AND FEES

Tuition for the MLA program is $\$ 1044.00$ per three credit course for the 2002-2003 academic year. A $\$ 25$ non-refundable fee must accompany each application.
For more information about the MLA degree or an application, contact the MLA coordinator at (504) 865-5555, FAX (504) 865-5562, or write the MLA Director, University College, 125 Gibson Hall, Tulane University, New Orleans, LA 70118-5698.

## Media Arts

The Media Arts program is open to all part-time students in the College and to all full-time students admitted to University College. The program concentrates on oral and written communications skills, acquaintance with computer technologies, and aspects of business relevant to communicators. Students can tailor much of their coursework to their areas of interest. Electives may be chosen from an array of disciplines, including English, Speech, Communication, Marketing, Information Technology, Telecommunications, and Media Arts.

The program trains students in areas such as journalism, graphic design, computer art, public relations, the Internet, advertising, marketing, film, radio, and television. Students may earn an Associate of Arts in Media Arts, Bachelor of Arts in Media Arts, a minor in Media Arts, a postbaccalaureate certificate in Media Arts, a certificate in Website Development, minor in Website Development, and a minor in Advertising.

## ASSOCIATE OF ARTS

The Associate of Arts in Media Arts is designed for students who want to gain a background in the written and oral communication, computer, and design skills required in media related fields such as journalism, graphic design, computer art, public relations, the Internet, advertising, marketing, film, radio, and television. Students are encouraged to continue their education after earning this degree, as the Bachelor of Arts is preferred by many employers.
Requirements for the degree total 60 hours. Major requirements for Associate of Arts in Media Arts are the same as those for the Bachelor of Arts. In addition, students must complete the following general education courses

- English 101 or UENG 125
- Math, PHIL 106, 121, or UMGT 325
- one course from oral communications supporting requirement (USPC 140, 311, or THEA 210)
- one course from computer applications supporting requirement (UMAR 245, 250, 280, 307, 330, 350, 352, 355, 380, 430, UINS 100, 227, 224)
- Humanities (3)
- Science (3)
- Social Science (3)
- Electives as necessary to total 29 hours in general education courses


## BACHELOR OF ARTS

To receive a Bachelor of Arts in Media Arts, a student must complete at least 124 credits with a cumulative grade point average of 2.0 (C) and a grade-point average of at least 2.0 in the major. All required courses are offered during the evening hours, with some additional courses offered in the daytime.
The major in Media Arts consists of:

- a two-course core (Media Arts 200, and English 263);
- two Media Arts computer courses (chosen from among UMAR 245, 250, 280, 307, 330, 350, 352, 355, 380, 430, UINS 224, 227, and 229);
- one ethical/legal course (chosen from among UMAR 315, 340, UMGT 338, and PHIL 103);
- four Media Arts electives (three of the four must be at 300 level or above) - see list below for eligible courses;
- Media Arts 505 - Media Arts Internship


## POST-BACCALAUREATE CERTIFICATE

The certificate program is offered to students who already hold a baccalaureate degree. The certificate will be earned upon successful completion of the six courses required for a minor in Media Arts.
At least 9 credits in the certificate must be earned at Tulane.

## MINOR IN MEDIA ARTS

A minor is open to students who are in a baccalaureate program other than Media Arts, but who wish to have some knowledge of the field. A minor consists of 18 credits distributed as follows:

- a core requirement consisting of Media Arts 200 and English 263
- one Media Arts computer course (chosen from among UMAR 245, 250, 280, 307, 330, 350, 352, 355, 380, 430, UNIS 224, 227, 229)
- one legal/ethical course (chosen from among UMAR 315, 340, UMGT 338, PHIL 103)
- two Media Arts electives

For all program options, Media Arts electives include UMAR 220, 245, 250, 280, 301, 302, 307, 310, 312, 315, 320, 330, 325, 350, 352, 355, 360, 370, 380, 390, 410, 412, 420, 450, UENG 331, ENLS 361, 363, 365, 367, UMKT 320, 330, 340, USPC 311, and COMM 215. Courses that satisfy the Computer and Legal/Ethical components may also be taken as electives.

## MINOR IN WEBSITE DEVELOPMENT

The minor is open to students who are in any baccalaureate program. If a student is majoring in Media Arts and chooses to minor in Website Development, only one course may count as a Media Arts elective or Media Arts computer course and as a course in the minor. The minor consists of 18 credits distributed as follows:

- core components for UINS 229, UINS 303, UMAR 350, and UMAR 280
- one course chosen from either UINS 304 or UINS 305
- one course chosen from either UMAR 250, UMAR 380, or UMAR 245


## CERTIFICATE OF COMPLETION IN WEBSITE DEVELOPMENT

The certificate program is offered to all students. The certificate will be earned upon successful completion of ten courses, or twelve, depending on the student's own judgment regarding UNIS 100 and UINS 227. To earn the certificate, students must complete:

- two prerequisite courses (to be waived at student's own discretion), UINS 100 and UINS 227
- ten required courses, UINS 229, UINS 303, UINS 304, UINS 305, UMAR 250, UMAR 280, UMAR 350, UMAR 380, UMAR 245, and UMGT 260. As classes develop, substitutions are acceptable. See the Media Arts Director for approval.


## MINOR IN ADVERTISING

## Course

UMAR 301 Intro to Public Relations
UMAR 280 Intro to Graphic Design
UMKT 320 Principles of Marketing
UMKT 340 Advertising I
UMKT 341 Advertising II
Select one:
UMGT 260 E-Commerce or
UMAR 330 Editing, Layout and Design or
ENLS 263 Expository Writing
Note: For Media Arts majors only: three credits can count towards both a major and a minor.

## Organizational Information Technology

## BACHELOR OF ARTS (ORIT)

The Bachelor of Arts degree in Organizational Information Technology prepares graduates to support and integrate computing technology in the modern workplace. Some of the entry and midlevel positions currently in demand are User support, Help Desk, PC Support, Tech Support, Application Specialist, Training Coordinator, and a variety of other titles and classifications. The 33-credit Major provides a broad range of courses dealing with computer applications, the Internet, networking technologies and information processing. Courses in the major and minor are offered in the evening hours.
To receive the Bachelor of Arts in Organizational Information Technology, students must complete 124 credits with a cumulative grade point average of at least 2.0 in all required coursework. The University College Proficiency requirements for the BA degree include 7 credits in Writing/English, 3-4 credits in Formal Thought and 6-8 credits in Foreign Language or NonWestern Culture. Supporting requirements include 3 credits in Oral Communications and 3 credits in Computer Applications. The Distribution requirements are the same as for other BA and BS degrees ( 12 credits from at least two fields in the Humanities, Sciences and Social Sciences).
Note: As this catalog goes to press, four concentrations within the major are being designed. Check with the Program Director.
The Major consists of the following 11 courses: UINS 220, UINS 227, UINS 312, UTEL 261 and one from UINS 201/205/207 or 210. The Core courses of the Major include: UINS 320, UINS 351, UINS 354 and UINS 356. There are also 6 credits of junior/senior electives required in the Major.
Options for the minor include Computing Information Systems, Telecommunications, Website Development, Business Studies, Advertising, Accounting and Finance, Marketing, Human Resource Management, Media Arts, Paralegal Studies or Social Work. The requirements for each of these are listed in their respective sections.

## ASSOCIATE OF ARTS

The Associate of Arts in Organizational Information Technology provides an intermediate degree option for those who plan to continue on for the Bachelor's in ORIT, or pursue any other UC degree. Students must complete Writing/English, Formal Thought and three supporting courses in Intro to Microcomputers, Word Processing and Oral Communications. One course is also required in each of Humanities, Science and Social Science. Students complete the first 24 credits of the ORIT major (listed above) and sufficient General Electives to total 62 credits. Students may transfer 30 credits into the ORIT program from 2-year colleges. All credits earned in pursuit of the Associate of Arts in ORIT apply to the Bachleor of Arts in ORIT.

Students who seek external certifications (A+, Network+, I-Net+, etc.) should contact the Program Director for information about which courses to take.

## MINOR IN ORGANIZATIONAL INFORMATION TECHNOLOGY (ORIT)

UINS 220 Applications of Database Software
UINS 227 Working with the Internet
UINS 312 Microcomputer Hardware
UTEL 261 Networking Fundamentals

## One from the following:

UINS 201 Advanced Office
UINS 205 Doc Dev with Word Processing
UINS 210 Problem Solving with Spreadsheets
One from the following:
UINS 320 End User System Analysis and Design
UINS 348 Advanced Database Administration
UINS 351 Information Technology and Ethics
UINS 354 Instructional Technology/Training
UINS 356 IT Project Management

## Paralegal Studies

Tulane's Paralegal Studies Program, established in 1979, prepares students for independent decision-making and participating fully in their roles as legal assistants. Paralegals are not lawyers and do not practice law. They perform, under the supervision of an attorney, specifically delegated substantive legal work. Paralegals work in large and small law firms, banks, corporations, legislatures, administrative agencies, legal aid offices and clinics, and in public and private advocacy associations.

The program stresses knowledge of law and mastery of the practical competencies essential to a successful paralegal, including computer literacy, organization and analytical skills, case management, and legal research and writing.
The Tulane Paralegal Program is a college credit program. The American Bar Association first granted its approval of the program in 1981 and it remains the oldest such approved program in this region.
The program runs an active job placement service at no cost to students, graduates, or employers. Students are encouraged to join TUPAA, the Tulane University Paralegal Alumni Association, to take advantage of the networking and mentoring opportunities available. TUPAA sponsors an annual Career Day and a CLE workshop.
Students can obtain a Certificate in Paralegal Studies by completing (1) an Associate of Arts in Paralegal Studies, (2) a Bachelor of Arts in Paralegal Studies, or (3) a Post-Baccalaureate Certificate in Paralegal Studies. A minor in Paralegal Studies is also available, but students do not earn a certificate under this option.
The minor does not constitute a program under ABA Guidelines and is not approved by the American Bar Association.
Note: Students receive the paralegal certificate only upon completion of all degree requirements.

## ASSOCIATE OF ARTS IN PARALEGAL STUDIES

For students with little or no college experience, the recommended path is to pursue the Associate of Arts degree and then to continue working towards the Bachelor of Arts degree. All coursework for the AA rolls forward and applies towards the Bachelor's degree. Students earn their Certificate in Paralegal Studies upon the completion of the requirements for the 60 -semester hour Associate of Arts degree.

Requirements for the Associate of Arts in Paralegal Studies are UPAR 201, 302, 303, 305, 306, 402, four 400+ level Paralegal Studies electives, and an internship (which has a classroom component). The core courses must be taken before any of the electives are registered for. The remaining four courses are taken as electives from among the many paralegal advanced elective courses offered. The internship is generally taken in the last semester of enrollment. To successfully complete this degree, the student must maintain a 2.0 grade point average in all paralegal courses taken.
In addition, students must complete the following courses from the general Liberal Arts curriculum: ENGL 101 or UENG 125; one additional English literature/writing course; one humanities elective; one social science elective; one science elective; one formal thought course (math); one additional course in either science, social science, or humanities, and electives of the student's choice as necessary to reach 60 hours, the minimum required for the AA degree.
Note: ENGL 101 must be completed prior to enrollment in any Paralegal Studies course. UINS 100 or an equivalent computer course is a prerequisite for UPAR 402. UPAR 302 Legal Research is a prerequisite to UPAR 303 Legal Writing. Paralegal students may not use ENLS 367 Technical Writing to fulfill the additional English/writing requirement nor THEA 210 Fundamentals of Acting to fulfill the Oral Communication proficiency.
Before registering for courses, new students must consult with the Paralegal Studies advisor. It is both important and required that students acquire a grounding in general education courses before enrolling in paralegal coursework. The advisor completes a degree worksheet with each student, charting a path for the degree plan.
There is a trend in paralegal employment to prefer a four-year degree. Many graduates of the twoyear program are gainfully employed, but students pursuing the two-year Associate of Arts should be aware that they may need to complete their bachelor's degree to advance within the profession.

## BACHELOR OF ARTS IN PARALEGAL STUDIES

Students may elect to major in Paralegal Studies as they work towards their Bachelor of Arts degree. Students who choose this option will receive a Certificate in Paralegal Studies at the same time they receive their bachelor's degree. To successfully complete the major, the student must maintain a 2.0 grade point average in all paralegal courses taken. Students who have earned an Associate of Arts degree in Paralegal Studies from Tulane University College will have already completed courses for the major.

Ten courses and an internship (which has a classroom component) are required for the major. Of the ten courses, six are required core courses: 201 Introduction to Paralegal Studies, 302 Legal Research, 303 Legal Writing, 305 Litigation I, 306 Litigation II, and 402 Computers in the Law Firm. The core courses must be taken before any of the electives are registered for. The remaining four courses are taken as electives from among the many paralegal advanced elective courses offered. The internship is generally taken in the last semester of enrollment. (Paralegal students may complete no more than 12 courses in the major.)

In addition, students must complete the University College general education requirements for a Bachelor of Arts degree.

Note: ENGL 101 must be completed prior to enrollment in any Paralegal Studies course. UINS 100 or an equivalent computer course is a prerequisite for UPAR 402. UPAR 302 Legal Research is a prerequisite to UPAR 303 Legal Writing. Paralegal students may not use ENLS 367 Technical Writing to fulfill the additional English/writing requirement nor THEA 210 Fundamentals of Acting to fulfill the Oral Communication proficiency.

## POST-BACCALAUREATE CERTIFICATE

The Post-Baccalaureate Certificate is available for students who already have an undergraduate bachelor's degree. This program allows college graduates to undertake intensive paralegal training.
The Post-Baccalaureate Certificate requires eight paralegal courses and an internship (which has a classroom component). Of the eight courses, six are required (core courses) and must be taken first, before students register for the two remaining elective courses and the internship. The internship is generally done after the student has completed all other courses. The six required courses are 201 Introduction to Paralegal Studies, 302 Legal Research, 303 Legal Writing, 305 Litigation I, 306 Litigation II, and 402 Computers in the Law Firm. UINS 100 or an equivalent computer course is a prerequisite for UPAR 402. UPAR 302 Legal Research is a prerequisite to UPAR 303 Legal Writing.

Students must maintain a 2.0 grade point average in all Paralegal Studies courses taken in order to receive the Certificate.

## MINOR IN PARALEGAL STUDIES

Students may elect a minor in Paralegal Studies as they work toward a bachelor's degree in another field. Students who choose this option do not receive a Certificate in Paralegal Studies. If they wish to earn a certificate, they may pursue a double major or complete a post-baccalaureate certificate after graduation. The minor does not constitute a program option under ABA Guidelines. It is not designed to educate the student to work as a paralegal. The minor is not approved by the American Bar Association.
Six courses are required for the minor. The six courses are 201 Introduction to Paralegal Studies, 302 Legal Research, 303 Legal Writing, 305 Litigation I, and two paralegal electives at the 400 level or above. To successfully complete the minor, the student must maintain a 2.0 grade point average in all paralegal courses taken.

## Social Sciences

University College offers a Bachelor of Arts in Social Sciences for part-time and full-time students. To earn this degree, students must complete University College's proficiency requirements ( 7 credits in English/Writing, 3-4 credits of formal thought , 6-8 credits in foreign language, or Non-Western Culture), supporting requirements (3 credits each in oral communications and computer applications), and distribution requirements ( 12 credits from two different disciplines in the humanities, 12 credits from two different disciplines in the social sciences, and 12 credits from two different disciplines in the sciences). This degree program also requires a minor of $15-24$ credits and a major consisting of ten courses in the social sciences, including one course each at any level in history, political science, either sociology or anthropology, and an additional course at any level in any social science department. The six remaining courses must be numbered 300 or above and may be taken in any social science discipline. The social sciences include anthropology, economics, geography, history, Latin American studies, political science, sociology, and Women's Studies.

## Social Work

Students minoring in Social Work are required to complete 15 credits of coursework from among the following: two core courses: SOCI 115: Introduction to Social Work and UPSW 450: Generalist Social Work Practice (capstone course); any two of the following-SOCI 103: Sociology of the Family, SOCI 109: Contemporary American Social Problems, UPSW 250: Introduction to Gerontology; and one of the following upper-level courses-SOCI 601: Advanced Special Topics, SOCI 604: Comparative Race Relations, SOCI 611: Sociology of Work and Leisure, SOCI 614: Problems in the Sociology of Deviance, SOCI 615: Alcohol and Drug Use, SOCI 620: Issues in the Sociology of the Family.

## Special Programs

## PROFESSIONAL DEVELOPMENT COURSES

University College offers special seminars and workshops at the Elmwood campus and at other locations during the regular academic year. These short courses do not carry academic credit. For more information, call 862-8000 x 8651 .

## Concurrent Enrollment for High School Students

University College offers a concurrent enrollment program for outstanding high school juniors and seniors. To qualify, students must have a minimum grade point average of 3.2, and an SAT score of at least 1000 , an ACT composite of at least 22, or a PSAT score of 151 . Concurrent enrollment students may enroll in either or both semesters of the regular academic year.
The Concurrent Enrollment program offers qualified high school students the opportunity to get an early start on their college education. Students take regular college coursework and earn credits and grades that become a part of their permanent college record. Concurrent enrollment students may apply for admission to Tulane upon graduation from high school, or they may transfer their Tulane credits to another institution, depending on the regulations in effect at that institution.

## Pre-Law

There is no standard pre-law curriculum that must be followed for admission to law school. A well-rounded, general liberal arts education is the best preparation for the study of law. The Tulane Law School recommends the completion of courses in history, political science, philosophy, economics, and accounting. All law schools stress the importance of developing skills in communication, both spoken and written, in critical analysis, and in rational thinking. Students may explore their interest in legal studies by taking UPLW 101: Law in American Society and other courses listed under the heading
"Pre-Law" in the course description section of this catalog, but these courses in no way constitute a pre-law curriculum and should be taken only as electives. Students interested in law school may consult with the University’s Pre-Law advisor, housed in the Pre-professional Advising Office, or with University College’s Paralegal Studies Director.

## Academic Performance

## CREDITS AND GRADES

Undergraduate units at Tulane University are measured by credits that correspond to the number of hours the class meets per week. Most courses meet three hours a week and are valued at three credits.

University College, along with the other undergraduate divisions of Tulane, adopted a plus/minus grading system beginning the fall of 1981. Each grade is assigned a number of grade points that are used in the calculation of the grade point average. Grades and grade points used in University College are:

A $\quad 4.00$
A- 3.67
B+ 3.33
B $\quad 3.00$
B- $\quad 2.67$
C+ 2.33
C 2.00 (average)
C- $\quad 1.67$
D+ 1.33
D $\quad 1.00$
D- 0.67
F failing, no grade points $=0.00$
WF withdrawn failing, counts in the GPA as an $\mathrm{F}=0.00$
UW unofficial withdrawal, counts in GPA as an $\mathrm{F}=0.00$
W withdrawn passing, not used in GPA computation
S satisfactory, not used in GPA computation (C- or above)
but counted in earned hours
U unsatisfactory, not used in GPA computation
(below C-) and earns no credit
AU audit, not used in GPA computation
I incomplete, no grade points $=0.00$

## Satisfactory/Unsatisfactory

Both full-time and part-time students in University College may avail themselves of the satisfactory/unsatisfactory option. A course with the grade of satisfactory (S) may not be used to satisfy the proficiency, foreign language, major, or minor requirements, and no more than 18 credits of $S$ will be credited toward the degree. Students should be aware that many colleges will not accept the transfer of credit with this grade.

Students may take three credits of work on a satisfactory/unsatisfactory basis per academic year if they have completed at least 30 credits of college work and are not on probation.

In order to receive a satisfactory grade, students must earn a C- or higher. The grade of S is not calculated into the grade point average. Grades below C - will be designated as unsatisfactory (U). The grade of U will not be calculated into the grade point average.

## Audit

Any student may take a course on an audit basis. No credit is earned for this work, but the course is entered on the official transcript with a grade of AU. Part-time students must pay the appropriate tuition for an audited course.

## Incompletes

An incomplete is given at the discretion of the instructor. It allows a maximum extension of one month after the end of the term for the completion of the coursework. If the work has not been submitted by the deadline, the incomplete is converted to an F.

## Repeated Courses

Part-time students who do not want a grade to count in the grade point average may repeat the course provided that:

- the course to be repeated was completed during the student's first semester or summer session at Tulane
- the repeated course, taken at Tulane, is identical to the one it replaces

If both of the above conditions are met, the student must meet with an advisor and request that the first grade be dropped from computation in the grade point average. The grade for the repeated course, even if lower than the first grade, will be factored into the student's GPA. The grade for the first course will still remain on the student's transcript.
Note: This rule applies only to part-time students entering University College during or after the 1997 fall semester, excluding students transferring from another division of the University; there is no repeated course option for full-time students. If passing grades are recorded twice or more for the same course, only the credit hours for one course will count towards the graduation total.
Grades assigned by a university committee, including a WF for an Honor Code conviction, cannot be removed from the student's transcript or cumulative grade point average even though the course may be repeated.

## Maximum Credits for Part-Time Students

Part-time students in good standing in University College are limited to 13 credits per semester. Undergraduate students may not enroll in 700-level courses.

## Honors

A Dean's List of undergraduate students is compiled at the end of the fall and spring semesters and posted in the University College office. To be eligible for the Dean's List, students must earn a grade-point average of 3.40 or greater. Students who earn a grade of U on any courses taken on a satisfactory/unsatisfactory basis are not eligible to be on the Dean's List. Part-time students must pass at least 6 credits, excluding those earned in courses taken on a satisfactory/unsatisfactory basis; full-time students must pass at least 9 credits, excluding those earned in courses on a satisfactory/ unsatisfactory basis.
Superior baccalaureate students are recognized at graduation by the award of the distinction cum laude. To qualify, a student must have a cumulative grade point average of at least 3.40, must have earned at least 36 credits at Tulane University, excluding those earned in courses on a satisfactory/unsatisfactory basis, and must be receiving a bachelor's degree.
The Theta Chapter of Alpha Sigma Lambda is a national scholastic honor society for part-time college students, and invitations for membership are extended each year to qualified students. To be eligible, students must be enrolled on a part-time basis in a degree program, have attended University College for at least three semesters, earned at least 36 credits at Tulane, and have a cumulative grade point average of at least 3.2. Additional information on requirements and invitations to membership can be obtained from the chapter advisor in the University College office.

## Registration

All students must register by the beginning of each semester. Students register with TUTOR, Tulane University's Touch-tone Online Registration or TOUR, Tulane University's Online Registration. Information regarding dates, times, and procedures for TUTOR appears in the Schedule of Classes issued by the Registrar's Office in mid-semester. All admitted students are eligible to register with TUTOR. Currently enrolled students are given the first opportunity to register for coming semesters; registration packets are mailed to currently enrolled students midsemester in the fall and spring semesters. Bills for tuition and fees are mailed; students assume financial obligation for their courses upon registration.
Students wishing to add or drop courses should consult the Schedule of Classes for deadlines and instructions. Failure to make schedule adjustments promptly and accurately may result in financial or academic penalties.
Note: University College reserves the right to cancel any course with inadequate enrollment.

## Requirements for Graduation

## ASSOCIATE DEGREE

To receive an associate degree, the student must complete all of the program requirements and have at least a 2.00 ( C ) cumulative grade point average.

## BACHELOR'S DEGREE

To receive a first baccalaureate degree from University College, students must have a minimum of 124 credits of passing work, as follows:

## Proficiency Requirement

English/Writing
(LAS requirement is 4 credits)
7 credits
(LAS requirement is 4 credits)
Formal Thought
(BA, BGS, BFA) Mathematics (BS)
Foreign Language/Non-Western Culture
Supporting Requirements
3-4 credits

Oral Communications
6-8 credits
6-8 credits
6 credits

Computer Applications
(3)
(Not required for LAS majors)

## Distribution Requirement

Humanities 12 credits
Science
12 credits
Social Science
12 credits
(BGS, BA or BS with University College major)
Humanities 9 credits
Science 10 credits
Social Science 9 credits
Writing
Found. of Western Culture
Non-Western and Latin American Cultures
(BA or BS with Liberal Arts and Sciences major)
Humanities
Science
Social Science (BFA)

## Major Requirements

Major (BA, BS)
Concentration (BGS)
Fine Arts (BFA)
30 to 36 credits
30 credits

Minor Requirement
Minor
48 credits

15-24 credits
(Not required for LAS majors or for double majors)

## Electives

## Minimum Credits to Graduate

Students must have a cumulative 2.0 grade point average to graduate. For University College majors, no fewer than 62 credits must be earned in courses listed at the 200 level or higher.
No more than half the credits used toward satisfying graduation requirements may be in the major. Students may take no more than 70 credits each of humanities, science, and social science. This includes credits in the major. Undergraduate students may not enroll in 700-level courses.
Students may not submit toward graduation requirements more than $\mathbf{6}$ credits of electives earned in courses with designations such as Independent Study, Special Projects, Directed Study, and Practicum. Students who must exceed this limit are required to petition the dean's office.
Students must file an Application for Degree/Certificate form with their academic advisor early in the semester in which they expect to graduate.

## ENGLISH PROFICIENCY REQUIREMENT

English 101, a 4-credit intensive writing course, is Tulane's LAS English proficiency requirement. Part-time students may complete UENG 125 online instead of English 101. In addition to English 101 or UENG 125, students majoring in University College disciplines must also complete 3 credits in an English literature or writing course. Students who need to review basic English skills before enrolling in English 101 or UENG 125 may wish to take English 100, available in class or online, for elective credit. English 100 does not count toward the proficiency requirement.

Full-time students in University College must enroll in English 101 in either their first or second semester and, if required, each subsequent semester until completing the requirement. Part-time students should include English 101 or UENG 125 within the first 18 credits they earn at Tulane.

## FORMAL THOUGHT PROFICIENCY REQUIREMENT

Students working toward a Bachelor of Arts, Bachelor of Fine Arts, or Bachelor of General Studies are required to demonstrate proficiency in 3-4 credits of formal thought by passing any mathematics course; Philosophy 106 or 121; Computer Science 101, 103, or 117; or Management 325. (Students majoring in an LAS discipline may not use Phil 106, CIS 170, or UMGT 325 to satisfy this requirement.)
Students seeking a Bachelor of Science are required to complete at least 6-8 credits of mathematics.

Note: After attempting three semesters of enrollment (or after two semesters for transfer students), full-time students in University College must be enrolled continuously in a course that meets the formal thought proficiency requirement until that requirement is completed. Any student who is under this condition and fails to properly register or drops the course will immediately be placed on probation and be required to pass the proficiency requirement during the next semester of enrollment. Failure to do so will result in academic dismissal.

## FOREIGN LANGUAGE PROFICIENCY REQUIREMENT

Students pursuing any bachelor's degree offered by University College are required to demonstrate proficiency in a foreign language. Proficiency is demonstrated through successful completion of the second level in any foreign language, or two courses in Non-Western culture/society, such as ANTH 102, 301, 316, or HISL 171, or LAST 101, or a combination of one language and one Non-Western course.

## SUPPORTING REQUIREMENTS

Students majoring in University College disciplines are required to complete one course in computer applications and one course in oral communications. There are no supporting requirements for Students majoring in LAS (Liberal Arts and Sciences) disciplines.

## DISTRIBUTION REQUIREMENT

Students majoring in University College disciplines are required to complete 12 credits each of humanities, sciences, and social sciences and in each distribution area courses must be chosen from at least two different academic departments.
Students majoring in LAS disciplines must complete 9 credits in humanities and fine arts with at least 3 credits in fine arts and 3 credits in humanities; 10 credits in science from at least two disciplines, including one laboratory science course from an approved list; 9 credits of social sciences from at least two disciplines; 3-4 credits in a designated writing intensive course, and 3 credits each in courses designated
"Foundations of Western Culture" and "Non-Western and Latin American Cultures."
To fulfill the distribution requirements for a Bachelor of Fine Arts, students must complete at least 9 credits in humanities and fine arts, including at least 3 credits in fine arts and 3 credits in humanities; 7 credits in sciences, including courses in at least two disciplines and one laboratory course; and 6 credits of social sciences from at least two disciplines.

Courses that may be used to satisfy the humanities distribution requirement include any class in African and Diaspora Studies, architecture, art, art history, classics, communication, dance, English, foreign languages, Jewish Studies, linguistics, music, philosophy, and Theater, and for students majoring in University College disciplines Exercise Science 418, Media Arts 200, 250, and 315, and Speech 140 and 311.

Courses that may be taken to satisfy the science distribution requirement include any class in astronomy, biological sciences, chemistry, computer science, geology, mathematics, physics, and psychology, and for students majoring in University College disciplines Anthropology 101, Exercise Science 202, 303/313, 304/314,, 310/312, 311, 402/413, 405, and 407/417 as well as one course in Computer Information Systems.

Courses that satisfy the social science distribution requirement include any class in anthropology, economics, geography, history, Latin American Studies, political economy, political science, sociology, Women's Studies, and for students majoring in University College disciplines Geology 206 and 208, Exercise Science 420, and one course chosen from Paralegal Studies 201 and 405, and UPLW 101.
Courses taken to satisfy proficiency and supporting requirements may not be used to fulfill distribution requirements for University College majors. For majors in the liberal arts and sciences, courses taken to satisfy proficiency requirements may not be used for distribution requirements.

## MAJOR AND MINOR REQUIREMENTS

Courses taken to satisfy proficiency, supporting, and distribution requirements may be used to fulfill major and minor requirements. At least 24 credits in the major must not overlap with the minor. Students must have a grade point average of 2.0 in the major and the minor to receive the degree.

## RESIDENCE REQUIREMENT

The last 48 credits of a student's degree program must be completed at Tulane University, with the final 24 taken while enrolled in University College. For an associate degree, certificate, major, or minor, at least one-half of the credits required in the area of concentration must be completed while enrolled in University College.

## LIMITATIONS

## Leave Restrictions for Returning Students

Part-time students who return to University College after an absence of more than seven semesters may not be able to complete the program in which they originally enrolled. Returning students should talk with an academic advisor to determine possible changes in requirements or curriculum.

## Business Course Restriction

Students may not earn more than 27 credits in courses under the business studies category or apply more than 27 credits of business courses toward any University College program. Business studies credits earned at University College are not applicable to any AACSB-accredited business school. All courses in accounting, business law, finance, management, human resource management, marketing, and real estate fall within this restriction.

## Evening Course Restriction for Full-Time Students

Full-time students in University College are traditional day students and are limited in the number of evening courses that they can take during any semester. This limit is seven credits. Students desiring to take more than seven credits in the evening must obtain approval of the Associate Dean. Full-time students in University College who are classified as freshmen may not enroll in courses with the following designations: Independent Study, Directed Study, Special Projects, Practicum, or any course in Business Studies or Paralegal Studies.

## Academic Standards

A student may be dismissed from University College for lack of sufficient academic progress toward fulfilling degree requirements. Through adherence to these regulations, the University seeks to ensure that its educational facilities are reserved for capable students who are motivated. For continued eligibility, academic progress is measured both by minimum credit and minimum grade point average.

University College students fall into two groups-full-time and part-time-and these are treated differently in assessing the quality of their work. Full-time students take 13-17 credits per semester; part-time students may take up to 13 credits each semester.

## ACADEMIC PROGRESS FOR PART-TIME STUDENTS

Undergraduate classification is based on cumulative earned credits:
Freshman 0-24 earned credits
Sophomore 25-56 earned credits
Junior 57-91 earned credits
Senior over 91 earned credits
Part-time students in University College are required to maintain a minimum grade point average throughout their enrollment (see table below). Students who fail to meet this minimum standard are placed on academic probation. The cumulative grade point average of a student is calculated by dividing the number of quality points a student has earned by the total number of quality hours (including credits with failures). Only the grades of S, U, NR, W, and grades in courses affected by University College’s "Repeated Course" policy are excluded from this calculation.

## ACADEMIC ENFORCEMENT FOR PART-TIME STUDENTS

The quality of each part-time student's work will be monitored at the end of each semester. Enforcement consists of two distinct steps: probation and dismissal.

## Probation

Any part-time student who does not meet the minimum cumulative grade point average as shown in the table below will be placed on academic probation.
The status of probation lasts until it is removed as a result of academic improvement or ended by dismissal. Part-time students who are placed on probation are warned that their academic progress is insufficient, and they are given a set time period (ordinarily one semester) in which to raise their cumulative grade point average to the required level. Part-time students on probation may enroll in no more than seven credits. As a further condition, all coursework taken while on probation must be passed with at least the grade of C. Students on probation cannot be given a recommendation of good academic standing to another institution for purpose of cross-enrollment or summer school admission.

## Dismissal

After attempting 31 credits at Tulane, part-time students will be dismissed if they fail to earn a " $C$ " in each course taken while they are on academic probation.
Dismissal from the university is for a period of at least one academic semester (summer is not counted as a semester). A third dismissal is non-appealable and will be for a period of one calendar year. Any coursework taken at another college or university during the dismissal period is not transferable to University College.

## Minimum Credits and Grade Point Average Quality-of-Work Rules

## For Part-Time Students

## Minimum CumulativeMinimum Cumulative Attempted Hours GPA

1-30 1.75
31-61 1.85
62-93 1.95
94-124 2.00

## Reinstatement

Any student who has been dismissed from University College has the right to petition the University College Academic Performance and Petitions Committee. Students who return after their dismissal period are placed on academic probation.

## Petitions

Petitions from students who have been denied registration under these regulations are evaluated by the Academic Performance and Petitions Committee of University College.

Successful petitioners will be readmitted on the terms and conditions specified by the committee, which may include limitation on the number of courses, specification of courses that must be taken, progress that must be achieved, the time within which terms and conditions must be met, and classification of academic standing.

## ACADEMIC PROGRESS FOR FULL-TIME STUDENTS

The academic progress of all full-time University College students is determined by a minimum grade point average and a designated number of earned credits. These two criteria are reviewed at the end of every academic semester in order to determine whether or not the student is eligible to continue in University College in good academic standing. Students who fail to pass at least 8 credits in any regular semester will lose their eligibility to continue during the next regular semester. The summer session does not count as a regular semester.
Note:This rule does not apply to a student's first semester of his or her freshman year.
The chart below stipulates the required standards for continuation in University College.

## ACADEMIC ENFORCEMENT FOR FULL-TIME STUDENTS

The quality of each full-time student's work will be monitored at the end of each semester. Enforcement consists of two distinct steps: probation and dismissal.

## Probation

Full-time students who fail to meet University College's credit and Grade Point Average Quality-of-Work rules will be designated as "Not in Good Academic Standing." This status requires that the student be placed on academic probation during his or her subsequent semester of enrollment. The probationary semester is a fixed period during which the student is allowed to correct any credit and/or grade point average deficiencies.

## Dismissal

Full-time students who fail to meet the requirements set forth in their probation will be dismissed from the university for a period of one academic semester (summer is not counted as a semester). A third dismissal is non-appealable and shall be for a period of one calendar year. Any coursework taken at another college or university during the dismissal period is not transferable to Tulane University.

## Petitions for Reinstatement

Any full-time student who has been dismissed from University College has the right to petition the University College Academic Performance and Petitions Committee. Students who return after their dismissal period are placed on academic probation and are given specific academic requirements to remove the probationary status.

## The Academic Performance Committee

Petitions from students who have been denied registration under these regulations are evaluated by the Academic Performance and Petitions Committee of University College.
Successful petitioners will be readmitted on the terms and conditions specified by the committee, which may include limitation on the number of courses, specification of courses that must be taken, progress that must be achieved, the time within which terms and conditions must be met, and classification of academic standing.

| mum | Credits and G | rade Point | Average Q |
| :---: | :---: | :---: | :---: |
| Semesters | Eligibility to | Minimum | Minimum |
| Completed | Continue in | Cumulative | Cumulative |
|  | Good Academic | Credits | GPA |
|  | Standing in | Passed |  |
| 1 | 2nd semester | 12 | 1.50 |
| 2 | 3rd semester | 24 | 1.75 |
| 3 | 4th semester | 36 | 1.83 |
| 4 | 5th semester | 48 | 1.90 |
| 5 | 6th semester | 60 | 2.00 |
| 6 | 7th semester | 72 | 2.00 |
| 7 | 8th semester | 84 | 2.00 |
| 8 | 9th semester | 96 | 2.00 |
| 9 | 10th semester | 108 | 2.00 |
| 10 | 11th semester | 124 | 2.00 |
| CLASS A | TTENDANCE |  |  |

Regular attendance is essential to successful academic progress. Students are expected to attend all classes, laboratories, seminars, and conferences as scheduled unless they are ill or prevented from attending by exceptional circumstances.
Since the majority of University College students are adults attending part-time, the administration and faculty try to accommodate their special needs. Occasionally, family or work may conflict with school responsibilities.
Instructors may establish policies for attendance of their classes, which are announced at the beginning of the semester. Students who find it necessary to miss class are responsible for obtaining notes on material covered in lectures or other class sessions. It is up to the instructor to determine whether to allow the student to make up missed quizzes, examinations or other exercises.

Students are also responsible for notifying professors about absences that result from serious illnesses, injuries or critical personal problems. Medical excuses are not issued by the University Health Service, except in instances of (1) illnesses or injuries that involve hospitalization; (2) in the event of partial or complete withdrawal due to medical reasons; or (3) in the event of a missed final examination for a medical condition being cared for by the Student Health Center. In all of these instances medical information will only be released with the student's written permission.
Students should be aware that instructors have the right to lower grades for excessive absence or failure to make up work missed. They may also assign a grade of WF.
Students who find their attendance seriously interrupted by exceptional, unforeseen circumstances are encouraged to discuss their difficulties with their instructor or academic advisor.

## HONOR CODE

The integrity of all undergraduate students, whether in Newcomb College, Tulane College, or University College is based on the absolute honesty of the entire community in all academic endeavors. As part of that community, students have certain responsibilities regarding all independent work that forms the basis for the evaluation of their academic achievement. Tulane
students are expected to familiarize themselves with the principles of this honor code and to conduct themselves in a manner that complies with it at all times.
The scholarly community of the university depends on the willingness of both faculty and students to uphold the honor code. When a violation of the honor code is observed, it is the duty of every member of the academic community who has evidence of the violation to take action. Students should take steps to uphold the honor code by reporting any possible offense to the instructor or the honor board. Students should under no circumstances tolerate any form of academic dishonesty.

In all work submitted for academic credit, students are expected to represent themselves honestly. The presence of a student's name on any work submitted in completion of an academic assignment is considered to be an assurance that the work and ideas are the result of the student's own intellectual effort, stated in his or her own words and produced independently, unless clear and explicit acknowledgement of the sources for the work and ideas is included. This principle applies to papers, tests, homework assignments, artistic productions, laboratory reports, computer programs, and other assignments.
If a violation of the honor code is suspected, the associate or assistant dean will provide the accused student with a copy of the formal charge in writing: the nature and occasion of the alleged violation, the name of the complainant, copies of the documents pertinent to the allegation, and a copy of the honor code. He or she will be allowed four working days to prepare his or her case; an extension to this period will be granted by the dean if necessary. The student may seek the counsel of a college advisor in preparing for the hearing. The advisor may be present at the hearing but can not testify. Because the hearing is an administrative procedure, internal to the workings of the university, the student shall not be represented by legal counsel. The student is expected to attend the hearing but non-attendance by the student and/or witnesses will not in itself prevent a hearing or the imposition of appropriate sanctions. The accused student may make a statement before the honor board, testify, present evidence, call witnesses, and examine or dispute any evidence. Conversely, the student may choose to make no statement and/or decline to respond to any question. The student is entitled to a fair and confidential hearing and will be presumed innocent.
If the student is judged innocent, there will be no report of the case on his or her college record. If the student is judged guilty, he or she will have the right to appeal the verdict and/or recommended sanctions to the appropriate dean within seven working days of the hearing. The appeal must be in writing and must provide evidence of substantial procedural error, excessive penalty or new evidence.

It should be noted that the hearing is not a legal procedure, so formal rules of evidence and courtroom procedures do not apply. The purpose of the hearing is to provide the student with an opportunity to be heard and to supply the hearing panel with the relevant information necessary to reach a decision. Honor board procedures are of grave importance and are to be taken seriously by all concerned. All persons appearing before the honor board are obligated to be completely honest. Charges can result in suspension or expulsion from the university. It is every student's duty to ensure that the principles of the honor code are upheld and that the procedures are properly followed.

## HONOR CODE VIOLATIONS

Any student behavior that indicates a lack of academic honesty and integrity is considered a violation. The following are defined as violations:

## Cheating

Unauthorized giving, receiving or use of material or information in examinations, quizzes, assignments or other course work, or trying to do so, with the attempt to influence a grade.

## Plagiarism

The use of the ideas, data or specific passages of others that are unacknowledged or falsely acknowledged, with the purpose of influencing a grade. Any paraphrasing or quotation must be appropriately acknowledged.

## Falsification of Research

The fraudulent or deceptive generation of data or the knowing use of data gathered in such a manner.

## Unauthorized Collaboration

Collaboration not explicitly allowed by the instructor to obtain credit for examinations or course assignments.

## Multiple Submission

Presentation of a paper or other work for credit in two distinct courses without prior approval by both instructors.

## Misrepresentation

One person taking a quiz or examination, or producing a paper, for another.

## Falsification of Academic Records

Forging the signature of an instructor or advisor on any form directly affecting a grade or academic credit.

## False testimony

Knowingly presenting false accusation or testimony before the honor board or its representatives.

## Improper disclosure

Failure of an honor board member to maintain strict confidentiality concerning honor board proceedings.

## CONDUCT

Responsible adult behavior is expected of students in University College in both scholastic and non-scholastic affairs. Violations of the rules and regulations, including those on academic honesty, lead to disciplinary action by a dean of University College, the Vice President for Student Affairs, or other appropriate University authority. University College reserves the right to be the judge of a student's fitness to continue attendance or to be recommended for graduation.

## DISCIPLINE

Departures from acceptable conduct may lead to fines, disciplinary probation, suspension or expulsion. Disciplinary probation (which refers to conduct and not to academic standing) and suspension usually are imposed for a stated period. Suspension and expulsion involve exclusion from classes and from all University activities. Students suspended or expelled receive W's or WF's in all courses at the discretion of the dean. Expulsion is the most serious academic penalty and is permanent. It is noted on the student's record and included on transcripts issued thereafter. Suspension is noted on the student's record and on transcripts issued while the penalty is in effect, but the notice is removed from the transcript at the end of the suspension. Transfer credits cannot be accepted for students who attend other colleges or universities while ineligible for any reason to continue in University College.

## REPORTING

All students must report to the Dean of University College, the Vice President for Student Affairs, or to their advisor or instructors without delay when notified to do so.

## GRIEVANCE COMMITTEE

The University College Grievance Committee is composed of three faculty and two student members and the associate or assistant dean as a non-voting member. One of the committee's
duties is to hear students' grievances and complaints against Tulane University and University College or Tulane personnel, including the faculty. The Grievance Committee deals with issues such as the grading system, sexual harassment and unfair treatment. Students desiring a hearing before the committee must submit their request in writing to the associate or assistant dean. Students who are dissatisfied with the committee's decision may appeal to the dean. For additional information about the committee and its procedures, the student should contact the University College office.

## Right to Privacy

Privacy of students' records and affairs is protected under the Federal Family Educational Rights and Privacy Act of 1974 as amended (P.L. 93-380) and by policies issued by the Tulane University Board of Administrators: (1) a university must allow a student the opportunity to review and inspect his or her educational records; (2) a university must give a student the opportunity to challenge the content of his or her records under certain circumstances; (3) a university must not grant access to or allow disclosure of a student's records to outside parties, unless such disclosure is specifically permitted under the law or is made with the student's written consent; (4) a university must notify students of their rights under the law.
For further details, contact the Office of Student Affairs at 865-5180.

## Academic Options

## CROSS REGISTRATION

Students can enroll in undergraduate courses not listed in the University College offerings. For courses listed under liberal arts and sciences, students need only meet the prerequisites before enrolling. The Schools of Architecture and Engineering and the A.B. Freeman School of Business courses require the relevant dean's approval.
Note: For the 2003-2004 academic year, courses listed under the University College section of the Schedule of Classes carry a reduced tuition rate of $\$ 232$ per credit. Courses not listed with University College, such as those listed under Liberal Arts and Sciences, carry a higher tuition rate that is more than $\$ 1000$ per credit.

## DOUBLE MAJORS

Students may complete two majors by meeting the requirements established by the departments concerned. Although two diplomas are not awarded for a double major, both majors are listed on the permanent record from which transcripts are made.
To undertake a double major, students must plan each major with the department concerned. Some minimal overlap may occur: (1) in cases where one course is listed by two major departments as part of the major curriculum of each: for instance, Social Psychology is listed under both the sociology and psychology departments; (2) in cases where one major is departmental and the other interdepartmental: for example, a double major in English and Medieval Studies might have a Chaucer course in common. In any case, each major of a double major must show at least eight courses that do not overlap, except a double major in Exercise Science and Cell and Molecular Biology where no more than five courses may overlap.

## INDEPENDENT STUDIES

Because University College believes superior students should assume responsibility for some of the direction of their own education, many departments offer to a limited number of students of superior scholastic standing creative opportunities for independent study under the direction of a faculty member especially interested in individual instruction.

The work may take the form of directed readings, laboratory or library research, or original composition. Instead of traditional class attendance, the student substitutes conferences, as needed, with the director.

Students who wish to take an independent studies course should give their advisor a note from the instructor who will direct their study.

## INTERNSHIPS

An internship involves a relevant academic foundation in addition to an experiential learning process. The academic foundation may, for example, consist of a term paper, a number of short papers, discussions of a number of books, and the like. Students may identify their own internship opportunity or they may consult with those persons on campus who coordinate internship programs to arrange an internship experience.
Internships are available through various departments. Students participating in elective internships register for Internship Studies (course numbers 456, 457) within the appropriate department after having made initial arrangements with a professor who will sponsor the internship. Registration is completed using an Internship Studies Registration form. Each student registered for an internship must submit an Internship Prospectus form to the appropriate departmental chair for approval within one week prior to the end of the add period. A copy of this form bearing the signatures of the student, sponsoring professor, internship supervisor and departmental chair also must be filed with the Office of the Dean within one week of the end of the add period. These forms are available in departmental offices and the Office of the Dean.
Each student completing an internship must write a synopsis of the internship, including both the academic and experimental components. This synopsis is to be approved by both the supervising professor and the appropriate departmental chair and filed with the Office of the Dean prior to the end of the final examination period.
A student may not take a salaried position outside Tulane University for the purpose of an internship, except where such an arrangement is required by the cooperating organization for insurance purposes. If a student must take a salaried position for this reason, a letter to this effect from the cooperating organization must be filed with the Office of the Dean prior to the end of the add period.

Internships are open only to juniors and seniors in good standing. Only one internship may be completed per semester.
Requirements of the Media Arts and Paralegal Studies practica (internships) differ somewhat, since these practica are required. Students must register in Paralegal Studies 590 (or 501 for students admitted prior to Summer 1991), or Media Arts 505 during the regular registration period. Arrangements for these practica should be made with the Media Arts or Paralegal Studies Program directors.

## SECOND DEGREES

Students already holding a baccalaureate degree may enroll in University College for a second baccalaureate degree. They must complete a total of 150 credits instead of 124 (48 credits must be taken at Tulane University), satisfy University College's proficiency, supporting, distribution, and residency requirements for a second degree, and fulfill the requirements for the major.

## General Information

## MAIN CAMPUS

Administrative offices of University College are located in Gibson Hall on St. Charles Avenue opposite Audubon Park. Office hours are 8:30 a.m. to 6:30 p.m. Monday through Thursday and 8:30 a.m. to 5 p.m. on Friday. University College shares classroom, study, and recreational facilities with the other academic divisions. Call (504) 865-5555.

## ELMWOOD CAMPUS

The Elmwood campus is located at 800 E. Commerce Rd., Harahan, LA 70123. Office hours are 9:00 a.m. to 9:00 p.m. Monday-Thursday and 9:00 a.m. - 4:30 p.m. on Friday. Morning, afternoon and evening courses are available throughout the year. Call (504) 865-5333.

## NEW ORLEANS CENTRE (DOWNTOWN) CAMPUS

The Downtown campus is located on the third floor of the New Orleans Centre, 1400 Poydras Street, Suite 841. Office hours are Monday-Thursday, 7:00 a.m. - 8:30 p.m., Friday 9:00 a.m.- 5 p.m., and Saturday 9 a.m.- 12:00 noon. Call (504) 587-9044.

## MISSISSIPPI COAST CAMPUS

The Mississippi Coast Campus is located in the Edgewater Mall, near Keesler Air Force Base, 2600 Beach Boulevard, Biloxi, MS 39531. (228) 388-5769.

## NORTH SHORE CAMPUS

Our North Shore center located on the site of Tulane's Primate Center at 18703 Three Rivers Road in Covington began offering evening classes in the Spring of 1990. Phone: Covington (985) 871-6336, New Orleans (504) 862-8040 ext. 6336; Fax: Covington (985) 893-1352, New Orleans (504) 862-8041.

Concluding with the 2003 Summer term, University College will no longer offer courses or any activity at the Tulane Regional Primate Research Center.

## ACADEMIC ADVISING

Academic advising for part-time students is available Uptown, by appointment, Monday through Thursday from 9:00 a.m. to 6:30 p.m. and on Friday from 9:00 a.m. to 4:00 p.m.; students may be able to obtain advising during other times but are encouraged to make an appointment by calling 865-5555. Advising for full-time students is available Uptown by appointment. Advising is also provided by appointment at the Elmwood campus from 11:30 a.m.

- 7:30 p.m., Tuesday-Thursday. Advising for majors in Computer Information Systems and Organizational Information Technology is done at the Elmwood campus. For an advising appointment at Elmwood, call 865-5333. Students are urged to maintain regular contact with their advisor in matters relating to academic planning, satisfaction of degree requirements, quality of work rules, and transfer of credit from other institutions.


## STUDENT GOVERNMENT

Each year during the spring semester, University College students elect a president, vice-president (full-time student), vice-president (part-time student), secretary, treasurer and senators-at-large. These officials function as the University College Student Government. Additionally, the president of the college government appoints (generally from among the elected officials) two representatives to the university-wide Associated Student Body Senate.
Student government is funded by a mandatory student fee. Part of the income goes to Tulane University student organizations and activities, and part is retained by the University College Student Government Association. Student activity fees are distributed by the Associated Student Body, which organizes campus activities. The University College Student Government Association requests its budget from that body.
Students interested in the student government should contact the student government advisor at 865-5555.

## ALUMNI ASSOCIATION

All graduates of University College automatically become members of the Alumni Association. There are no dues. The purpose of the Association is to promote the idea of higher education with emphasis on the continuing education of adults and to encourage fellowship among members. Alumni receive University College's newsletter to help them keep informed. The Association holds several functions throughout the year which members are urged to attend. Contact with the Alumni Association can be made by calling the University College office, at 865-5555.

University College publishes Groundswell, a newsletter for alumni and friends, each spring and fall. Read Groundswell online for the latest information on UC activities and accomplishments. To be included in the Classnotes section of Groundswell, send email to Celeste Uzee, Director of College Gifts, at cuzee@tulane.edu.

## Admission, Costs, and Transfer Credits

## ADMISSION

## Part-Time

University College has an open admissions policy. Students do not need ACT or SAT tests in order to be admitted but must hold a high school diploma or graduate equivalent degree. Continued enrollment is based on satisfactory academic performance.
Students wishing to study part-time through University College should obtain an application form and submit it, along with a $\$ 20$ processing fee, to the office before the beginning of the semester. The $\$ 20$ application fee is non-refundable. Applications cannot be processed without this fee.

Students who have attended college previously and plan to work toward a degree or certificate must contact all their former schools and have them send official transcripts directly to University College. Students who have not attended college must submit a copy of their high school diploma (or equivalent) with their application.
Students can be admitted conditionally without transcripts, but registration may be canceled if transcripts have not been received by mid-semester. Students desiring to attend University College to take miscellaneous courses or to audit courses do not need to submit transcripts of previous college work.
Students dismissed from, or on probation at, their last college may be admitted on probation at the discretion of the Academic Performance Committee. Conditions of probation at entry generally include a load limit of seven credits in the first semester. Readmission is generally contingent upon the student earning grades of C - or better in all courses taken the first semester.

## Full-Time

Students wishing to apply for the full-time program or for a Bachelor of Science in Exercise Science should apply to the Office of Undergraduate Admissions, 210 Gibson Hall.

## Interdivisional Transfer

Students in good academic standing in another division of Tulane University who wish to change to part-time status may, with the approval of the dean of their own college, transfer to University College.
Students on probation in another division of Tulane University who wish to improve their academic standing through part-time studies may, with the approval of the dean of their own college, transfer to University College but will be admitted on probation.

Note: Students not eligible to return to another division of Tulane University are generally inadmissible to University College. These students may appeal to the dean’s office for probationary admission.
Students wishing to transfer from another division of Tulane University to University College as full-time majors in Exercise Science may do so with the approval of the dean of their own college and the dean of University College.
Students enrolled in either Tulane College or Newcomb College may not transfer into University College as full-time students in order to complete an undergraduate degree otherwise available through the LAS colleges.
Part-time students in University College who wish to transfer to another division of Tulane University should apply through the Office of Undergraduate Admissions and obtain the recommendation of the associate dean of University College. This recommendation is given only to students who have completed at least one semester in University College (two if placed on probation at entry) and are in good academic standing.

Students admitted to a full-time program in University College are required to meet different criteria for an interdivisional transfer and must see an academic advisor for information.

## TRANSFER OF CREDIT FROM OTHER COLLEGES

Students who wish to transfer credits earned at other colleges and universities must have official transcripts sent directly to University College.
University College will transfer only those credits earned at another college or university which was accredited by a regional authority such as the Southern Association of Colleges and Schools at the time the courses were taken. Up to 62 credits may be transferred from a regionally accredited community or junior college. Individual academic departments at Tulane may have rules governing the transfer of credits from community or junior colleges which may affect students. For specifics, contact an academic advisor. No more than 27 credits of business coursework may be transferred to University College.
Work from such regionally accredited colleges is transferred at the value in credits/hours for which it was awarded if a grade of C- or higher was earned and if an equivalent Tulane course exists. Work from other colleges within Tulane University is transferred at face value, subject to minor differences of interpretation between divisions.
Students transferring from a school using the quarter, rather than the semester, system are awarded two-thirds of a semester hour for each quarter hour credit. The transfer of credit from institutions not belonging to a regional accrediting body is at the discretion of University College. University College does award 12 transfer credits for graduates of the New Orleans Police Academy. Courses transferred from other institutions are never figured into the grade point average.

Part-time students who have 20 or more credits to transfer should see an academic advisor before the end of their first semester to have their credits evaluated. Students should first check with the University College registrar to see if their transcripts have been received.
As a general rule, determination of transfer credits for all University College full-time students should also be made no later than the end of their first semester of full-time enrollment after all transcripts have been received.

Transfer credit requested for academic work done more than 10 years ago is subject to review. Course work from foreign universities will be referred to the International Student Office for evaluation. Students desiring transfer credit must submit official transcripts, not photocopies, from all other colleges or universities attended.
Students wishing to take courses at another institution during the summer must first receive approval from the dean's office and from the appropriate department.
Ordinarily, while enrolled at Tulane, part-time students are not permitted to take credit courses at any other university for the purpose of applying such credits toward a degree program at Tulane. Students desiring such an arrangement must obtain the approval of the dean.

## CLEP CREDIT

Students enrolled in University College may receive up to 15 credits by successfully testing out of courses through the College Level Examination Program (CLEP) or by experiential testing. Credit can be earned in the following courses: Mathematics 121, Chemistry 107, Psychology 100, and Sociology 101. Students interested in taking one or all of these CLEP examinations must contact their academic advisor for information regarding times, dates, and specific tests to be taken. Students who plan to take a CLEP examination are advised to do so during the first two semesters of their enrollment. To receive credit, students must place in the 75th percentile or higher. CLEP credits may be transferred from other accredited institutions if they fulfill stated University College requirements.
For CLEP credit in the following courses, students must earn an equivalent of a "B" grade: Elementary Accounting 112, Business Law 340, Intro to Information Systems 110, Humanities 201, Natural Sciences 201, Management Principles 231, Intro to Marketing Principles 320, Litigation I 305. Note: Students interested in testing for credit in Litigation I 305 only, must contact Nancy Wagner at (504) 865-5333 or at nwagner@tulane.edu.
CLEP credits may be transferred from other accredited institutions if they fulfill stated University College requirements.

Note: Credits awarded through CLEP may not be transferable to other Tulane divisions.
Delgado Community College provides a convenient designated testing center for the College Level Examination Program for students attending University College’s Louisana campuses. For Mississippi UC students, there is a testing center William Carey College in Hattiesburg.
Charges for 2003-2004 for Part-time Students

| Application Fee | $\$ 20$ |
| :--- | :--- |
| Tuition | $\$ 232$ per credit hour |
|  | $\$ 696$ for three credit hours |
| University Fee (max) | $\$ 10$ per course |
| Books \& Supplies (estimated) | $\$ 100$ per class |
| Parking Permit | $\$ 90$ per year |
| Reily Recreation |  |

Center Membership (optional) \$100 per semester

## TUITION AND FEES

Tuition at University College is assessed per course. For 2003-2004, it has been fixed at the rate of $\$ 696$ per three-credit course ( $\$ 232$ per credit hour) for part-time students. The same fee applies to courses taken on an audit basis.
In addition to tuition, part-time students pay university and student activity fees.
University College students may register for courses offered by other divisions at Tulane but must pay a substantially higher tuition for those courses.
Full-time students in University College who have been admitted by the Tulane Admissions Office pay the same tuition and fees as other full-time Tulane students. During their last semester before graduation, students in University College with a previous and continuous enrollment record as full-time students are eligible for conversion to part-time status and lower tuition only if six (6) credits or less are needed for graduation.
Several sessions of night courses are offered each summer at regular University College rates. University College students may take daytime Summer School courses without restriction but must pay tuition at the Summer School rate rather than the University College rate.
Special fees are charged for laboratory and studio courses, and special examinations as specified in the Schedule of Classes published by the Registrar's Office.

Tuition refunds are allowed for students who drop courses (effective when received in the University College office) by the dates specified in the academic calendar published in the Schedule of Classes. Failure to attend does not constitute a withdrawal.

No diploma or transcript will be given to a student who is in default on any payments due to Tulane University.
Note: Application, lab, and university fees are non-refundable.

## Tuition Discounts

## For Teachers

Full-time teachers employed at schools approved by the Louisiana State Board of Elementary and Secondary Education may qualify for a 50 percent tuition discount. Elementary and secondary teachers and counselors enrolled in courses appropriate to their respective fields are eligible.
For more information, contact the Center for Education at (504) 865-5342.

## For Senior Citizens

Students who are 60 years or older qualify for the senior citizen tuition discount, which entitles them to take University College credit courses for one-half off the regular tuition rate. Senior citizens who wish to take advantage of this discount must inform the University College registrar of their status and complete the Senior Citizen Discount Form. A copy of a birth certificate, driver's license, or other proof of age must accompany this form.
For Employees of the City of New Orleans
Full-time employees of the City of New Orleans receive a $50 \%$ tuition discount on all courses listed in the University College section of the Schedule of Classes. To qualify for this discount, Certification of Employment forms must be completed by the application deadline for each new semester. This discount also applies to employees of New Orleans Regional Transit Authority, the Orleans Parish Criminal Sheriff’s Office, and the Housing Authority of New Orleans. The same certification procedure is required.

## For Employees of Jefferson Parish

Full-time employees of Jefferson Parish and its municipalities, including Parish Courts, receive a $50 \%$ tuition discount on all courses listed in the University College section of the Schedule of Classes. To qualify for this discount, Certification of Employment forms must be completed by the application deadline for each new semester. Discounts are percentages of tuition. No combination of tuition discounts entitle a student to a $100 \%$ discount.

## Courses

The following list is a representative sample of courses that are normally offered during an academic year. Students should not assume that all courses will be offered in any given period of time, and the college reserves the right to cancel any class that has insufficient enrollment.

The Office of the University Registrar publishes a preliminary Schedule of Classes, including courses, times, and instructors before phone registration begins for the next semester. A final Schedule of Classes, which includes the locations for each class, is published just before classes begin.

Courses numbered 001 to 099 are review courses: 100 to 199 are primarily for freshmen; 200 to 299 primarily for sophomores; 300 to 399 primarily for juniors; 400 to 599 primarily for seniors; and 600 to 699 primarily for seniors and graduate students.

## ACCOUNTING

Note: All accounting courses are subject to the nine-course (27 credit) limit on business, management and related courses. This rule does not apply to students with a baccalaureate degree wishing to take accounting courses in order to sit for the CPA exam.

## 111 Elementary Accounting I (3)

An introduction to the principles of accounting. Topics include: recognition of revenue and expenses for income determination, proper classification of balance sheet items, and income statement and balance sheet preparation. Students learn to prepare adjusting entries, closing entries and worksheet presentations necessary for monthly financial statements. The principle and theories behind the proper accounting treatment of cash, accounts receivable, inventories, prepaid expenses, marketable securities and fixed assets are studied.

## 112 Elementary Accounting II (3)

Prerequisite: 111 or equivalent. Continuation of the study of financial accounting with a detailed study of liabilities and ownership interests for partnerships and corporations. Introduction to statements of changes in financial position, consolidated statements, cost accounting, and the effect of taxes on business decisions.

## 220 Special Topics in Accounting (1-3)

## 221 Intermediate Accounting I (3)

Prerequisite: 112 or equivalent. Review and extension of the complete accounting process, financial statement preparation and accounting for assets. Study and application of accounting theory to problems of classification and valuation in preparation of the balance sheet and income statement.

## 222 Intermediate Accounting II (3)

Prerequisite: 221 or equivalent. Continuation of the study and application of accounting theory to the balance sheet and income statement, including accounting for liabilities and corporate ownership interests, and the flow of funds. Contemporary accounting development and problems.
331 Cost Accounting (3)
Prerequisite: 112 or equivalent. A study of the accounting methods and procedures peculiar to manufacturing activities. Emphasis is placed on product costing in accordance with generally accepted accounting principles under various costing methods.

## 341 Income Tax (3)

Prerequisite: 112 or equivalent (intermediate accounting recommended). A basic study in federal income tax concepts with emphasis on individual taxation, especially as it relates to income, capital gains, exemptions, credits, and deductions.

## 342 Corporate Tax (3)

Prerequisite: 341 or equivalent. Continuation of the basic study of federal income tax with emphasis on partnerships, trusts, corporations, and estates.

## 451 Auditing (3)

Prerequisite: 222 or equivalent. This course involves the study of the principles of auditing at an intermediate level. Theoretical as well as practical applications are reviewed. These applications are studied at great length in each area of audit responsibility, i.e., requirements for each balance sheet classification and analysis and tests of revenue and expense classifications. Statistical sampling techniques are reviewed. Case studies supplement the lectures, and students create standard and tailored audit programs.

## 562 Advanced Accounting (3)

Prerequisite: 222 or equivalent. Special accounting problems in the area of partnerships, installment and consignment sales, mergers, consolidations, translation of financial statements of foreign affiliates, and accounting for estates, trusts and governmental units.

## Requirements for Certified Public Accountants

University College serves both students who wish to prepare for the CPA exam while they earn a degree as well as students who already have a degree but lack the specified accounting and/or business courses.

In order to sit for the Uniform Certified Public Accountant (CPA) Examination, a student must earn a baccalaureate degree from an accredited institution and have a minimum of 150 semester credits, including 24 credits in non-accounting business courses to include Commercial Law (UBSL 345) and complete the following accounting courses:

Elementary Accounting 111 and 112 (prerequisites to the intermediate accounting courses), Intermediate Accounting 221, Intermediate Accounting 222, Cost Accounting 331, Income Tax 341, Corporate Tax 342, Auditing 451, Advanced Accounting 562, and one accounting elective above the 100 level. (Total: 30 credits of accounting).
Any student considering taking the Uniform CPA examination should contact the State Board of Certified Public Accountants of Louisiana (566-1244) or www.cpaboard.state.la.us to get a complete copy of the examination requirements and information. The requirements may change.
Students seeking a degree while preparing for the CPA exam must complete the same courses. Some of these courses may be used as general electives satisfying degree requirements.

## ANTHROPOLOGY

(For other course descriptions, see the Liberal Arts and Sciences section.)

## 316 Peoples of the Pacific (3)

Introduction to the cultures of Polynesia, Micronesia, Melanesia, and Australia from the time of first settlement to emergence of modern nation-states.

## 318 Cultures and Peoples of South Asia (3)

A survey of the peoples and cultures of India, Pakistan, Nepal, Bangladesh, Bhutan, Sikkim, and Sri Lanka. Emphasis is placed upon the social organization and cultural history of the diverse peoples who have inhabited the Indian Triangle.

## 374 Anthropology through Science Fiction (3)

Examination of anthropological concepts in works of science fiction. Emphasis on the place of anthropology in the contemporary literature. Consideration of human origins, human nature, origin of civilization, cultural ecology and environmental determinism.

## 375 Magic, Witchcraft, and Religion (3)

Examination, in a cross-cultural perspective, of the major elements and categories of folk religion and its relationship to other cultural and societal variables. Topics considered include witchcraft, divination, curing, and the occult.

## ARCHITECTURE

131 Louisiana Architecture, 1700-1865 (3)
Architecture in Louisiana from colonial to early Victorian period, as seen in the work of important architects and builders and in vernacular construction. The planning of towns and forts is examined, especially in New Orleans. The course illustrates the development in the 18th century of the distinctive Louisiana Colonial style, its mingling with styles introduced from the East Coast after the Louisiana Purchase, and the gradual dominance in the mid-19th century of international Anglo-American styles. The effects on architecture of climate, natural resources, early industrialism and the rich ethnic mix of Louisiana are considered. Field trips to the Vieux Carre, plantations and the Garden District are scheduled. Previous experience in courses using slide presentations is useful.

## 132 New Orleans Architecture (3)

Architecture in New Orleans, from Native American to contemporary times, will be investigated. Regional, national, and international influence on local architectural heritage will be examined. The designs of prominent local architects and builders will be explored, as well as the vernacular forms of architectural styles found throughout New Orleans.

## 141 Historic Preservation and Renovation (3)

The course reviews the history and theory of historic preservation, as well as the modern concepts that have been developed for contemporary needs. The process of structural analysis is studied; methods of consolidation of structures are viewed in detail and illustrated with study cases. The economics of recycling, the involvement of governmental offices and the benefits of the existing tax incentives are analyzed.

## 205 Introduction to Japanese Architecture (3)

This course surveys and analyzes the interaction of geography, secular history, and religious beliefs through the study of Japanese architecture up to the end of the Meiji Period. Particular emphasis is given to the influences of the Shintoism and the Buddhism on Japanese architecture and style.

## 241 Historic Preservation Law (3)

Overview of legal theories as well as local, state, and federal laws applicable to historic preservation.

## ART HISTORY

(For other course descriptions, see the Liberal Arts and Sciences catalog.)

## 300 History of Photography (3)

This course will examine the growth of photography's contribution to the visual arts, from its beginnings as a substitute for skill of hand to its present status as an accepted art form. Students will approach the history of photography as the history of a medium rather than a technique, with technology discussed only as it has affected the vision of the photographer. Emphasis is placed upon the masterworks of photography, i.e., photographs made with such quality of vision that they have become works of art of the 19th and 30th centuries, European and American.

## ART STUDIO

(For Art Studio course descriptions, see the Liberal Arts and Sciences section.)

## ASTRONOMY

(For Astronomy course descriptions, see the Liberal Arts and Sciences section.)

## BUSINESS LAW

Note: These courses are subject to the nine-course (27 credit) limit on business, management and related courses.

## 340 Legal Aspects of Business (3)

A practical approach to law as it affects the business person and the consumer. The primary focus is on the laws of contracts; the requirements and the rights and obligations they create. The relief granted to debtors through bankruptcy and the resulting detriment to creditors are studied with emphasis on precautionary measures. Finally, the consequences of willful or negligent acts are carefully treated.

## 345 Commercial Law (3)

This course is designed to show students the connection between law and business; give students basic knowledge of the fundamental concepts, principles, and rules of law that apply to business transactions, especially in the areas covered by the La. CPA examination; and to develop the ability to apply this knowledge to specific situations with good judgement.

## 220 Special Topics in Business Law (1-3)

CELL AND MOLECULAR BIOLOGY
(For Cell and Molecular Biology course descriptions, see the Liberal Arts and Sciences section.)

## CHEMISTRY

(For Chemistry course descriptions, see the Liberal Arts and Sciences section.)

## CHINESE

## 103 Beginning Chinese I (3)

An introduction to the skills of speaking, understanding, reading and writing Chinese.
104 Beginning Chinese II (3)
A continuation of the objectives presented in Chinese I.

## 205 Intermediate Chinese (3)

Prerequisite: Chinese 104. An intensive review of Chinese grammar. Comprehensive skills will be stressed in both the classroom and language laboratory.
310 Survey of Chinese Classical and Popular Literature (3)
Readings (in English translation) of the Chinese classics, historical narratives, lyrical poetry, ballads and stories, and fiction. Discussion of nature images and lyric-making, techniques of thematic and narrative compositions, and, where relevant, comparison of parallel compositional techniques in other literary sources.

## CLASSICS

(For Classics course descriptions, see the Liberal Arts and Sciences section.)

## COLLOQUIA

(For Colloquia course descriptions, see the Liberal Arts and Sciences section.)

## COMMUNICATION

(For Communication course descriptions, see the Liberal Arts and Sciences section.)

## COMPUTER INFORMATION SYSTEMS

## 110 Introduction to Information Systems (3)

This survey course covers concepts and relationships of the hardware, software and people involved with computer systems. It puts the rest of the curriculum in perspective and builds a foundation upon which you can build a coherent sequence of courses. An introduction to the use of editors and compilers is included.

## 150 Elementary BASIC (3)

Prerequisite: 110. BASIC, Beginner’s All-purpose Symbolic Instruction Code, although relatively easy to learn, is widely used in business, especially on small or medium-sized computers. This course not only teaches the QBASIC language but also instructs you in good programming techniques.

## 151 Elementary Visual Basic (3)

Prerequisite: 110 or equivalent experience. This introductory programming course assumes no previous programming experience and introduces programming in an <<object-like>> environment. The student is introduced to the use of problem-solving, logic skills and program design to develop simple computer-based solutions in Visual Basic. Students will write Visual Basic programs using elementary applied computing techniques including editing, calculation, decision branching, control looping, and file I/O.

## 160 Elementary Pascal (3)

Prerequisite: 110. This course introduces programming in a strongly structured language, Pascal. Although not widely used in business, Pascal is a good example of modern computer language trends and is a good preparation for C programming.

## 165 Introduction to Software Development (3)

Prerequisite: 110 or previous programming experience. This course provides an overview of problem definition, program design and application programming. Different styles, methods and tools are covered: procedural, data-driven, even-driven, and object-oriented. Students complete programming assignments using a variety of design methods and programming languages.
221 Problem Solving with PL/SQL (3)
Prerequisite: 160 and 220 or equivalent experience. This course parallels Oracle Corporation's first course, <<Introduction to Oracle.>> It is the prerequisite to all Tulane’s courses using Oracle products. Students are introduced to SQL and PL/SQL for use in developing database system solutions. Tables are built and relationships developed. SQL programs are written using elementary applied computing techniques including editing, calculation, decision branching, control looping, and file I/O.

## 251 Problem Solving with Visual Basic (3)

Prerequisite: 150, 160, or 165 (or equivalent programming experience) and familiarity with a GUI environment. The course moves more quickly than 150 and develops more topics. Developing computer-based solutions in Visual Basic, using object-oriented and event-driven techniques. Uses, characteristics, syntax, and strategies of programming with a "visual" tool. Fundamental data types and derived data structures of a database engine. Design of effective graphical interfaces.

## 282 Problem Solving with Developer: Forms (3)

Prerequisite: 221 or equivalent experience. This course parallels Oracle Corporation's second course in its application development track, <<Developer: Forms I.>> Provided in this course are concepts and principles of elementary application component development using Oracle Forms tools and relational databases. An overview of the structure and toolset of Oracle Developer is provided. Hands-on practices and implementation of forms development is taught in a lab setting.

## 283 Problem Solving with Developer: Reports (3)

Prerequisite: 282. Designing and producing reports will be taught, using Oracle Corporation's Developer tool and understanding appropriate concepts, terminology, and methods. Students first build reports using the wizard and then manually. Data for the reports are extracted from an Oracle database using SQL Select statements and PL/SQL scripts. Students create matrix, master detail, tabular, and form reports; adding new information, additional fields and secondary reports will be taught.

## 290 Current Topics in Computer Information Systems (3)

Prerequisite: 110 and some computer programming experience. The content and objectives of this course will vary with new developments in applied computing and new system technologies. Some examples will be "VB.net" and "C.\#".

## 291 Problem Solving with C (3)

Prerequisite: 160 or 165 (or equivalent programming experience). Developing computer-based solutions in "C", using structured techniques. Uses, characteristics, syntax, and strategies of programming with ANSI "C"; editing, branching, looping; fundamental data types and derived data structures; pointers, arrays, and variables.

## 293 Problem Solving with C++ (3)

Prerequisite: 160 or 165 (or equivalent programming experience). Developing computer-based solutions in C++, using object-oriented and event-driven techniques, accessing databases with open database connectivity.

## 295 Problem Solving with Java (3)

Prerequisite: 291, 293 or other intermediate level experience in programming. Students learn fundamentals of Java: working on multiple platforms without recompilation; differences between procedural and object oriented software development; producing maintainable, portable code. Java syntax, data types, and program structures are taught, as well as the generation of working Java applications and Applets.

## 310 Information Systems Architectures (3)

Prerequisite: at least one 200-level programming in the CIS curriculum, or equivalent experience. This course supports learning of the hardware/software technology background needed to understand tradeoffs in computer architecture for effective use in an organizational environment. The student is introduced to the internal data representation for information, the logical interconnection of components for processing data, and the controlling software that manages systems resources. Architectures included are single user, central and networked hardware systems, as well as single and multi-user operating systems.

322 Systems Analysis (3)
Prerequisite: 282 or 293. This course develops your skills in using the tools of the systems analyst, teaching you about the systems process, problem definition, the feasibility study, project planning and definition of a functional system proposal, typically in an applied computing environment.

## 323 Systems Design (3)

Prerequisite: 322. You continue the project started in 322 by designing an applied computing system using hardware, operating system, software and communications requirements, application software design, procedures specifications and an implementation schedule.

## 340 Relational Database Analysis and Logical Design (3)

Prerequisite: 221 and 282. This traditional track course requirement begins the development of a large database application. Students learn to being a large 2 -semester project by analyzing organizational data needs, then to model and present those needs using diagrams and specifications. Different database designs are explored. Topics include: normalization, entityrelationship modeling, relational algebra, a review of SQL, and database application design.

## 341 Relational Database Physical Design and Implementation (3)

Prerequisite: 340. This traditional track courses requirement continues development of a large database application. Students continue to develop a large database and database application, using physical design and systematic implementation techniques. A 2-semester project is concluded. Topics include: database processing using internet technology, managing multi-user databases, accessing the database server, sharing enterprise data, and MS SQL Server implementation. Advanced/optional topics include: hierarchical and network data models and object oriented database processing.

## 342 Object-Oriented Analysis and Logical Design (3)

Prerequisite: 295. This progressive track course requirement begins the development of a large object-oriented application. Students begin a series of 2 -semester progressive assignments by analyzing an organizational problem, then model and present those needs and a solution using UML diagrams and methods. Key design decisions are made regarding use of inheritance vs. composition, interfaces, thread, and notification mechanisms. A user interface design completes the course.

## 343 Object-Oriented Physical Design and Implementation (3)

Prerequisite: 342. This progressive track course requirement begins the development of a large object-oriented application. Students continue the series of progressive assignments begun in 342, using physical design and systematic implementation techniques. The course covers: performance issues, use of the JDBC in an application, use of XML-RPC and Java servlets. Other topics include: the object class, reflection, threads, collections, resources, packages, testing, naming and style.

## 347 Database Administration (3)

Prerequisite: 221 and 344 or equivalent experience. This course parallels Oracle Corporation's second course in its database administration track, "Database Administration." Some topics and activities include: installation and management of a database system; ensuring data integrity; managing database users. Students will work in a lab environment to install Oracle 9i, and will then work their way through a series of crucial system-side activities to learn the various tasks of an Oracle database administrator.

## 348 Advanced Database Administration (3)

Prerequisite: 347. This course is designed to give the student a firm foundation in advanced database administrative tasks. The student will gain the necessary knowledge and skills to set up a backup and recovery scheme for a high-end database system. Students will then follow a structured performance and tuning analysis of a database. Students will receive an introduction to network administration. Currently, Oracle is used for this course.

## 355 Directing the Information Systems Department (3)

Prerequisites: 323 and 341 or 343. Examines the organization, planning and management of major I. S. department functions. Some of these are: technology, personnel, budget, productivity, assessment, project selection and implementation, operations, data custody and ownership.

## 360 Networking (3)

Prerequisites: any 200-level programming course, or equivalent experience. This course begins with an overview of data communications, including coverage of media, devices, standards and protocols. It then examines the International Standard Organization (ISO) model, Open Systems Interconnection (OSI), and the protocols necessary to implement it.

## 370 Application Development with C/Unix (3)

Prerequisites: 291 and 323. This capstone course includes development of an application system, using top-down design and structured programming techniques. Key components of major courses in the curriculum are integrated into the projects. The C language and Unix operating system are utilized.

## 372 Event-Driven Application Development (3)

Prerequisites: 251, 341 and 323. Principles, concepts and methodology of online interactive systems development in a client/server environment are covered. Applied computing cases and their requirements are considered. Screen design, file handling, operating system interfaces, systems testing, debugging and implementation are included. Visual Basic and Active X are currently utilized in this course.

## 373 Information Engineering (3)

Prerequisites: 323 and 341. Principles, concepts and activities of CASE (Computer Assisted Software Engineering), as applicable to information systems, are treated. Enterprise-wide modeling is used to design integrated applications. Various integrated CASE tool sets are utilized. Currently, Oracle's Designer tools are used for the course.

## 375 Expert Systems Development (3)

Prerequisites: 323 and 340 or 342. Knowledge-based system development is utilized, along with decision making processes. Actual case situations are discussed and an application system is developed with a prototype design methodology. Some typical
"shells" are reviewed, as are Prolog and Lisp. Currently ExSys is used for this course.

## 376 Object-Oriented Application Development (3)

Prerequisites: 295, 323 and 343. Advanced object-oriented concepts and approaches are covered. Examples and features of object-oriented languages are reviewed. Emphasis is on design of a small system; Visual C++ or Java is used in an application development project. Check the schedule notes for each term offered. Other tools vary over terms.

## 378 Client/Server Database Application Development (3)

Prerequisites: 282, 323 and 341 . This course synthesizes principles and design techniques of prerequisite courses and adds advanced learning components needed to develop a client/server database application. Included are concepts and components of a two-tier client/server application; design and development of database structure, objects, and relationships; design and development of screens/forms to support the database application. Oracle tools are currently being used in this course.

## 379 Data Warehousing (3)

Prerequisite: 282, 323 and 341. This course synthesizes principles and design techniques of prerequisite courses and adds advanced learning components needed to develop a data warehouse application. The first half of the semester focuses on the Analysis and Design of data warehouse applications. It will also include the Build and Test phases of the data mart and data warehouse structures. The second half of the semester focuses on the client development using data warehousing tools. Oracle tools are currently being used in this course.

## 400 Independent Study (3)

Prerequisites: senior standing, completion of both 323 and 341 or 343 , and approval of the director of the CIS program. Under the supervision of an instructor, you pursue a selected advanced topic, either as independent research or as a work-related task. Note: registration for this course is through the CIS program Director only and is reserved for exceptional students in exceptional circumstances.
410 Advanced Topics (3)
Prerequisite: 323 and 340 or 342 . Note: The topics taught in a course numbered 410 in any semester will change as topic feasibility, student demand and instructor availability permit. Topics that may be included tend to focus on new developments in applied computing areas.

## CRIMINAL JUSTICE

## 101 Introduction to the Administration of Justice (3)

An overview of the three components (law enforcement, the judiciary and corrections) of the administration of justice with emphasis on the functions of each component and the interrelationships among them.

## 102 Criminology (3)

The study of crime and society from a social-psychological perspective. Consideration of major sociological and psychological factors related to criminal behavior, the definition, varieties and causes of crime, and the extent of crime in the United States.

ECOLOGY, EVOLUTION, AND ORGANISMAL BIOLOGY
(For EEOB course descriptions, see the Liberal Arts and Sciences section.)

## ECONOMICS

(For Economics course descriptions, see the Liberal Arts and Sciences section.)

## EDUCATIONAL TECHNOLOGY

## 100 Introduction to Microcomputers (3)

(See Organizational Information Technology.)

## 227 Working with the Internet (3)

(See Organizational Information Technology.)

## 256 Software Integration in Education (3)

Prerequisite: UINS 100 or equivalent experience. Teachers gain an understanding of how to integrate the use of educational software resources into their teaching methods. Sample topics include: identifying types of software and developing criteria for evaluating software; integrating software use with curriculum goals and designing lessons for transfer of learning; planning and implementing technology-related lessons; classroom management techniques for one-computer and multi-computer environments.

## ENGINEERING

The Bachelor of Science in Engineering is offered only by the Tulane School of Engineering. The University College student may earn some of the credits required in one of the departmental engineering programs. The student interested in engineering can meet most of the first-year requirements, a few of the second-year requirements and some elective requirements through University College. For further information, contact the dean's office of the School of Engineering.

## ENGLISH

(For other course descriptions, see the Liberal Arts and Sciences section.)

## 100 Composition and Reading (3)

An introduction to basic composition, preparing students for the requirements of higher level courses, including English 101, that demand sound reading, writing, and critical thinking skills. Students will learn how to discover ideas, narrow and shape a topic for a particular purpose and audience, organize supporting points and develop them with relevant details, and revise for overall effectiveness, appropriate diction, and sound sentence structure and grammar. This study of the compositional process includes discussions of readings to supplement writing assignments and a library project to introduce students to basic research skills.
Note: Must be taken on a satisfactory/unsatisfactory basis only.

## 125 Writing (4)

Completely online and for part-time UC students only, this course provides an introduction to academic writing and critical reading. The class focuses on developing students' organization and presentation of both personal opinion and individual research. Class discussion and students’ skills will be addressed according to contemporary issues, situations, and needs across the curriculum. This self-paced class includes two online lessons per week, chat room sessions, an online bulletin board, a LISTSERV, a multi-media, self-grading grammar book, and more. Everything is designed to hone students’ organization, presentation, and general writing skills in the contemporary world, and in a variety of disciplines. Only the minimal computer skills of sending email and pointing and clicking with a mouse are required. An email account and online computers are provided. Tutorials on using the computer, the Internet, and the Tulane library are provided online.

## 331 Business Report Writing (3)

An overview of business writing, with special attention to resumes, letters of application, the long report, documentation for reports, the writing of manuals and business proposals, and executive summaries. Emphasis is given to the form and the content of business writing.

## ENGLISH AS A SECOND LANGUAGE

The non-credit English as a Second Language Program offers intensive courses emphasizing integrated communicative language skills. It is offered throughout the year in sessions of four weeks, with students receiving 20 hours of instruction weekly. As the program is separated into levels by proficiency, several terms may be taken consecutively.

Students who have completed the highest level of the non-credit program and intend to enter American universities may continue with the courses below.

Tuition for ESL courses varies as to the courses selected. Consult the ESL Department for exact costs.

## ESL CREDIT COURSES

## 095 Basic English Composition (3)

This course is an introduction to the concepts of composition designed specifically for the international student (or a student whose native language is not English) intending to pursue his or her college education in the United States. Students may not enroll in both 095 and 100. Not for credit for students in Arts and Sciences or Newcomb.

## 096 Fundamentals of Composition (3)

Intensive review of grammar with emphasis on composition. Taught especially for full-time students whose native language is not English. Not for credit for students in Arts and Sciences or Newcomb. Note: Students may not receive credit for both 095 and 096.

## 097 English and Classroom Techniques for Foreign Teaching Assistants (2)

This course is designed to place the teaching assistant in a variety of classroom situations requiring different types of interactional skills. The teaching tasks will include simulating the first day of class; defining specialized terms or concepts; fielding students questions; giving oral instructions; explaining a diagram, model or illustration; presenting short lectures and leading group discussions.
098 Professional and Technical Writing for International Students (2)
This course is designed to assist non-native speakers of English to develop and improve specific composition strategies and skills for writing effective professional reports, correspondence, manuals, documentation and research papers. The course emphasis will be on application of strategies to the student's field of interest.

## 099 ESL Special Studies (2)

This course allows international students to improve their English skills through special topically oriented courses on tutoring sessions not available through the regular ESL curriculum. Students must take diagnostic test before placement.
Note: See the Director of the English as a Second Language Program for more information on the Intensive English Program.

## EXERCISE SCIENCE

## 104 First Aid and CPR (2)

The course is designed to address the care and treatment of respiratory and cardiac emergencies as well as the first aid procedures for bleeding, shock, stroke, burns, bone fractures, poisoning, and other injuries. Successful completion of the course will certify the students in American Red Cross Standard First Aid and Community CPR, which includes adult, child, infant CPR skills.

## 107 Wilderness First Aid (3)

Most first aid courses are designed for those with rapid access to EMS. This course will provide skills for extended care since wilderness first-aiders may have to spend extended amounts of time with an injured person. Wilderness first aid has a distinct focus in its attention to environmental demands placed on care giving under adverse conditions that affect both rescuer and victim. Upon completion of this course, students will have earned a National Safety Council Wilderness First Aid card as well as an American Heart Association CPR card. Must be taken in lieu of UESS 104.

## 110 Emergency Medical Services - Basic (3)

This 124-hour class serves as an introduction to emergency medicine. Course topics include but are not limited to anatomy/physiology, respiratory/cardiac emergencies, trauma, EMS systems, rescue, diabetic emergencies. Basic skills addressed include trauma assessment, oxygen therapy, splinting, life-threatening wound management, automatic defibrillator use. A 10-hour segment with a private, local ambulance service is required. Course includes: 2-year CPR certification and preparation for certification with the National Registry of Emergency Medical Technicians.

## 115 Emergency Medical Services - Intermediate I (3)

Prerequisite: 110. This 160 -hour class will address advanced concepts in Emergency medicine building upon material covered by UESS 110. This course introduces students to new emergency skills such as Endo-Oseal intubation, intravenous administration, and fluid therapy. Students will spend half of the 160 hours in clinical Emergency/Operating Room rotations under the supervision of the course instructor and Registered Nurses. Additional academic content will extend previous material covered in anatomy, physiology and respiratory/cardiac emergencies.

## 117 Emergency Medical Services - Intermediate II (3)

Prerequisites: 110, 115. In the first half of the semester the student will be supervised performing EMT-Intermediate level patient care (e.g., patient assessment, intravenous fluid therapy) and observing Emergency Room medical practice. In the second half, students will practice EMTIntermediate level pre-hospital care and transport of patients contacted by assigned ambulances. Weekly meetings with supervisors will also be held to provide for feedback concerning hospital and field experiences.

## 180 Fundamentals of Health and Fitness (2)

This course is designed to teach the importance of physical activity and its relationship to health and a better quality of life. Emphasis is placed on the components of total fitness: physical, social, emotional, and intellectual. Content provides scientific information to guide students in developing personalized exercise programs to achieve the highest potential for total well being. This is a basic course in health and fitness education designed for the general student body.

## 202 Physiology of Exercise (3)

Prerequisite: 180 or instructor approval. This course provides a detailed understanding of the physiology of exercise, e.g., how the body responds and adapts to exercise and physical activity at the skeletal, muscular, and neurohormonal level. An integrative systems approach to exercise will be presented. The bioenergetics of muscular work and cellular mechanisms of muscle contraction will be emphasized and applied to issues of health and performance.

## 303 Human Anatomy and Physiology I (3)

Prerequisite: UXSS 202 or instructor approval. Corequisite: 313. The first of two sequenced courses intended to address human anatomy and physiology. This course explores the musculoskeletal system and physiological subsystems that support human movement. Special emphasis is given to the chemical basis of life cells and cellular metabolism; histology and tissues; the endocrine, skeletal, and neurological systems.

## 304 Human Anatomy and Physiology II (3)

Corequisite: 314. The second in a sequence of courses intended to address human anatomy and physiology. Special emphasis is given to the respiratory, digestive, cardiovascular, lymphatic and reproductive systems; nutrition and metabolism; water, electrolyte, and acid base balance; human growth and development.

## 310 Biomechanics of Exercise and Sport (3)

Corequisites: EXSS 312. An investigation of the principles of physics (e.g., Newtonian mechanics) as they relate to human movement. Topical areas include force and motion relationships, mechanics in aquatics, applications to motor development, quantitative analysis of locomotion and research instrumentation.

## 311 Mental and Behavioral Aspects of Sport (3)

Prerequisites: Psychology 100. This course presents an overview of exercise and sport psychology and is composed of three sections: the social psychology of sport, performance enhancement techniques, and health psychology. Topics such as group dynamics, motivation, team cohesion, self-regulation, self-talk, concentration, exercise adherence, stress management, and selfconceptualization are included.
312 Biomechanics of Exercise and Sport Laboratory (1)
Corequisite: EXSS 310. The laboratory provides the opportunity for students to construct and experience qualitative and quantitative methods of assessing movement; design and apply mechanical principles toward improving movement quality or reducing injury in sport and work place settings; develop knowledge and experience using kinetic and kinematic data collection instrumentation.

## 313 Human Anatomy and Physiology II Laboratory (1)

Corequisite: 303. The laboratory is designed to actively involve students in learning the gross anatomy of the musculoskeletal system supporting structures. Dissection and exploration of human cadavers are integral components of the lab experience. Subject matter includes but is not limited to the following: levels of organization, metabolism, histology, the integumentary, skeletal, muscular and endocrine systems.

## 314 Human Anatomy and Physiology II Laboratory (1)

Corequisite: 304. The laboratory is designed to actively involve students in learning the principles and applications of anatomy and physiology. Gross dissection and exploration of human cadavers are integral components of the lab experience. Subject matter will include the following: blood, the cardiovascular system, the lymphatic system, the digestive system, and the reproductive system.

## 316 Legal Aspects of Sport (3)

An introduction to the application of law to the sports industry. Topics include tort negligence, safety and debilitating injuries in football, sport violence, antitrust and labor law in professional sports, and sports agents. The Constitution is studied in its application of equal opportunity employment practices in sport management, drug testing of athletes, and the civil rights of student athletes.

## 320 Therapeutic Exercise and Modalities in Sports Medicine (3)

Prerequisites: EXSS 202 or 313 or instructor approval. This course is designed for individuals interested in the treatment and rehabilitation of athletic injury. The theoretical foundations and scientific principles that support the use of therapeutic modalities in the physical medicine environment will be presented. Particular attention is given to the physical, mechanical, and chemical effects of therapeutic agents and techniques. Laboratory experiences will be incorporated into the lecture series.

## 333 Nutrition, Sport and Exercise (3)

Prerequisite: EXSS 202 or instructor approval. This course is designed for individuals interested in optimizing the health, performance, and training practices of athletes or sports participants. It is intended to bridge the gap between the exercise and nutrition sciences in order to allow the practical application of research findings to the effective design and implementation of the optimal diet for individual athletes and/or peak performance. Topics include: exercise bioenergetics and the biochemical and physiological processes of fuel utilization, mobilization, and storage in response to exercise and the modification of these processes by nutritional variables; fuel, vitamin, and mineral requirements of athletes; nutritional ergonomic aids and nutritional concerns of the sports community. The emphasis of the course is the scientific approach to understanding sports nutritional needs for optimal training and performance using laboratory and clinical research findings.

## 371 Basic Techniques of Athletic Training (2)

Supervised study and practice in the skills of taping, bandaging and use of prosthetics in the prevention and care of athletes’ injuries. Note: Not open to students below sophomore standing.

## 377 Wellness Programming for Special Populations (3)

This course will enhance the student's ability to become a competent health and fitness instructor who is involved in preventive and rehabilitative exercise programs. The theoretical part of the course will discuss the physiological and psychological effects of exercise, the limits and benefits of exercise, and the implication of these on exercise guidelines aimed at a variety of special populations, e.g., the elderly, pregnant women, people with controllable diseases such as hypertension, diabetes, arthritis, cardiovascular disease, etc. The practical part of the course will put emphasis on safe and innovative class designs and formats, as well as the use of various forms of equipment.

## 389 Service Learning (1-2)

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Provides students with an opportunity to earn academic credit for service oriented projects that apply the discipline of exercise and sport sciences within the surrounding New Orleans community. Specific requirements will be determined by the instructor of record and the local site supervisor.

## 399 Directed Study in Exercise and Sport Sciences (1-3)

For study, research, and projects in programs of special interest not covered in normal course offerings. Liberal Arts credit by petition only.

## 401 Health Related Fitness Programs and Assessments (3)

Prerequisite: EXSS 202. This course is designed to enhance theoretical knowledge and clinical abilities in exercise leadership, and administration of preventive and rehabilitative health/fitness programs. The course includes the knowledge base related to all of the competencies required for the American College of Sports Medicine Health Fitness Instructor Certification.

## 402 Advanced Exercise Physiology (3)

Prerequisite: EXSS 202 or instructor approval. Corequisite: EXSS 413. A continuation of EXSS 202, the major focus of the course is on cardiovascular and respiratory physiology. Additional topics include exercise in extreme environments, exercise during pregnancy, and exercise and aging. Students will gain understanding of the integrative nature and broad application of exercise physiology as well as of the principles and techniques applicable to athletic, clinical and sedentary populations. Service Learning component available.

## 405 Exercise Electrocardiography (3)

Prerequisites: EXSS 202 or approval of instructor. A study of the physiological basis and analysis of normal and abnormal exercise electrocardiograms. Emphasis will be given to the identification of selected ECG abnormalities during exercise testing. This course builds on the foundation laid by the introductory courses in exercise physiology.

## 407 Motor Learning, Development \& Control (3)

Prerequisite: EXSS 304 or instructor approval. Corequisite: EXSS 417. The course explores the observable movement behavior patterns of humans from early infancy to late adulthood. Concomitant physiological, psychological and anatomical stages of human development will serve as foundation of the investigation. Students will study the various methods of learning movement skills and the latest theories that address the manner in which humans control their musculoskeletal system.

## 412 Research Design in Exercise and Sport Sciences (3)

This course is designed to acquaint the student with research design, methodology and data analysis appropriate to the field of Exercise Science. Special attention will be given to statistical analysis and methodology used to evaluate applied physiology, biomechanics, and psychology in an exercise and sport setting.

## 413 Advanced Exercise Physiology Laboratory (1)

Prerequisite: EXSS 202 or instructor approval. Corequisite: EXSS 402. This course is designed to give students the knowledge and skills necessary to perform laboratory tests used in the study of exercise physiology. Students will learn to operate equipment used to assess fitness and athletic performance, e.g., metabolic cart, electrocardiograph, lactate analyzer, oxygen saturation, body composition analysis. In addition, students will learn to develop exercise prescription programs as well as risk assessment and safety procedures involved in exercise testing.

## 417 Motor Learning, Development and Control Laboratory (1)

Corequisite: EXSS 407. This laboratory explores and documents observable movement patterns of humans from early infancy to late childhood. The exploratory process begins with each student writing a "movement autobiography" This self-history will be referenced throughout the semester with specific topics addressed in the accompanying lecture series. Each lab experience is designed
to give course participants an opportunity to observe, collect and analyze data. Results will be presented to the entire lab group during presentation periods.

## 418 Philosophy of Sport (3)

This course is intended to assist the serious student in the development of his or her own philosophy of sport. The content of the course will include three main sections: 1)
"How to do" philosophy, 2) an overview of various philosophical camps (e.g., dualism, materialism, humanism, Zen, and existentialism), and 3) the application of philosophy to sport. The ultimate objective of developing one's own philosophy will be realized through library/internet research, introspection and the acquisition of new Knowledge.

## 420 History of Western Sport (3)

This course addresses the historical context of Western sport from Early Greek and Roman cultures to the contemporary United States. Using history, its philosophers, and sport as a medium, the cultural customs, values and norms of various civilizations will be explored in order to provide each student with a perspective concerning the place of sport within today's society. In addition, by analyzing the Olympic Games from their inception to today's global community, students will gain insight into their organization, political structure and ultimate objects. Particular attention will be given to the evolution of women's participation.

## 457 Internship (3)

Departmental approval required. This supervised work experience is available to students in Exercise Science and will focus on areas of interest which correspond to the student's long term professional goals. In either case, the internship will be coordinated between a departmental faculty member and an on-site supervisor. Opportunities locally, nationally, or internationally are available.

## 464 Seminar: Current Issues in Sport (3)

A comprehensive study of some of the major developments occurring in sport. Using sport as a medium for investigation, awareness of social, political, and economics systems is achieved and applied to current events in society as a whole. Examples of major topics include the economics of professional/collegiate sport, gender equity, management-labor relations, race relations, educational values of sport, sport for the masses.

## 472 Seminar in Sports Medicine (3)

Prerequisites: EXSS senior status. This course serves as a capstone experience for graduating seniors. It is intended to facilitate professional discussion amongst students and faculty in a variety of subdisciplines within Exercise Science and their 'real life applications' to human performance and wellness, e.g., exercise physiology, sport and exercise psychology, biomechanics, motor behavior, anatomy, wellness and health promotion. The seminar setting will require each student to prepare research findings to be used for discussions and debate concerning contemporary issues facing the field, its graduates, and professionals.

## 470 Practicum in Athletic Training IV (2)

Prerequisites: 170, 180, 202, 270, 370. Minimum of 15 hours per week for a total of 225 hours per semester. Laboratory credits are assigned so that students have an opportunity to practice athletic Training skills during all sports seasons. Direct Supervision and instruction provided by team physicians and athletic training staff.

## 472 Seminar in Sports Medicine (3)

Prerequisites: 201, 202. Methods and procedures in restoring and ameliorating the physically handicapped with corrective exercises for specific sport-related disabilities as well as for adapted sports. Emphasis is placed on the treatment of injuries (both new and recurring) sustained as a result of sport participation. The course is taught by a physician.

## 495 Independent Study in Exercise and Sport Sciences (3)

For study, research, and projects in programs of special interest not covered in normal course offerings.

## 496, 497 Special Topics in Exercise and Sport

## Sciences (3, 3)

Courses offered by visiting professors and/or permanent faculty for specific topics not included in other courses.

## 499 Senior Thesis (3)

A qualitative or quantitative research project that includes an exhaustive review of literature, data collection and analysis.

## FINANCE

Note: These courses are subject to the nine-course (27 credit) limit on business, management and related courses.

## 221 Introduction to Finance (3)

Analysis of business opportunities and problems from the financial manager's point of view. Special emphasis on determining discounted cash flow, analytical techniques and methods used in structuring the balance sheet. Some accounting desired.

## 254 Introduction to Investment (3)

Fundamental principles of investment and development of the student's ability to select the various investment securities that meet the investor's needs. A study of the principles and practices in security analysis and a review of the methods commonly employed in the analysis of financial statements.
331 Money and Banking (3)
A non-technical overview of the role of financial institutions in the economic process with emphasis upon the development of commercial banking since 1960. The course is structured to give relatively equal attention to each of the following three general areas: the supply of loanable funds, the demand for loanable funds, and money and capital markets.

## 346 Financial Markets (3)

This course is designed to introduce students to the different types of financial instruments and the markets in which they trade. The instructor will discuss the characteristics of the various products, how they are valued, and how the markets in which they trade differ. The student will study the money markets, the bond markets, the private debt market (bank loans, etc.) and the equities market. If time permits, the course will briefly cover the derivatives markets.

## 354 Intermediate Investments (3)

Prerequisite: 254 or instructor approval. A continuation of Introduction to Investments (UFIN 254). This course explores investment topics as they relate to individual investors and professionals. Risk and return principals on securities and portfolios are studied as well as valuation techniques and analysis of fixed income securities, equities, and options. Financial statements, futures markets, portfolio theory, and capital market theory are also covered. The course assumes the student has a basic understanding of investment vehicles and their characteristics.

## 356 Personal Financial Planning (3)

While laws and values continue to change, the abilities to analyze, evaluate and make decisions remain central to building financial security. The course develops these abilities and considers the skills to look for in selecting competent bankers, brokers, accountants, insurance and real estate professionals.

## 220 Special Topics in Finance (1-3)

FRENCH AND ITALIAN
(For French and Italian course descriptions, see the Liberal Arts and Sciences section.)

## GEOGRAPHY

(For Geography course descriptions, see the Geology section of the Liberal Arts and Sciences section.)

GEOLOGY
(For Geology course descriptions, see the Liberal Arts and Sciences section.)

## GERMAN

(For German course descriptions, see the Liberal Arts and Sciences section.)

## HISTORY

(For History course descriptions, see the Liberal Arts and Sciences section.)

## HONORS THESIS

## H499-H500 Honors Thesis (3, 3)

For senior honors candidates. Intensive reading, research and writing in the student's major field.

## HUMAN RESOURCES

Note: These courses are subject to the nine-course (27 credit) limit on business, management and related courses.

## 300 Learning and Training in Organizations (3)

An overview of human resources training and development, including needs assessment, training design, implementation and evaluation. This course will integrate applied principles of adult learning. Various methods and training media will be explored.

## 333 Human Resources (3)

This class is an introduction to organizational, legal, and psychological frameworks governing modern Human Resources Administration. This course provides an overview of the Human Resources function and the Human Resources department's role in furthering both employee and organizational goals.

## 342 Managing Troubled Employees: Sex, Drugs and Violence (3)

This course will prepare the student to understand, identify and manage the troubled employee on a macro and micro basis. The student will learn to develop effective policies and procedures to address the causes and concerns of troubled employees. The student will become familiar with the legal and ethical issues surrounding troubled employees. This course covers workplace trends, sexual equality, sexual harassment, discrimination, life/work balancing, stress, mental illness, drug and alcohol abuse, workplace violence, post-traumatic stress intervention and employee assistance programs. Prerequisite: Human Resources 333. Instructor approval required for waiver of prerequisite.

## 352 Compensation and Benefits (3)

This is a comprehensive analysis of the purpose, structure and effectiveness of compensation systems. Topics include legal issues, job design, job analysis, job evaluation, pay systems, incentives, psychological and motivational aspects of pay, executive compensation and compensation plan administration. Benefits are addressed at a basic level. Prerequisite: Human Resources 333. Instructor approval required for waiver of prerequisite.

## 353 Benefits Administration (3)

This course addresses issues regarding mandatory benefits such as social security and workers’ compensation and voluntary benefits such as medical and life insurance. Cost containment and the changing legal environment regarding benefits are covered. Prerequisites: Human Resources 352 and its prerequisite. Instructor approval required for waiver of prerequisites.

365 Planning, Recruitment, and Selection of Human Resources (3)
This course addresses the strategic, legal and administrative issues associated with recruitment and selection of employees, including assessment of staffing needs. The psychological aspects of Human Resources flow systems are emphasized. Career issues are examined from the point of view of the employee and the organization. The coordination of Human Resources planning and organizational competitive strategy is covered. Prerequisite: Human Resources 333. Instructor approval required for waiver of prerequisite.

## 370 Performance Appraisal and Productivity (3)

This course includes developing and implementing performance appraisal systems appropriate for the organization's competitive strategy. Students are introduced to productivity-enhancing work designs such as Total Quality Management, teams, empowerment, and Business Process Reengineering. Prerequisite: Human Resources 333. Instructor approval required for waiver of prerequisite.

## 382 Human Resources Information Systems (3)

Human Resource functions are rapidly being computerized. This course will cover computer applications in Human Resources including applicant tracking, payroll and benefits administration, employee data bases, and other applications. Basic HR research and program evaluation will be introduced. Prerequisite: Human Resources 333. Instructor approval required for waiver of prerequisite.

## 392 Employment and Labor Law (3)

The Federal laws surrounding employment and their impact on Human Resource policies and practices are addressed in this class. These include the Equal Employment Opportunity Act, the Family and Medical Leave Act, Americans with Disabilities Act, Occupational Safety and Health Act, the National Labor Relations Act, and many others. Prerequisite: Human Resources 333. Instructor approval required for waiver of prerequisite.

## 393 Industrial Relations (3)

This course covers the fundamentals of Industrial Relations in the United States. It addresses the historical roots of the labor movement and its social and economic underpinnings. The major Federal laws governing the relationship between unions and employers are covered. The issues of union organizing, contract negotiations, impasses and strikes, contract administration and grievance systems are discussed. The key differences between unions in the public and the private sector are addressed. The trends in Industrial Relations are addressed, including labormanagement cooperation, the decline of U.S. unions and the impact of globalization on U.S. unions. Union avoidance through good Human Resource practices is discussed.

## 400 Internship or Practicum (3)

Projects related to Human Resources will be designed by the intern, faculty advisor and the internship sponsor, and evaluated by the faculty advisor and internship sponsor. Projects would involve such things as revising an employee handbook, assisting with a salary survey, conducting job evaluations. Prerequisites: All core courses must have been satisfactorily completed.

## 220 Special Topics in Human Resource Management (1-3)

## JAPANESE

101 Beginning Japanese I (3)
Emphasizes conversational Japanese based on Romaji text. Includes study of basic grammar and introduction of hiragana, and katakana.

## 102 Beginning Japanese II (3)

Prerequisite: Beginning Japanese I or equivalent. Emphasizes conversational Japanese based on text in hiragana, katakana, kanji. Includes study of complex grammar and introduction of approximately one hundred kanji.

## 203 Intermediate Japanese I (3)

Prerequisite: Japanese 102 or equivalent. Conversation, reading and writing based on text in hiragana, katakana and kanji. Continuation of study of complex grammar and introduction of approximately 100 additional kanji.
204 Intermediate Japanese II (3)
Prerequisite: Japanese 203 or equivalent. Conversation, reading, and writing based on text in hiragana, katakana, and kanji. Continuation of study of complex grammar and introduction of approximately 150 additional kanji.

## LATIN AMERICAN STUDIES

(For Latin American Studies course descriptions, see the Liberal Arts and Sciences section.)
MANAGEMENT
Note: These courses are subject to the nine-course (27 credit) limit on business, management and related courses.

## 220 Special Topics in Management (1-3)

## 225 Business Communications (3)

This course focuses on the three main areas for learning: The theoretical - a brief background and sources of communication theory. The practical

- tools of communication theory as it applies to the world of work. The experiential - putting the tools to work in both a classroom setting and in a "real world" business setting.


## 231 Principles of Management (3)

Analysis of the basic management process such as planning, organization, coordination and control. Survey of the various schools of management thought with emphasis on the process, human behavior and quantitative schools of management. No prerequisites are required.

## 260 E-Commerce (3)

This course provides a comprehensive introduction to the field of e-commerce. It is designed to provide the student with an understanding of the impact of technology and the "new" or "networked" economy on basic business practices. Students will work through a sequential process for building a business strategy to operate in the "new" economy and then examine the four infrastructures (technology, capital, media and public policy) and their impact on the strategy. At course completion, students will have a solid understanding of the major components of the e-commerce landscape and how they interact with one another. This will enable them to better position their business (organization) to compete successfully in the "new" economy.
325 Business Statistics (3)
A survey of some of the more important concepts and techniques of statistics. Illustrations are drawn from the business world; in particular, time series analysis and index numbers are introduced. Students are brought in contact with computer implementation of statistical procedures. It is recommended that the student have a background in high school algebra. Meets math proficiency requirement for Bachelor of Arts and Bachelor of General Studies degrees only.

## 336 Introduction to Modern Organization (3)

An introduction to the major concepts, theories, purposes, and processes associated with the management of modern organizations. An historical approach to organization as rational constructs, power in organizations, the role of the manager, etc. Examples from student experience are used as themes to be explored. Prerequisite: Management 231 or instructor approval.

## 338 Business Ethics (3)

Prerequisite: 231 or approval of instructor. A theoretical critique and case oriented analysis of the moral, ethical, and value issues that challenge business, industry, and corporate life with a view toward discovering ethical principles and strategies applicable to the management process.

## 360 Entrepreneurship (3)

Prerequisites: Finance 221 and Marketing 320 or approval of instructor. This course gives a brief historical survey of entrepreneurship, discusses the personality traits common to many entrepreneurs, explores ways to analyze new venture opportunities from marketing, production, and organizational perspectives; and reviews the legal considerations involved in starting a business and protecting a new venture idea. Special emphasis is placed on solving the problem of financing the new venture.
365 Developing a Small Business (3)
This course is designed to introduce students to the essentials of small business start-up and management. This course will teach students how to locate and analyze the opportunity, set up the operating structure, develop the marketing and financial plans, and utilize financial reports for the effective management of a developing small business.

## MARKETING

Note: Courses are subject to the nine-course (27 credit) limit on business, management, and related courses.

## 320 Introduction to Marketing Principles (3)

A study of our present-day marketing system from a managerial point of view. Subjects covered include products, consumers, promotion, channels of distribution, market research, pricing, marketing, feasibility analysis, marketing law and international marketing. The majority of class time is spent in lecture and discussing solutions to marketing cases by the application of

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marketing principles. An out-of-class project is required in which student groups observe actual business operations of their choice and analyze particular problems that these businesses are encountering.
330 Consumer Behavior (3)
Understanding the consumer is the key to developing and implementing successful marketing strategies. Disciplines such as psychology, sociology, and anthropology provide insight into the factors that influence the decision to buy. These factors are used to identify market segments and to explain their buying habits and mental processes.
340 Principles of Advertising (3)
This course covers the fundamentals of advertising, beginning with the history and evolution of advertising as an element in the economy, a specialized form of communication, a craft, and an area of ethical sensitivity. At the practical level, students will be introduced to media planning and the emergence of new media, market research, agency organization and creativity as well as the legal and ethical concerns that advertising professionals must bear in mind.

## 341 Advertising II (3)

Prerequisite: 340 or instructor approval. This course requires the students to put together projects and advertising campaigns that should enhance their understanding of advertising and give them meaningful projects for their portfolio.

## 410 Marketing Research Design (3)

This course focuses on the fundamental techniques and skills of marketing research today, including research and survey design, data collection methods, behavioral science techniques, computer programs and techniques for statistical analysis, and marketing applications for new product development and testing, sales forecasting, and advertising for retail, industrial and international markets.

## 220 Special Topics in Marketing (1-3)

## MASTER OF LIBERAL ARTS

The courses listed below are available only to students who have been formally admitted to the Master of Liberal Arts program.

## 701 Western Culture I: Intellectual Background (3)

This course considers the origin and development of early Western views in the realms of philosophy, religion, society, politics and artistic expression. Consideration is given to the relation between the Judeo-Christian and the Greco-Roman views on the purpose of human life and on the place of humankind in the cosmos.

## 702 Western Culture II: Historical Development (3)

This course examines the major ideas and events which have modernized Western culture. Among the events discussed are the rise of the nation-state, the emergence of new modes of scientific thought and their effect on Christian and classical culture, and the creation of a commercial market on a global scale. The course studies the period of time between the 17th century and the modern time.

## 703 Masterworks of Western Literature I (3)

This course is designed to acquaint students with some of the important works, ancient and medieval, that have helped shape Western thought and imagination. Students discover the way in which the Western tradition developed out of the roots of Athens and Jerusalem in antiquity and their attempted reconciliation in the Middle Ages.
704 Masterworks of Western Literature II (3)
This course is designed to acquaint students with great books of the Western world from the Middle Ages to the 20th century. Particular emphasis is placed on concepts such as the self,
custom, change, fortune, the state, God, and the classical heritage on which modern sensibility rests.

## 705 Understanding America I (3)

The main currents of American thought from colonial Puritanism to contemporary critical realism. Readings in the works of Jonathan Edwards, James Madison, Ralph Waldo Emerson, William Graham Sumner, Lester Frank Ward, Josiah Royce, William James, John Dewey, and George Santayana.

## 706 Understanding America II (3)

The political and socio-economic foundations of American civilization.
707 Emerging World Society I: Politics (3)
The political institutions and modern changes in the political systems of the Soviet Union, Europe, the United States, Japan, and such developing areas as China, Latin America, and the Islamic World.

## 708 Emerging World Society II: Economics (3)

The political economy of the Soviet Union, Europe, the United States, Japan, and such developing areas as China, Latin America, and the Islamic World in the context of current challenges of the emerging global economy.
709 Emerging World Society III: Religion in an Age of Science (3)
The objective of this course is to examine the evolving integration of science and religion-the principal intellectual influences in Western civilization and increasingly in world cultures-in an attempt to project their roles into the third Milleneum.
710 Emerging World Society IV: Rhetoric in Western Societies(3)
The objective of this course is to build a better understanding of the development of rhetorical theory, how that theory has been taught, and how it has been applied in Western societies.
750, 751, 752, 753 Special Topics (3)
For specific topics, see Schedule of Classes.
MATHEMATICS
(For Mathematics course descriptions, see the Liberal Arts and Sciences section.)
MEDIA ARTS
200 Introduction to Media Arts (3)
This course provides an introduction to the principles and practices of media communications, from newspapers and film, to television and the Internet, and their numerous influences on society. The course explores the development of various kinds of media and their impact on culture. Students are led through brief, introductory surveys of other related areas, including public relations, marketing, and ethical issues in the media. (Satisfies humanities requirement for University College Students)

## 220 Introduction to Visual Communications (3)

This course provides an introduction to visual literacy with the fundamentals of Visual Communications. Class discussions and assignments will demonstrate how these tools are used to communicate visually to an audience. The value, ethics, and methods of visual communicators will be explored and analyzed by discussing examples from graphic art, print, film/video slides, and computer graphics.
245 Web Wisdom and Information Fluency (3)
This course teaches students how to become discerning users of the Internet and create efficient, useful, and usable Web pages. Students develop Internet and online searching and researching competencies in addition to Web design and information management skills.

## 250 Introduction to Computer Illustration (3)

This course explores basic issues of illustration, using the computer as a drawing tool. Students are introduced to both creative and professional applications of technology to drawing, color theory and systems, and computer-based artistic production with design software. The course examines the role of digital illustration in art history and addresses the application of classroom knowledge to solving problems in desktop publishing. (Satisfies humanities requirement for University College students)

## 280 Introduction to Graphic Design (3)

This course introduces the field of graphic design to students who have little or no design knowledge. Learning through manual techniques, students develop proficiency in the principles of design, the technical vocabulary, and professional application. Topics include color theory, typography, advertising techniques, and poster and logo design. To complete the class, students are introduced to QuarkXPress software to coordinate applications of graphic design to desktop publishing. (This course is a prerequisite to UMAR 380.)

## 301 Principles of Public Relations (3)

This course focuses on the communication between an individual or organization and the public to promote public acceptance and approval. Students explore traditional and emerging components of the public relations process through mass media, as well as the needs of different types of businesses, such as corporations, nonprofit organizations, and government offices.

## 302 Public Relations Campaigns (3)

This course studies real-life public relations cases with a view to understanding why some campaigns succeed while others fail. Special attention is given to contemporary cases and to development of the tools necessary for effective campaigns. Using contemporary campaigns as models, the course examines the development of public relations strategies and communications for employees, the media, the community, the consumer, and other relevant groups. Students also practice the elements of public relations research and writing.

## 307 Internet Public Relations

This course explores the opportunities and special demands of the electronic media in the business and promotion of public relations and PR campaigns. Students learn how to take advantage of Internet technologies to promote a person, product, event, web site, problems. Students study the often-unwritten rules of Internet protocol, while developing promotional campaigns that are appreciated and effective.

## 310 Introduction to Journalism (3)

This course introduces students to researching, reporting, and writing news stories for print, broadcast, Internet and other media. Through extensive reporting/writing assignments, guest speakers, and quizzes on current events, the course will cover the nature of news, journalistic style, the preparation of manuscripts for publication, the development of leads, interviewing techniques, selection and organization of facts, and the difference between various media styles.

## 312 Feature Writing (3)

This course works within journalistic standards to focus on the skills needed to write topical, indepth, human interest stories. Students learn to gather materials through interviews, research, and observation while cultivating their own writer's <<voice>> for the creation of comprehensive articles for publication in newspapers, magazines, Internet sites, and other media.

## 315 Media and the Law (3)

This course provides historical survey and analysis of the current and future trends in the development of the media-related law in America. Students explore media-related ethical theories and the law in current issues, case studies, and problem-solving scenarios. Students explore the moral philosophies that govern such concerns as royalties, copyright infringement, libel, and intellectual property. (Satisfies humanities requirement for University College students).

## 320 Introduction to Screenwriting (3)

This course introduces students to the art and technical demands of contemporary screenwriting. Students explore the concepts of character, story, and dramatic structure of the screenplay while studying transformation of an idea into a finished script. Students are acquainted with strict standards of the screenwriting format and discuss the realities of professional screenwriting. Students will begin writing a full-length film script to demonstrate their skills in these areas. (This course is a prerequisite to UMAR 420.)

## 325 The Art \& Craft of Film (3)

This course goes beyond critical and theoretical perspectives of film to explore the practical aesthetics of film from the viewpoint of filmmakers. Students learn to recognize the various technical, stylistic, and narrative options available to filmmakers in any given work, and to evaluate the aesthetic merit of the choices made by the artists. Course objectives include promoting insightful cinematic experiences and building skills by which students can articulate those insights. The course also explores various career options in the film industry.

## 330 Editing, Layout, and Design (3)

This course explores the editing, layout and design practices of print media and develops the skills necessary for successful editors and desktop publishers. Students learn copy editing and preparation, composition strategies, layout, design, headline and caption writing, photo editing, and newsletter production. (This course is a prerequisite for UMAR 380.)
340 Ethical Issues in the Media (3)
This course discusses traditional moral theory and ethical philosophies while applying them to current-day issues, including truth in media, privacy, social justice, stereotyping, advertising, communications law and the Internet. Students are presented with case studies of events and issues surrounding various media as they focus on a systematic approach to making ethical decisions.

## 350 Computer Art and Digital Imaging (3)

This course provides students with the knowledge and skills needed for computer-based photo manipulation, including the basics of drawing and painting. Students learn Photoshop software and desktop skills to produce and edit bitmap images. The course also provides instructions in the application of classroom knowledge to solving problems in desktop publishing, including an overview of preparing Photoshop projects for pre-press productions.

## 352 3D Design and Animation (3)

This course provides students with the knowledge and the skills needed for computer based photo manipulation, 3D design and gives an introduction to 3D animation. Students will learn 3D software and desktop skills to produce print and animated 3D designs.

## 355 Internet Writing (3)

This course is designed to enable students to streamline, enhance and tailor their writing for new media publications, online magazines and commercial web sites. Students learn how to market their skills and gear their material towards Internet clients and to interact with other skilled professionals, such as graphic artists, editors and photographers.

## 360 News Writing and Reporting (3)

This course develops research, organization, and composition skills for the production of professional-quality articles for publication in newspapers, magazines, Internet sites, and other media. It explores the knowledge and skills needed for building on story ideas by acquiring sources, researching effectively, and writing polished, informative stories. (UMAR 310 or instructor's permission is a prerequisite for this course.)

## 370 Intro to Documentary Production (3)

This course instructs students in the basics of documentary film production, including ethical issues, research, funding, and technique. The class explores the documentary within an interdisciplinary approach, including historical, technical, and aesthetic perspectives, as well as practical planning for a documentary project. Students learn about finding and telling a story, doing research, writing a proposal, defining the production approach, and managing postproduction.

## 380 Intermediate Graphic Design (3)

This course continues the skills developed in UMAR 280 in design, grid systems, advertising techniques, and electronic publication by providing students with in-depth proficiency in design principles and vocabulary. With QuarkXPress and Photoshop software, students learn advanced techniques in traditional graphic design and desktop publishing. (UMAR 280 and UMAR 330 are prerequisites for this course.)

## 390 History of Radio (3)

This course examines the past one hundred years of radio and how it has shaped our culture and us as individuals. Also, conversely, we will see how cultural forces have shaped, and reshaped, radio. Through reading, discussion, and critical listening of various formats of radio we will address questions such as: How has radio changed to address cultural voices? How has radio dealt with the building of audiences? How do people listen or interact with different types of radio? In discussions and writing assignments we will also address these questions in the context of how radio figures into New Orleans as a community. We will also discuss the future of radio broadcasting via the internet and otherwise.

## 410 Interviewing (3)

This course works within journalistic perspectives to focus on the critical, too frequently overlooked art of interviewing. Students hone skills on both sides of the interview process, including the basic psychology and techniques of cultivating contacts, dealing with difficult sources, retrieving sensitive information, and tracking down elusive people. The course will cover confidentiality and interviewing ethics as well as the use of interviews in journalistic and other writing.

## 412 Investigative Journalism (3)

This course introduces students to the field of investigative journalism, including career prospects, ethical concerns, basic interviewing techniques, finding and following documented sources, and writing stories for maximum interest and impact. Students practice organizing materials and writing with clarity and precision.

## 420 Intermediate Screenwriting (3)

This course further develops students’ writing skills of UMAR 320, including the application of advanced techniques in character, story, and dramatic structure introduced in UMAR 320, particularly as regards consistency, development, and resolution. Emphasis is placed on revision techniques and professional polish. The course also covers the marketing of the completed script. (UMAR 320 or instructor's permission is a prerequisite for this course.)

## 430 Designing Websites (3)

This course explores advanced concepts in Web design with an emphasis on visual communication and animation for the web, including web 3D design and concerns. Students are introduced to both the creative and professional applications of technology towards visual impact, identity, clarity, narrative, organization and presentation of information for the interactive environment of the web. The course will also examine the role of the web designer and addresses the application of classroom knowledge to solving problems alone and in a team for desktop web publishing.

450 Special Topics (3)
Recent courses include Internet Writing, Documentary Film Production, and Website Design.

## 499 Directed Study (1-3)

Approval of director required. Individual study or a field project under the direction of a faculty member, the director, and/or a supervisor. May be counted toward fulfilling specialty requirements with approval of the director.

## 505 Media Arts Internship (3)

Approval of director required. Students complete a minimum of 100 hours field experience in a Media Arts-related organization. Students also attend classroom sessions that focus on career choices and job search skills. Note: For students already engaged in careers in media professions, the Media Arts practicum may be waived on appeal to the program director.

## MUSIC

(For Music course descriptions, see the Liberal Arts and Sciences section.)

## ORGANIZATIONAL INFORMATION TECHNOLOGY

## 100 Introduction to Microcomputers (3)

This course introduces students to the microcomputer and some popular micro applications. Special attention is given to essential concepts, word processing, spreadsheets, and database management. The course also provides a preface to operating environments such as Windows. Includes hands-on laboratory sessions; currently, Microsoft Office tools are used for this course.

## 201 Advanced Office (3)

Prerequisite: 100 or equivalent experience. This course uses Microsoft Office to teach intermediate and complex design and implementation skills with desktop computers. Tools for data analysis and cross-system integration are stressed; embedding, importing, exporting and linking are taught, using the word processor, spreadsheet and database software of an integrated vendor package. Lectures and practical exercises in the lab will be used to convey both practical and theoretical knowledge. The student learns to integrate powerful application software packages into a departmental information solution.

## 205 Document Development with Word Processors (3)

Prerequisite: 100 or equivalent experience. Concepts and principles of designing various types of documents, using word processor packages on the microcomputer. Development of word processing applications: macros, merge techniques, mathematical operations, style sheets, tables, outlining, graphics and desktop publishing fundamentals. Representative word processing packages are used.

## 207 Presentation Software (3)

Prerequisite: 100 or equivalent experience. This course prepares students to use a presentation graphics program to organize and present information for personal and professional use. Some topics include: importing, linking and inserting a variety of objects into slides, use of animation and transitions, delivery of presentations. Currently PowerPoint is used for the course.

## 210 Problem Solving with Spreadsheets (3)

Prerequisite: 100 or equivalent experience. Concepts and principles of budgeting, graphing data, system design, and data analysis. Use of electronic spreadsheets to perform key applied computing functions with the microcomputer. Techniques and methods for designing spreadsheet applications: basic layout and functions, templates, graphing data, macros, consolidation, audit. Representative spreadsheet packages are used.

220 Applications of Database Software (3)
Prerequisite: 100 or equivalent experience. Designed for end-users, this course includes design and implementation of various functions and processes using database packages. Topics include: definition of needs from the database software, development data tables and fields, design of forms and reports, and construction of relationships and views. Representative software packages are used.

## 224 Introduction to Multimedia Authoring (3)

Prerequisites: 100 or equivalent experience. Concept, tools, and techniques of designing and producing multimedia presentations are taught. Using authoring software, students assemble projects that combine text, graphics, audio and video components. Hands-on class activities are included, culminating in an extensive multimedia project.

## 227 Working with the Internet (3)

Prerequisite: 100 or equivalent experience in microcomputing. In this course students gain acquaintance with the Internet, its uses and history, and with a wide variety of tools and applications for effectively accessing information. Students will have the opportunity to learn classic text-based Internet applications, as well as to explore the newer and emerging graphical and multimedia capabilities of the World Wide Web. Coverage of basic technologies (e.g., hardware, protocols, authoring software) is included.

## 229 Internet Publishing (3)

Prerequisite: 227 or equivalent experience with the Internet and the WWW. This course goes beyond mere use of the Internet into the tools and techniques needed to successfully publish digital media. Through lectures, class discussions, and hands-on lab work, you will become acquainted with the hardware, software (on workstations, on servers, and on the Internet), and tool management techniques needed to create and maintain web documents and sites.

## 290 Current Topics in Organizational Information

## Technology (3)

Prerequisite: 100 or equivalent experience. The content and objectives of this course will vary with new developments in end user microcomputing. Some examples of proposed courses are: Statistical Software and Help Desk Operations.

## 303 Web Site Development with Javascript (3)

Prerequisite: 229 or equivalent experience. This course provides the opportunity to obtain a solid understanding of some of the tools and techniques, beyond basic HTML, used to publish on the Internet via the World Wide Web. Through online 'lectures' and posted materials, electronic discussions, and hands-on 'lab' work you will become acquainted with the computer hardware, software (both used on your machine and the Net), and programming techniques needed to design, create and maintain fully interactive Web documents and sites. This course will primarily focus on JavaScript programming and some additional advanced techniques and concepts.

## 304 Web Site Development with CGI/Perl (3)

Prerequisite: 229 or equivalent experience. This course provides the opportunity to obtain a solid understanding of some of the tools and techniques, beyond basic HTML, used to publish on the Internet via the World Wide Web. Through online 'lectures’ and posted materials, electronic discussions, and hands-on 'lab' work you will become acquainted with the computer hardware, software (both used on your machine and the Net), and programming techniques needed to design, create, and maintain fully interactive Web documents and sites. This course will primarily focus on CGI/Perl programming and some additional advanced techniques and concepts.

## 305 Multimedia Website Development (3)

Prerequisite: 229 or comprehensive knowledge of HTML. This course provides understandings and skills with some of the tools and techniques of designing, developing and publishing multimedia components on the Internet via the World Wide Web. Through classroom and online lectures and posted materials, electronic discussions, and hands-on lab work students become acquainted with the computer hardware, software (both used on the desktop and the Net), and programming techniques needed to design, create and maintain fully multimedia Web documents and sites. This course will primarily focus on sound, video, and animation component development and publishing; it will rely primarily on "plugins" but will require some programming as well.

## 307 Website Development with PHP (3)

Prerequisite: 220 or comprehensive knowledge of HTML. This course teaches the fundamentals of programming for web sites using PHP Hypertext Preprocessor, a popular tool for enhancing home pages. The language is part of the Open Source collaborative effort and may be found on millions of websites. Students develop PHP based functions and use MySQL to interface with a small database application using PHP code.
308 Website Development with ASP (3)
Prerequisite: 229 or comprehensive knowledge of HTML. This course teaches the fundamentals of programming for web sites using ASP Active Server Pages, a popular tool for enhancing home pages. The language is part of the Microsoft's internet development tool effort and may be found on millions of websites. Students develop ASP based functions and use SQL statements with Access or SQL Server to interface with a small database application using ASP code.

## 312 Microcomputer Hardware (3)

Prerequisite: 100 or equivalent experience. The course provides learning opportunities in the various hardware components of microcomputers, together with their interconnective relationships and fundamental system software. Topics and activities emphasized will be those involved in managing and maintaining the personal computer components: system board, storage drives (especially hard drives), and peripheral equipment (e.g., video and network cards).

## 314 Microcomputer Operating Systems (3)

Prerequisite: 312 or equivalent experience. This course teaches concepts and skills in popular desktop operating systems. It includes coverage of Windows, Windows NT, Unix, Linux, MacOS, and NetWare. Students develop hands-on skills needed to service and maintain microcomputer operating systems. Foundational knowledge and skills with microcomputer hardware are assumed.

## 320 End-User Systems Analysis and Design (3)

Prerequisites: Completion of at least 6 credits in Information Technology. This course stresses the practical techniques and strategies that a support specialist would use to define, analyze, design and implement an effective solution to an information problem. Students will start with a small, well-defined business problem and develop an appropriate solution using the standard approaches of systems analysis and design.

## 351 Information Technology and Ethics

Prerequisites: Completion of at least 6 credits in Information Technology. This course examines the ethical and social aspects of information technology with emphasis on computing. Pertinent issues include acquisition, access, stewardship, liability, freedom, privacy, control and security.

## 354 Instructional Technology and Training

Prerequisites: Completion of at least 6 credits in Information Technology. This course assists technology support specialists in the design and implementation of a corporate training program. Included are principles of curriculum and instructional design. Practical techniques that can be used to develop a training program are included and practiced in a class project.

## 356 Information Technology Project Management

Prerequisites: Completion of at least 6 credits in Information Technology. Students will work through a multistage project to develop techniques in project and resource management. Gantt charts, outline trees, flowcharts and network schematics will be used to analyze and schedule the logical flow of processes. Students will learn to control projects though tracking and analysis using computerized project management software.

## PARALEGAL STUDIES

## The Core Courses

Note: English 101 (or UENG 125) is a prerequisite to all courses in Paralegal Studies. The core courses must be completed prior to enrollment in advanced electives.

## 201 Introduction to Paralegal Studies (3)

Introduction to the study of law and the legal system; the legal assistant in the legal system; an overview of the skills of the paralegal including legal interviewing, investigation in the law office, law office administration, and litigation; legal trends, and professional ethics, including the unauthorized practice of law.

## 302 Legal Research (3)

Introduction to the law library and the process of legal research, including computer assisted methods.

## 303 Legal Writing (3)

Prerequisite: UPAR 302. Building on skills developed in Legal Research, students learn to analyze the law as it applies to specific facts, and to effectively communicate the conclusions resulting from legal research and analysis.

## 305 Litigation I (3)

Introduction and detailed analysis of the litigation process in federal and state courts; jurisdiction and venue analysis; commencement of the lawsuit, including the initial client interview and investigation techniques and methods; the early pleadings, including the complaint and petition; the answer and other early objections, exceptions and motions; calendars and tickler systems; federal and state court systems and practice; discovery procedures including file management; management of document production; depositions and deposition summaries; overview of discovery devices and pleadings; summary judgments and other pre-trial matters. Lecture is supplemented with drafting practice.

## 306 Litigation II (3)

Prerequisite: 305. Detailed analysis of and practice in discovery including fact research and drafting of interrogatories, requests for production of documents, and requests for admissions; subpoenas and subpoenas duces tecum; deposition notices and discovery-related motions; evidence; trial preparation, including preparation of the trial notebook and trial brief; assistance at trial, including "second chair" responsibilities, standard jury instructions, arrangements for witnesses, summonses and subpoenas duces tecum; trial motions, summary judgments, motions in limine, pre-trial and post-trial orders; post-trial practice, including execution and filing; settlement/releases; supplemented with drafting practice.

## 402 Computers in the Law Firm (3)

Prerequisite: UINS 100 - Introduction to Microcomputers or equivalent course. Introduction to applications of computer technology within the law firm, including the use of computers related to paralegal functions in litigation support, legal research, case management, Internet utilization, and e-mail.

## Advanced Electives

To be taken only after completion of core courses.

## 401 Business and Corporate Practice (3)

The sole proprietorship; partnerships; corporations, including formation of corporations and amending Articles of Incorporation; preparing drafts of stock certificates; maintaining stock ledgers; drafting resolutions; agency law.

## 403 Louisiana Succession Practice (3)

Review of Louisiana substantive law of successions and donations including wills; drafting of simple wills; estate administration including the collection, legal description, and appraisement of assets; drafting of pleadings to probate will, appoint executor, pay estate debts, sell or lease estate property, and send heirs into possession of their inheritance; preparation of documents to transfer estate assets including automobiles and securities; preparation and filing of Louisiana Inheritance Tax Return and Federal Estate Tax Return.

## 404 Real Property Practice (3)

Review of substantive law and history of real estate transactions, a compilation of initial information for real estate transactions, conducting a title search, preparation of preliminary abstract of title, title assurance, mortgages and transfer of ownership, the requisition of deeds and leases, preparation of preliminary opinion of title, and real estate closing procedures.

## 405 Family Law (3)

Review of substantive law related to marriage, children, and property; client interviews; preparation of pleadings for dissolution, support and division of property; preparation of cases for trial; supervision of case progress; drafting of property settlements and tracing of assets; tax consequences of support and division of property; future issues in family law.

## 408 Criminal Law (3)

Review of basic principles of criminal law; criminal law practice including court rules, prosecutorial functions, probation, bail, and personal recognizance, sentencing, and alternative dispositions; investigation and interviewing in criminal cases; preparation of criminal cases for trial; constitutional limitations on criminal procedure; juvenile courts and mental commitment procedures.

## 409 Administrative Practice (3)

This course teaches the rule-making and adjudicatory procedures in governmental agencies. The student will learn to analyze and apply statutes and specific acts such as the Freedom of Information Act and the Administrative Procedures Act. Many areas of specialty practice rely heavily upon an analysis and understanding of administrative regulations and application.

## 410 Law Office Management (3)

Approaches to the organization and efficient operation of the law office, management problems in the law office, office structures and systems, accounting and billing procedures, hiring, scheduling, and management of non-attorney personnel, information storage and retrieval systems, forms libraries, office equipment, management of the law office library, purchasing of law office supplies, client relations.

## 412 Admiralty Practice (3)

An in-depth study of off-shore drilling activities and vessel operations in the Gulf of Mexico, on the Mississippi River, and other navigable waters, including the role of the paralegal in typical law office procedures relative to salvage, vessel charters, cargo handling and claims issues, and personal injury rights and liabilities.

## 414 Oil and Gas Practice (3)

Review of Louisiana Mineral Code including articles on leasing, types of lease agreements, execution of mineral leases, subleases and assignments; unitization and conservation regulations; function and practice before the State Mineral Board; review of abstract examination and opinion preparation; analysis of gas purchase contracts; review of take or pay litigation and governmental regulation.

## 415 Commercial Law (3)

An introduction to the execution, validity and enforcement of contracts, mortgages, pledge assignments and other security devices, the law of checks and notes with emphasis on formal requirements and liabilities of parties and collection procedures.

## 416 Legal Interviewing and Investigation (3)

This course is an in-depth study of principles, methods, and investigative techniques utilized to locate, gather, document and disseminate information. The emphasis will be on developing interviewing and investigative skills intended to prepare paralegals to communicate effectively while recognizing ethical problems.

## 418 Commercial Law and Bankruptcy (3)

An introduction to agency law, antitrust law, consumer law and insurance, and as an overview, specific topics dealing with property, wills, trusts and estates, commercial litigation and business ethics. Overview of the bankruptcy system, with focus on the practical applications of the Bankruptcy Code and Federal Rules of Bankruptcy Procedure applicable to paralegal use. On all topics covered, there will be a focus on both theoretical and practical applications including pleading preparation.

## 419 Professional Responsibility and Ethics (3)

An introduction to the professional and ethical dilemmas faced by practicing paralegals. Comparison of ethical rules and professional standards developed by the American Bar Association, adopted by Louisiana, and presented as guidelines by the two major paralegal associations. Emphasis is placed on analysis and research regarding ethical dilemmas.

## 422 Computer Assisted Legal Research (3)

Examination of basic and advanced search techniques using the two major legal databases, Lexis and Westlaw. Students will have the opportunity to do legal research on both systems during class with the assistance of the instructor. They will also be able to schedule time on the computers outside of class. There will be an overview of non-legal databases and their applications to the legal field.

## 423 Pro Bono Practice (3)

Introduction to service agencies utilizing paralegals in pro bono publico work. Provide a comprehensive understanding of these agencies and the task paralegals are expected to provide. Emphasis is given to legal research and writing.

427 Sports and Music Law (3)
The purpose of this course is to provide a working knowledge of the sports and entertainment industries for paralegals and pre-law students desiring to work in the areas of sports and music law. The class will provide both practical and theoretical information on the NCAA, professional leagues, teams and players, recording contracts, publishing and songwriter agreements, and royalty calculations.

## 428 Personal Injury/Medical Malpractice (3)

Review of basic tort law and insurance law as it relates to personal injuries; assisting the lawyer in personal injury legal practice; factual investigation of intentional torts; preparation of pleadings and other papers in tort litigation; assisting in settlement negotiations; preparation of exhibits and organization of personal injury cases. Introduction to and detailed review of procedures in prosecuting and defending medical malpractice cases, review of Louisiana Medical Malpractice Act, burdens of proof and theories of recovery, defenses available, obtaining and analyzing the medical record, basic medical terminology, selection and utilization of the expert witness: pretrial preparation and discovery, researching medical literature, how to use the medical library and computer databases, trial of the malpractice action.
429 Medical Records Analysis (3)
Upon completion of this course the student should have an understanding of medical terminology, anatomy and physiology, and standard of care as relates to cases commonly handled in personal injury and medical malpractice causes of action; an understanding of Louisiana medical malpractice statutes and practice relevant thereto, including discussion of ethical issues and the ability to produce a case submission for a Medical Review Panel.

## 430 Louisiana Notary Law for Paralegals

This course is an introduction to the general duties, powers and laws governing a layperson Notary Republic. Upon completion of this course the student should have an understanding of the law in Louisiana notaries in the areas of matrimonial regimes, adoptions, emancipations, tutorships, curatorships, interdictions, successions, wills, donations, real estate, mortgages, security interests and formation of businesses.

## 499 Directed Study (1-3)

Prerequisite: Approval of director. Individual study of a field project under the direction of a faculty member, the director, and/or a supervising attorney. May be counted toward fulfilling specialty requirements with approval of the director.

## 511 Environmental Law Seminar (3)

This course will provide students with a broad overview of U.S. environmental law and policy, with particular concentration on the National Environmental Policy Act, Clean Air Act, Clean Water Act, Endangered Species Act, Toxic Substances Control Act, and CERCLA. The course will also explore the role of the paralegal in environmental compliance, permitting, and litigation.

## 515 Bankruptcy Law (3)

This course covers the terminology and vocabulary of bankruptcy law; analysis and overview of Bankruptcy Law Code and Rules of Bankruptcy; Procedure with interplay of Louisiana law; stresses familiarity with Bankruptcy forms; covers bankruptcy concepts for debtors and creditors; role of the Trustee; and court organization.

## 550 Selected Topics (3)

Advanced research seminars addressing current trends in practice or developing legal theory. Classes are taught by lecture and may require a research paper. Selected Topics is an intensive course intended for students nearing completion of the program and graduates continuing their paralegal education. Recent topics include Class Actions, Hot Topics in Criminal Law and Litigation Public Relations.

## 590 Paralegal Practicum (3)

Approval of director required. The practicum (internship) gives students experience by requiring them to work, under the supervision of an attorney, for 100 hours in an approved legal setting. Students also meet in a classroom component throughout the semester in which they review ethics, professionalism, regulation, and job search skills. Upon completion of the practicum, students submit a paper outlining the duties undertaken during the practicum and an evaluation from their practicing attorney. Students may register for the practicum in their final semester in the program. A 2.0 grade point average is required for enrollment in the practicum. The practicum must be successfully completed; failure to obtain a passing grade after two attempts will result in dismissal from the program.

## PHILOSOPHY

(For Philosophy course descriptions, see the Liberal Arts and Sciences section.)

## PHYSICS

(For Physics course descriptions, see the Liberal Arts and Sciences section.)
POLITICAL SCIENCE
(For Political Science course descriptions, see the Liberal Arts and Sciences section.)

## PRE-LAW

101 Law in American Society (3)
Students will explore the interplay between America’s legal system and our social structure. This includes a detailed analysis and discussion of the development of social, economic, and political relationships and how the legal system affects and imposes upon those relationships. The students will also study and discuss the functions of the federal and state court systems and their accessibility and availability to citizens of varying socioeconomic means. (Satisfies social science requirement for University College majors.)

## 300 Introduction to Law, Lawyers, and Law School (3)

Introduces students to basic building blocks of law (civil procedure, torts, contracts, and criminal law), legal research, and legal writing. In addition, it deals with important ethical issues facing the legal profession. Taught by law professors in the same manner as a first year law school course, this course also allows students considering law school to determine whether law school is for them, and students committed to going to law school a chance to begin to learn key skills for law school success, such as briefing cases, legal research, legal writing, and exposure to law school style examinations. The course is taught in two time blocks, the first dealing with substantive law issues and the second, conducted in smaller break-out sessions, focusing on the research and writing component. The course is open to students who are juniors or seniors, and may be taken by graduating students on a non-credit basis. Enrollment is limited and no credit is earned toward a law degree.

## 301 The Adversary Process (3)

This is an introduction to the intellectual and philosophical basis of the American legal system and the processes by which it is carried on. Students examine civil and criminal cases and proceed through the court from fact gathering to final appeal.

## 303 Introduction to Legal Research (3)

This course is an introduction to the basic literature of the law and the structure and function of the law library. It includes a study of case reports, statutes, and tools for finding and updating research. Students are given basic problem exercises and learn about computer-assisted research.

## 390 Special Topics (3)

Recent special topics include Understanding Civil Rights/Liberties and Understanding Criminal Law/Procedure.

## PRE-SOCIAL WORK

## 201 Introduction to Social Work (3)

The course introduces the student to social work as a profession, examining historical development, current practice, and predicted trends. Major tenets of social welfare and social problems, as well as populations served by social workers in a variety of fields are covered. Students are further introduced to the body of knowledge, skills, and values inherent to the profession of social work, particularly stressing the Systems Model.

## 250 Introduction to Gerontology (3)

This course provides knowledge and skills to understand the complexity of needs of older persons and their families, including income levels, health, nutrition, employment, developmental and adaptive processes, diversity, support systems, class and stereotypes, and the impact of racism, sexism and ageism in social policies/programs.

## 300 Sociology of Aging (3)

This course is a continuation of knowledge-building begun in the Introduction to Gerontology. Special emphasis will be on application of both traditional and new concepts in the area of aging. This course delves into the socio-interactional aspects of aging and will stress the heterogeneity and resultant issues of this population. Case studies, journal articles, and other readings will be employed.

## PSYCHOLOGY

(For Psychology course descriptions, see the Liberal Arts and Sciences section.)

## REAL ESTATE

Note: These courses are subject to the nine-course (27 credit) limit on business, management and related courses.

## 232 Principles and Practices of Real Estate (3)

This course discusses the real estate business, market, ownership and interests, contracts, land surveying, property description, title transfers, closings, financing, mortgage market, liens, taxes, assessments, brokerage, appraisal, leases and property insurance. Experts in special fields contribute to lectures and discussions.

## 245 Introduction to Urban Planning (3)

An examination of the rules and regulations governing land use controls and how these must be taken into consideration throughout design and construction phases. The student will come to understand the necessity for such regulations and the importance of conforming to them.

## 332 Advanced Real Estate Principles (3)

This course presents the principles of Real Estate that are necessary for effective decision making in the marketing of real estate, purchasing of real estate, and buy-hold-sell situations. The student will study factors of supply and demand, financing options, investment analysis, and the development process use in decision making by real estate developers. (Discounted CASH Flows) The Louisiana Real Estate Commission has approved this course for 45 hours towards resident and general appraisal certification.

## 334 Real Estate Law (3)

Prerequisite: 232 or approval of instructor. Legal aspects of real estate, including sales, mortgages, leases, servitudes, successions, wills, closing costs and procedures, judgments, liens, surveys, purchase contracts, condominiums and townhouses.

## 335 Real Estate Appraisal I (3)

Prerequisite: 232 or approval of instructor. This introductory course emphasizes appraisal principles and procedures. Special topics include the new appraisal law, changes in current appraisal standards of professional practice, and report writing techniques. A field inspection and the preparation of a factual demonstration report is part of the course.

## 336 Real Estate Appraisal II (3)

Prerequisite: 335 or approval of instructor. This course is a continuation of Real Estate Appraisal I and an introduction to appraising income-producing property. The emphasis is on the development of income and expense statements and the use of capitalization techniques. This course also includes a seminar on the uses of computers in appraising real estate.

## 340 Real Estate Brokerage (3)

Prerequisite: 232 or approval of instructor. This course is designed to give an overview of general real estate brokerage. It includes the broker and the license law, the real estate commission, the specialist and the generalist in brokerage, when and how to expand, sales personnel, recruiting, training and supervision, administration of the brokerage operation, and other topics pertaining to the day-to-day brokerage business.
351 Real Estate Finance (3)
Prerequisite: 232 or approval of instructor. An introduction to residential, multi-family, and commercial financing. The course covers government guaranteed loans, conventional loans, and innovative financing. Guest speakers are brought in to lecture on construction loans, appraisals, title insurance, private mortgage insurance and legal aspects of the mortgage.

## 360 Current Issues in Real Estate (3)

Prerequisite: 232 or approval of instructor. This course will be taught as a seminar. Topics include: creative financing, advanced investment structuring, time sharing, property insurance, transferring title-recordation, taxes and assessments, real estate appraisal, condominiums, leasing real estate, syndication exchange, and historic preservation. There may be changes in these subject areas as the interest and accent change from year to year.

220 Special Topics in Real Estate (1-3)
Students wishing to qualify for the Louisiana Real Estate Salesman’s Licensing Examination must complete a minimum of 90 contact hours of coursework (equivalent to six credits or two real estate courses) including Real Estate 232 and one Real Estate elective.

Students who wish to qualify for the Louisiana Real Estate Salesman’s Licensing Examination must complete a minimum of 6 hours: one Real Estate Elective and UREL 232 Principle and Practices of Real Estate.

Students who are interested in qualifying for the Louisiana Real Estate Broker's License Examination must complete a minimum of 150 contact hours (equivalent to 15 credit hours) including Real Estate 232 and any four Real Estate electives.

## SOCIAL WORK

(See Pre-Social Work)

## SOCIOLOGY

(For Sociology course descriptions, see the Liberal Arts and Sciences section.)

## SPANISH

(For Spanish course descriptions, see the Liberal Arts and Sciences section.)

## SPEECH

## 140 Persuasive Public Speaking (3)

Principles of audience analysis, speech composition, and delivery. Special attention is given to persuasive techniques. Note: Credit will not be given for both COMM 121 and USPC 140.
311 Dynamics of Group Communication: Skills, Concepts, and Characteristics (3)
An analysis of the impact of social, psychological, emotional and environmental factors on the small-group decision-making process. Emphasis is on the study and application of current problem-solving theories and techniques. (Satisfies humanities requirement for University College students.)

## TELECOMMUNICATIONS

## 200 Introduction to Telecommunications (3)

Prerequisite: 110 or equivalent experience. Fundamentals of voice, data, and video telecommunications technologies and some implications for organizations. Topics include basic concepts and terminology, essential operational components, integration factors, role in organizational planning and operations, steps of the design process, and current and future trends.

## 201 Telecommunications Technology Practicum (3)

Prerequisite or corequisite: 200 or equivalent experience. Examines the hardware and essential systems software of telecommunication technologies and how they work. It focuses on the specific individual functions of telecom equipment and the essential workings of data transmission boxes and media.

## 252 Principles of Voice/Speech Communications (3)

Prerequisite: 200 or equivalent experience. Explores the applications, technologies and management of voice communication, especially telephony and current digitizing trends. While the industry is migrating toward digitized integration of voice, data and image/video, there is still a need to understand the development and usage of voice telecom.

## 254 Principles of Image/Video Communications (3)

Prerequisite: 200 or equivalent experience. Students will have the opportunity to learn fundamental principles, applications, systems and procedures of imaging, as well as applications, environments, systems and architectures of video communications. This course includes an overview of emerging technologies, including new developments in both image and video technologies.

## 261 Networking Essentials (3)

Prerequisite: 200 or equivalent experience. This course provides an understanding of the basic transmission methods and techniques of data communications. Essential hardware, software, protocols, and applications are covered.

## 290 Special Topics in Telecommunications (3)

Prerequisite: 200 or instructor approval. Topics will vary in these experimental courses. Some examples of proposed titles are Network Design; Policy and Regulation; Integration of Voice, Data, and Video Telecommunications; Advanced Technologies; and Infrastructure Services.

## 315 Fundamentals of Routers (3)

Prerequisite: 261 or equivalent experience with a full range of networking topics and functions. Students learn the functions, technologies and applications of routers. Usage of Cisco routers and software tools, plus RouterSim software, is included in the course. Configuration of routers using IOS commands is taught, as well as network protocols, design and management principles and tools, and security.

## 316 Internet Information Services Administration (3)

Prerequisite: 261. This course will provide students with a comprehensive understanding of all facets of Microsoft Windows server based web service installation, configuration, administration, and maintenance. The course will focus on hardware, software, Internet protocols, and advanced web server hosting and services. It provides students with the understandings and skills needed to effectively plan, implement, and deploy valuable World Wide Web services in a professional or personal capacity.

## 317 Linux/Unix Internet Administration (3)

Prerequisite: 261. This course will provide students with a comprehensive understanding of all facets of Linux/Unix server based web service installation, configuration, administration, and maintenance. The course will focus on hardware, software, Internet protocols, and advanced web server hosting and services. It provides students with the understandings and skills needed to effectively plan, implement, and deploy valuable World Wide Web services in a professional or personal capacity.

## 318 Fundamentals of Information Systems Security (3)

Prerequisite: 261 (or UCIS 360) or equivalent experience with a full range of networking topics and functions. The scope of security challenges range from a compromised desktop to the enterprise security policy, disaster recovery, and business continuity. This course is designed to provide a framework for thinking about and implementing Information Systems Security. The student will examine ISS assumptions, principles, concepts, technologies, ethics, and tools from various relevant perspectives. This knowledge will be applied to examine evidence, identify security vulnerabilities, select appropriate countermeasures, and detect and appropriately respond to intrusion.

## 360 Networking (3)

(Same course as Computer Information Systems 360.)

## 362 Local Area Network Administration (3)

Prerequisite: 261 or equivalent experience. Upon completion of this course, you will have an in depth understanding TCP/IP protocol and its implementation for use with the Internet and company intranets. In addition, the availability of Windows 2000 and its graphical interfaces has opened up the use of the full range of networking resources and applications. You will review/use these resources, applications and features of the Windows 2000 operating system focusing on its networking utilities used in combination with the TCP/IP suite of communication protocols. The course is taught hands-on in a local area network equipped microcomputer lab.

## 364 Wide Area Networking (3)

Prerequisite: 360 or 261. Taught at an advanced level, this course focuses on the technical side of connectivity across the corporation and/or region. The course will emphasize the design of networks that service multiple locations.

## THEATER AND DANCE

(For Theater and Dance course descriptions, see the Liberal Arts and Sciences section.)

## VIETNAMESE

## 105 Beginning Vietnamese I (3)

The study of grammar, vocabulary, phonetics, and diacritical marks necessary to read, write and speak the Vietnamese language.

## 106 Beginning Vietnamese II (3)

A continuation of the study of grammar, vocabulary, phonetics, and diacritical marks begun in 105. Prerequisite 105 or equivalent.

## Administration

Scott Cowen, President of the University
Richard A. Marksbury, Dean of University College
ACADEMIC ADVISORS
Judith Bride, Computer Information Systems and Organizational Information Technology
Warren E. Duclos, Jr., Computer Information Systems
Rosaria Guastella, Senior Academic Advisor
Julia Houston, Media Arts
Jaime Morris, Academic Advisor
Sharyn Orr, Full-Time Studies
Andrew J. Reck, Master of Liberal Arts
Choose Taurman, Business Studies
Henry Teles, Full-Time Studies
Nancy Wagner, Paralegal Studies
PROGRAM ADMINISTRATION
Terrence W. Fitzmorris, Associate Dean
Judith Bride, Director, Organizational Information Technology
Jake Calamusa, Information Specialist/Advisor to Student Government
Monica Caminita, Project Assistant, Downtown Campus
Linda Civello, Secretary to the Associate Dean
Donald Cooper, Microsystems Analyst
Meta Dave, Secretary, Uptown Campus
Warren E. Duclos, Jr., Assistant Dean for Academic Computing and Director, Computer Information Systems
Jim Flarity, Assistant Professor, Exercise and Sport Sciences
Paul Forbes, Director, Professional Development Institute, Elmwood Campus
Jane Gordon, Office Manager, Elmwood Campus
Judie Graham, Secretary to the Directors of Paralegal Studies, Media Arts, and the Full-Time Program
Lance B. Green, Chair, Exercise and Sport Sciences
Rosaria Guastella, Senior Academic Advisor
Julia Houston, Director, Media Arts/Publications
Edlee G. Karrigan, Supervisor of Records
Deneen LeBan, Project Assistant, Elmwood Campus
Katie LeBlanc, Director of the Downtown Campus
Kathleen Lee, Project Assistant, Uptown Campus
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Jaime Morris, Academic Advisor<br>Sharon Nunez, Director of the North Shore Campus<br>Jan O'Rorke, Assistant to the Director of Computer Information Systems<br>Sharyn Orr, Full-Time Studies<br>Demeka Ray, Project Assistant, Downtown Campus<br>Irvin Schwartz, Information Technology Specialist<br>Chastian Taurman, III, Director, Business Studies<br>Henry Teles, Full-Time Studies Advisor<br>Ella Taylor, Administrative Assistant, Exercise Science<br>Jenifer F. Thiel, Assistant to the Dean<br>Celeste Uzee, Director of College Gifts<br>Nancy Wagner, Director, Paralegal Studies<br>Kirk Williams, Project Assistant<br>Loretta Wilson, Assistant Professor, Exercise and Sport Sciences

## Where to Write or Call

University College
125 Gibson Hall
Tulane University
New Orleans 70118
(504) 865-5555

Fax: (504) 865-5562
Career Services
Director, Career Services Center
University Center
(504) 865-5107

Downtown (New Orleans Centre) Campus
1400 Poydras Street, Suite 841
New Orleans, LA 70112
(504) 587-9044

Fax: (504) 587-9046

## Counseling and Educational Resources

Mechanical Engineering Building
(504) 865-5113

## Elmwood Campus

800 East Commerce Road, Suite 100
Harahan, LA 70123
(504) 865-5333

Fax: (504) 733-7947

## Exercise Science

Reily Recreation Center, 865-5301
Financial Aid
Director of Financial Aid
Mechanical Engineering Building, 2nd floor
(504) 865-5723

## Housing

Director of Housing
Irby House
(504) 865-5724

Mississippi Coast Campus
2600 Beach Boulevard
Biloxi, MS 39531
(228) 388-5769

Fax: (228) 388-6323

# North Shore Campus 

18703 Three Rivers Road
Covington, LA 70433
(504) 892-6999 (Toll Free)

Parking, Traffic and Security<br>Diboll Center

(504) 865-5424

## Professional and Technical Programs

Elmwood Campus
(504) 865-5333

Fax: (504) 773-7947

## Recreation

Reily Recreation Center
(504) 865-5431

Summer School
125 Gibson Hall, 865-5555
Transcripts
Records Office
110 Gibson Hall
865-5231
Tutoring
Counseling and Educational Resources
Mechanical Engineering Building
865-5103

## For Further Information

University telephones may be dialed directly or reached through the Tulane University operator at (504) 865-5000. Correspondence regarding undergraduate admission and application procedures should be directed to:

Office of Undergraduate Admission
210 Gibson Hall
Tulane University
New Orleans, LA 70118-5680
Phone: (504) 865-5731 or 1-800-873-WAVE (9283)
Fax: (504) 862-8715
e-mail: undergrad.admission@tulane.edu
Website: www.tulane.edu/admission
Requests for catalogs should be directed to the individual schools or colleges.

## OFFICES

The following offices serve the entire university; correspondence should be directed to the individual offices: c/o Tulane University, New Orleans, LA 70118.

## Contact: Bursar

Bruff Commons
(504) 865-5398

For: Financial obligations

## Contact: Career Services Center

73 University Center
(504) 865-5107

For: Career exploration, employment assistance, internships

## Contact: Educational Resources and Counseling

1st Floor, MechanicalEngineering Bldg.
(504) 865-5113 • Counseling
(504) 865-5103 • Tutoring Center

For: Personal, educational, and career counseling; career testing; disability services; Graduate and professional school admission test information; Tutoring Center; Writing Workshops

## Contact: Financial Aid

205 Mechanical Engineering Bldg.
(504) 865-5723

For: Financial Aid

## Contact: Housing and Residence Life

27 McAlister Drive
(504) 865-5724

For: Housing information, residential programming

## Contact: Honors Program

119 Norman Mayer
(504) 865-5517

For: Honors Program

## Contact: Center for International Students and Scholars

7008 Zimple Street
(504) 865-5208

For: Assistance for international students; travel, work \& study abroad information; Year at Tulane

## Contact: Pre-professional Advisors

Hebert Hall
(504) 865-5370

For: Pre-law and Premedical advising
Contact: Registrar
110 Gibson Hall
(504) 865-5231
www.registrar.tulane.edu
For: Degree audits, grade reports, tranlscripts, registrations, certifications

## Contact: Vice President for Student Affairs

215 University Center
(504) 865-5180

For: General information, judicial, extracurricular services

## Contact: Center for International Studies

116 Newcomb Hall
(504) 865-5339

For: Information on Tulane/Newcomb Junior Year Abroad, Semester Programs

## Contact: Multicultural Affairs

223 University Center
(504) 865-5181

For: Multicultural events, multi-ethnic student organizations

## Contact: Student Programs

204 University Center
(504) 865-5141

For: Orientation, Parent/Family Weekend, student organizations, Greek affairs, leadership programs, community service

## UNDERGRADUATE SCHOOLSICOLLEGES

## School of Architecture

Donald F. Gatzke, Dean
303 Richardson Memorial Bldg. (504) 865-5389

## A.B. Freeman School of Business

James W. McFarland, Dean
440 Goldring Woldenberg Hall
(504) 865-5407

School of Engineering
Nicholas J. Altiero, Dean
201 Lindy Boggs Center
(504) 865-5764

## Liberal Arts and Sciences

Teresa Soufas, Dean
327 Gibson Hall
(504) 865-5246

Newcomb College
Cynthia Lowenthal, Dean
104 Newcomb Hall
(504) 865-5421

Tulane College
Tristram R. Kidder, Dean
Robert C. Cudd Hall
(504) 865-5720

University College \& Summer School
Richard E. Marksbury, Dean
125 Gibson Hall
(504) 865-5555

## Tulane Academic Calendar

Fall 2003
Calendar
August

27(W)
29 (F)
September
1 (M)
9 (T)
9 (T)
16 (T)
22(M)
29 (M)
3(F)
29 (M)
October
6 (M)
15 (W)
15 (W)
27 (M)
27 (M)
November
6 (TH)
26-30 (W-SUN)
December
1 (M)
5 (F)
6-9 (SAT-T)
SW
10-18 (W-TH)
12 (F)

25-26 (M-T) Registration (Refer to Directory of Classes for specifics) CLASSES BEGIN
Last Day to Confirm Registration

LABOR DAY HOLIDAY
Last Day to Register/Add
Last Day for 100\% Refund
Last Day for 75\% Refund
Last Day for 50\% Refund
Last Day to Drop without Recor
Last Day to Change Grading Rules for Audit

Yom Kippur/Holiday*
Last Day for 25\% Refund
Mid Term Grades Due for Undergraduate Freshmen
Last Day to Drop
Last Day to Change Grading Rules other than Audit

PRIORITY Registration Begins for Spring
THANKSGIVING RECESS

CLASSES RESUME
LAST DAY OF CLASS
Study Period

EXAM PERIOD
Social Work Commencement

## Exceptions to Basic

LS - AUG 20(M); SW AUG 28 (T)
LS - AUG 24 (F)

LS - AUG 31(F)

LS-Sep 19(F); GS/GRAD EN OCT

LS - SEP 19 (F)
LS - OCT 31 (F)

LS - DEC 4 (TH); SW - DEC 12 (F)
LS- DEC 5-7 (F-SUN); NONE IN

LS-DEC 8-20 (M-SAT)

Saturday classes will be held on the Saturday before Labor Day
Spring 2004

## Calendar

## January

14 (W)
GRAD BS

16 (F)
19 (M)
21 (W)
27 (T)
27 (T)
February
3 (T)
9 (M)
13 (F)
20 (F)
13 (F)
22-29 (SUN-SUN)

12-13 (M-T) Registration (Refer to Directory of Classes for specifics) CLASSES BEGIN

Last Day to Confirm Registration
MARTIN L. KING HOLIDAY
Last Day to Remove Fall Incompletes
Last Day to Register/Add
Last Day for 100\% Refund

Last Day for 75\% Refund
Last Day for 50\% Refund
Last Day to Drop without record
Last Day to Change Grading Rules for Audit
MARDI GRAS BREAK

## Exceptions to Basic

LAW JAN 12 (M); SW-JAN 13 (T);

JAN 20 (T)

GS, GRAD EN - FEB 7 (F)
LS - JAN 23 (F)

LS - FEB 6 (F); GS/GRAD EN FEB

March
1 (M)
10 (W)
10 (W)
19 (F)
19 (F)
April
9-11 (F-SUN)
12 (M)
12 (M)
30 (F)
May
1-4 (SAT-T)
5-14 (W-F)
22 (SAT)

CLASSES RESUME
Last Day for 25\% Refund
Mid Term Grades Due for Undergraduate Freshmen
Last Day to Drop without record
Last Day to Change Grading Rules other than Audit

SPRING BREAK
CLASSES RESUME
PRIORITY Registration for Summer and Fall
LAST DAY OF CLASS

Study Period
EXAM PERIOD
COMMENCEMENT WEEKEND

LS - FEB 6 ( F )
LS - MAR 19 (F)

LS APR 28 (W)

LS APR 29-MAY 2 (TH-SUN)
LS - MAY 3-15 (M-SAT)

Note: Exams will be held on Sunday

| Class Day Distribution | Fall | Spring |
| :--- | :--- | :--- |
| Mondays | 12 | 13 |
| Tuesdays | 14 | 14 |
| Wednesdays | 14 | 15 |
| Thursdays | 14 | 15 |
| Fridays | 14 | 14 |
| Saturdays | 13 | 13 |
| Total | 81 | 84 |

Fall 2004
Calendar
August
23-24 (M-T)
25 (W)
27 (F)
September
6 (M)
7 (T)
7 (T)
14 (T)
20 (M)
25 (SAT)
27 (M)
1 (F)
27 (M)
October
13 (W)
13 (W)
25 (M)
25 (M)
November
4 (TH)
24-28 (W-SUN)
29 (M)
December
3 (F)
$4-6$ (SAT-M)
SW
7-17 (T-F)
17 (F)

Registration (Refer to Directory of Classes for specifics) CLASSES BEGIN
Last Day to Confirm Registration

LABOR DAY HOLIDAY
Last Day to Register/Add
Last Day for $100 \%$ Refund
Last Day for 75\% Refund
Last Day for 50\% Refund
Yom Kippur/Holiday*
Last Day to Drop without Record
Last Day to Change Grading Rules for Audit

Last Day for 25\% Refund
Mid Term Grades Due for Undergraduate Freshmen
Last Day to Drop without Record
Last Day to Change Grading Rules other than Audit

PRIORITY Registration Begins for Spring
THANKSGIVING RECESS
CLASSES RESUME

LAST DAY OF CLASS
Study Period
EXAM PERIOD
Social Work Commencement

Saturday classes will be held on the Saturday before Labor Day
Exams will NOT be scheduled on Sunday

## Exceptions to Basic

LS - AUG 23 (M);SW AUG 24 (T)

LS - SEP 3 (F)

LS-SEP 17 (F); GS/GRAD EN OCT

LS - SEPT 17 (F)
LS - OCT 29 (F)

LS - DEC 2 (TH); SW - DEC 17 (F)
LS- DEC 3-5 (F-SUN); NONE IN
LS - DEC 6-18 (M-SAT)

## Spring 2005

Calendar
January
10-11 (M-T) Registration (Refer to Directory of Classes for specifics)
10 (M)
14 (F)
17 (M)
21 (F)
25 (T)
25 (T)
February
1 (T)
7-8 (M/T)
9 (W)
9 (W)
14 (M)
18 (F)
14 (M)
March
9 (W)
9 (W)
18 (F)
18 (F)
20-27 (SUN-SUN)
28 (M)
April
4 (M)
29 (F)
20 (
30-MAY 2 (SAT-M) Study Period
May
3-13 (T-F)
21 (SAT)
CLASSES BEGIN
Last Day to Confirm Registration
MARTIN L. KING HOLIDAY
Last Day to Remove Fall Incompletes
Last Day to Register/Add
Last Day for $100 \%$ Refund
Last Day for 25\% Refund
MARDI GRAS SPRING BREAK
CLASSES RESUME
Last Day for 50\% Refund

Last Day to Change Grading Rules for Audit
Last Day for 25\% Refund
Mid Term Grades due for Undergraduate Freshmen
Last Day to drop without Record
Last Day to Change Grading Rules other than Audit SPRING BREAK
CLASSES RESUME

PRIORITY Registration for Summer and Fall
LAST DAY OF CLASSES

EXAM PERIOD
COMMENCEMENT WEEKEND

Last Day to Drop without Record LS - FEB 4 (F); GS/GRAD EN FEB

Exceptions to Basic

GS, GRAD EN - FEB 11 (F)
LS - JAN 21 (F)

LS - FEB 4 (F)

LS - APR 27 (W)
LS - APR 28-MAY 1 (TH-SUN)

LS - MAY 2-14 (M-SAT)

Notes: Exams will NOT be held on Sunday.

| Class Day Distribution | Fall | Spring |
| :--- | :--- | :--- |
| Mondays | 13 | 13 |
| Tuesdays | 14 | 14 |
| Wednesdays | 14 | 15 |
| Thursdays | 14 | 15 |
| Fridays | 14 | 15 |
| Saturdays | 12 | 13 |
| Total | 81 | 85 |

## Tulane's Probable 5 Year Academic Calendar

| First Semester | Fall 2002 | Fall 2003 | Fall 2004* | Fall 2005* | Fall 2006* |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Classes Begin | W Aug 28 | W Aug 27 | W Aug 25 | W Aug 31 | W Aug 30 |
| Labor Day Holiday | y M Sep 2 | M Sep 1 | M Sep 6 | M Sep 5 | M Sep 4 |
| Yom Kippur | M Sep 16 | M Oct 6 | Sat Sep 25 | Th Oct 13 | M Oct 2 |
| Thanksgiving Holiday |  |  |  |  |  |
| Begins | W Nov 27 | W Nov 26 | W Nov 24 | W Nov 23 | W Nov 22 |
| Classes Resume | M Dec 2 | M Dec 1 | M Nov 29 | M Nov 28 | M Nov 27 |
| Last Day Of Class | F Dec 6 | F Dec 5 | F Dec 3 | F Dec 9 | F Dec 8 |
| Exam Period | W-Th <br> Dec 11-19 | W-Th <br> Dec 10-18 | W-F <br> Dec 8-17 | $\begin{gathered} \text { T-W } \\ \text { Dec } 13-21 \end{gathered}$ | $\begin{gathered} \text { T-W } \\ \text { Dec } 12-20 \end{gathered}$ |
| Second Semester Spring 2003 |  | Spring 2004* | Spring 2005* | Spring 2006 | Spring 2007 |
| Classes Begin | W Jan 8 | W Jan 14 | W Jan 12 | W Jan 11 | W Jan 10 |
| Martin L. King Holiday | M Jan 20 | M Jan 19 | M Jan 17 | M Jan 16 | M Jan 15 |
| Carnival Break | $\begin{gathered} \text { Sun-Sun } \\ \text { Mar 2-Mar } 9 \end{gathered}$ | Sun-Sun <br> Feb 22-29 | $\begin{aligned} & \text { Mon-T } \\ & \text { Feb 7, } 8 \end{aligned}$ | $\begin{gathered} \text { Sun-Sun } \\ \text { Feb } 26 \text { - Mar } 5 \end{gathered}$ | $\begin{gathered} \text { M-T } \\ \text { Feb } 19-20 \end{gathered}$ |
| Classes Resume Spring Break | M Mar 10 | M Mar 1 | W Feb 9 | M Mar 6 | W Feb 21 |
|  | $\begin{aligned} & \text { Fri-Sun } \\ & \text { Apr 18-20 } \end{aligned}$ | $\begin{aligned} & \text { F-Sun } \\ & \text { Apr 9-11 } \end{aligned}$ | $\begin{aligned} & \text { F-Sun } \\ & \text { Apr 9-11 } \end{aligned}$ | $\begin{aligned} & \text { Sun-Sun } \\ & \text { Mar 20-27 } \end{aligned}$ | $\begin{gathered} \text { F-Sun } \\ \text { Ap 14-16 } \end{gathered}$ |
| Classes Resume | M Apr 21 | M Apr 12 | M Apr 12 | M Apr 28 | M Apr 17 |
| Last Day Of Class | F Apr 25 | F Apr 30 | F Apr 30 | F Apr 29 | F Apr 28 |
| Exam Period A | $\begin{gathered} \text { W-Th } \\ \text { Apr 30- May } 8 \end{gathered}$ | W-Th <br> May 5-13 | W-Th <br> May 4-12 | W-Th <br> May 3-11 | W-Th <br> May 2-10 |
| Commencement | Sat May 17 | Sat May 22 | Sat May 21 | Sat May 20 | Sat May 19 |
| Terms marked with * are subject to change through faculty action. |  |  |  |  |  |

## Glossary

Academic Year: The period consisting of fall and spring semesters.
Advanced Placement: Exemption or credit awarded to beginning freshmen based on scores on the College Board Advanced Placement [AP] Tests.
Advanced Standing: Exemption or credit awarded to beginning freshmen upon successful performance on proficiency examination.
Audit: To enroll in a course for no credit.
Code of Student Conduct: The regulations of behavior which prohibits unsatisfactory or disruptive conduct. Disciplinary action and sanction resides with the Office of Student Affairs.
Colleges \& Schools: The academic units of the University, administered by deans, that offer the University's academic programs. The degree anticipated determines the student's choice of school or college.
Course Load: The total number of semester hours for which a student is registered in one semester or summer term.
Credit: The quantitative measure of recognition given to a course stated in semester hours.
Cross-Registration: Courses designated in other divisions of the University or at Loyola for which a student may register.
Cumulative or Overall Average: A student's grade point average based on the total number of quality points earned and total number of semester hours attempted.
Curriculum: A program of courses required for a degree in a particular field of study.
Departments: The academic Units of the University within colleges or schools; administered by chairs or directors.
Drop/Add: A change in registration during the designated period of time in which a course and/or a section the time and day the course is offered may be changed.
Early Registration: A specified period of time during a semester when a student may pre-enroll in courses for the following semester.
Elective: Course chosen by the student, as opposed to a required course. The term "elective", without a qualifier, will be understood to be a free elective, chosen by the student at his or her option from all the courses offered by the University for degree credit, with due regard for prerequisites and subject to restrictions of the school or college in which the students is enrolled.
Equivalent: When used in a course prerequisite [e.g., "Prereq: SOCI 101 or equivalent"], this term means either credit in a comparable course, or equivalency to be determined by individual department.
Good Standing: The typical status of a student who is not on academic probation is eligible to continue in or return to the University.
Grade Point Average [GPA]: A measure of scholastic performance; the ratio of quality points earned to semester hours attempted.

Honor Code: Procedures in dealing with academic assignments that are misrepresented by the student to be his/her work, or cooperation in such a misrepresentation.

Interdivisional Transfer [JDT]: The procedure for transfer from one school or college within the University to another.

Joint-Degree Programs: A program whereby a student may pursue two degrees in two schools or colleges of the University concurrently.
Leave of Absence: An interruption in enrollment approved by the student's dean which permits re-enrollment without an application for readmission.
Major: The primary field of study; students will take the majority of their required courses in this area.

Matriculation: The state of being registered for credit and working toward a specific degree.
Minor: The student's field of secondary academic emphasis.
Over/Under Load: Stated minimum and maximum course loads for which approval must be obtained from the students' dean.
Pre-professional Program: A program of study in preparation for entry into a professional degree program at another institution or another division of the University.
Prerequisites: The preliminary requirement, usually credit in another course, that must be met before a course may be taken.
Privacy Act: The privacy of students' records and affairs is protected under the Family Educational Rights and Privacy Act of 1974 as amended [P.L. 93-380], preventing the distribution of any information other than 'directory information' on a student.
Probation and Dismissal: Failure to meet the minimum semester requirements toward graduation for the fall or spring semester will result in being placed on academic probation. Academic deficiencies not corrected in the subsequent semester or in the Tulane Summer School will be cause for dismissal from the University.
Proficiency Examination: A test equivalent to a final examination in a college-level course in which a beginning student not formally enrolled may demonstrate competence.
Quality of Work: The progress toward the baccalaureate degree measured by credits and quality points at the close of each semester.
Quality Point: Numerical value assigned to each letter grade from "A" to "F', when given as the final grade in a course; provides a basis for quantitative determination a grade point average.
Registration: The process by which a [duly admitted] student, upon payment of required tuition and fees, is enrolled in classes.

Residency Requirement: The period of time students are required to be enrolled for a designated number of courses or credits.
ROTC: The Reserve Officers Training Corps program.
Semester Hour: The unit by which course work is measured.
Student Schedule: The courses in which a student is enrolled.
S/U Option: Satisfactory or unsatisfactory is elected as an unrevokable option [following the announced deadline] for a course in which a letter grade and quality points are not awarded, thereby not affecting the GPA.
Transfer Student: A student who terminates enrollment in another university and subsequently enrolls in this University.
Tutor: Computerized registration for course work by telephone.
Withdrawal: Extensive non-attendance to class(es) requires formal withdrawal from: course(s), section(s), or the college/school, with appropriate approvals including that of the dean.

